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Proceedings of the Eighth
Agricultural and Food Policy Systems Information Workshop

Keeping the Borders Open

Edited by

R.M.A. Loyns
Karl Meilke
Ronald D. Knutson
Antonio Yunez-Naude

January 2004

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EXECUTIVE SUMMARY

KEEPING THE BORDERS OPEN

NAFTA has made major positive contributions to farmers, agribusinesses, and consumers. These contributions include reductions in regulation and trade barriers; reduced prices for many food products; increased efficiency of production, processing, and distribution; increased demand for farm products; increased trade; and reduced inflation. Business and trade relations among the participants in food production, processing, and distribution have been significantly improved. NAFTA's strength relies on day-to-day working relationships, frequent ministerial contact, and effective institutions at the working level.

Need for NAFTA Leadership

The risk of trade disruption is one of the most significant risks facing agriculture. Despite the gains, NAFTA has neither accomplished free trade nor has it achieved an adequate level of trade harmony. Several areas not dealt with in the agreement continue to limit trade and cause stress. In particular, domestic farm policies and trade remedy laws limit the gains from trade that NAFTA could provide.

In order to continue the momentum of gains and to reduce the incidence of impediments, there is need to provide NAFTA with the tools to facilitate actions that reduce policy stress and stimulate national and supranational trade and economic development. This will require new institutional arrangements within the NAFTA framework to provide leadership for making further improvements in trade relations.

A visionary leadership body that speaks for North American agriculture was proposed to be established at the supranational level within NAFTA. This body would evaluate progress in achieving NAFTA's objectives; identify and evaluate sources of trade frictions; and be an active advocate, mediator, and participant in recommending outcomes that foster benefits for North American farmers, agribusinesses, and consumers. This voice would search for mutually beneficial solutions rather than pursue the confrontational, protectionist, short-run, and nationalistic interests that continue to detract from the positive NAFTA contributions.

Need for National Restraint

While NAFTA initially resulted in a reduction in SPS barriers, antidumping, and countervailing duty actions; recent increases are notable and concerning. These actions, more often than not, have frivolous, retaliatory, costly, and risk-increasing characteristics that seriously undermine NAFTA as an institution.

If NAFTA's benefits are to be realized, national restraint must be exercised to avoid taking backward steps in terms of trade and trading rules that deter trade expansion and thus thwart the gains that have already been achieved. Specific concerns include the imposition or maintenance of sanitary and phytosanitary (SPS) trade barriers that are not based on science, anti-dumping (AD) actions, countervailing duties (CVD), and increased agricultural subsidies by NAFTA countries. Individual countries should always consider the economic impacts of their actions on other member countries.

Counterproductive Policies

Agricultural prices are determined by competitive forces of supply and demand that are subject to considerable seasonal and cyclical variation and in some cases, a high degree of perishability. Consequently, most agricultural prices periodically and predictably fall below total costs of production, a main standard for findings of dumping. While injury may be demonstrated in such instances, it often results from normal market adjustments to relative supply or demand conditions and is likely reflected on the world market for these commodities. When no price differences can be demonstrated between the countries involved, it is a clear indicator of a competitive market. These price characteristics should be recognized when dumping cases are brought.

Countervailing duty cases often result from perceptions of farm subsidies and sometimes from their reality. Subsidies usually result in lower prices to producers in other NAFTA countries and higher producer costs in the subsidizing country. The higher production costs are the result of capitalization of subsidies into the value of land and other capital assets, which increase rental rates and asset prices. Countervailing duty cases have doubtful impact on modifying subsidization policies. A more efficient and less costly means to reduce the trade distorting effects of subsidies is restraint in the use of this form of public support for agriculture, particularly subsidies extending over a number of years.

Role of Science

Special care must be taken to assure that SPS regulations are based on scientific facts that can be replicated in research. Sound science is to be distinguished from "soft science" that is based on normative judgments on the part of the advocates and their research counterparts regarding what is good, moral, and ought to be. Such judgments need to be carefully and consistently avoided in SPS decisions.

The evidence in dumping and countervailing cases often has limited economic content. It is frequently based on evidence that runs counter

to economic and business logic. Free trade, and the benefits thereof, is an economic concept. Therefore, economic science should be seriously considered in trade dispute decisions.

The NAFTA countries share an obligation for employing sound science and transparency. Sound science and transparency in policy, programs, and decision-making should enhance trade harmony among the NAFTA partners. NAFTA's integrity depends on being able to openly evaluate the impacts of its policies and those of its member countries on trade.

The following areas were identified where gains can be realized by all NAFTA countries and where the only pain involves sharing costs. The areas where the benefits can be readily realized and should be actively pursued include:

- **Eradication programs for animal diseases and pests:** There are substantial benefits to be realized in all NAFTA countries from the eradication of diseases such as bovine tuberculosis and brucellosis; from systematic control of carriers of disease such as ticks; from control of plant diseases; and from cooperative efforts to prevent outbreaks of contagious animal diseases such as foot and mouth disease (FMD).

- **Food Safety:** Hazard analysis and critical control points (HACCP) procedures need to be implemented throughout all NAFTA countries for both crops and livestock. HACCP facilitates trade by reducing reasons for SPS barriers while protecting the health and safety of the member countries' highly mobile populations.

- **Facilitate commerce:** Compatible grades, standards, and payment procedures are essential for trade in agricultural commodities. The US Perishable Agricultural Commodities Act (PACA) provides a useful model for implementation across NAFTA.

- **Infrastructure:** Improved border infrastructure is an obvious area of need. Many other examples, such as the development of water quantity and quality infrastructure, are equally important.

- **Education:** There is need for a massive education program informing concerned citizens in the three countries about the accomplishments and problem areas of NAFTA. An informed body politic can then take ownership of NAFTA.

ORDERING THE PUBLICATION

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Several universities, interest group organizations, the private sector, and interested individuals are among our presenters and discussants. We pay a small honorarium for the preparation of main papers but it does not cover the time and effort expended by those researching and writing the papers, let alone resubmitting them after the workshop for publication. These contributions are part of the way this workshop has evolved, and we could not maintain our program without these generous contributions.

The Agricultural and Food Policy Center at Texas A&M University took the lead role in administering the workshop, and providing print-ready copy of the edited publication. Rene Ochoa did all the detailed organization before, during, and following the workshop. David Ernstes prepared the print-ready copyand provided the cover design. All of these functions are time consuming tasks, essential to a good workshop, and required for the publication. Finally, we acknowledge the ongoing contributions of Brenda Pitt in AAFC for keeping the committee connected through conference calls, Lenore Loyns for the “final reads and edits,” and Friesen Printers for expert printing services, all of which are also essential to publication of these proceedings.

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BACKGROUND AND PURPOSE OF THE WORKSHOP
"Keeping the Borders Open"

Karl Meilke, R.M.A. Loyns, Ronald D. Knutson and Antonio Yunez-Naude

This workshop, *Keeping the Borders Open,* is the eighth in a series organized by the Policy Disputes Information Consortium. The NAFTA was in its infancy when the first workshop was held in 1995. Since then, largely as a result of North American market integration spurred by free trade agreements, trade in agri-food products among the NAFTA members has exploded. As tariffs have fallen trade, has not only expanded but it has been rationalized. NAFTA member trade has grown to such an extent that Canada is nearly as dependent on access to the United States market as it is on its own domestic market. However, this improved economic performance and market integration brings with it a new set of trade related problems. These new problems stem largely from the fact that North American market integration is incomplete, and that few NAFTA institutions have been created.

It is widely understood that as tariffs are negotiated downward non-tariff barriers to trade become more important. This is especially true in agriculture where sanitary (human and animal health) and phytosanitary (plant health) as well as technical barriers to trade are common. Ideally, inside a free trade area (FTA) products move across the borders of member nations as easily as they flow between different areas within a country. However, this ideal is difficult to achieve. Tariffs are transparent and eas-

ily monitored by customs agents and trade ministries, and traders are aware of pending reductions. However when an FTA is formed, many potential non-tariff barriers remain and they tend not to be transparent, and even when identified, not easy to change. One of the most challenging areas involves sanitary and phytosanitary (SPS) regulations and technical barriers to trade. The goal is to make sure that these regulations in NAFTA facilitate, or at least do not to hamper the increased trade flows resulting from tariff elimination.

It seems reasonable to set the standard for successful integration of member nations regulatory schemes within NAFTA higher than among non-member nations. However, the problems of integration are similar across all countries. Domestic regulations reflect the culture, geography, stage of development and language requirements of the home country. Most domestic regulations are designed to solve local problems and in solving these problems generally create costs and benefits for certain groups in the economy. When an attempt is made to change a regulation as a result of an FTA there is often an initial round of inertia, or active opposition as domestic "losers" attempt to preserve the status quo. When domestic regulations are changed as a result of bilateral or multilateral negotiations, nationalists also decry the loss of sovereignty. At other times there will be active rent seeking among those who see positive benefits from the proposed regulatory changes. It is also possible for producers in one NAFTA country to bring trade action against another NAFTA partner using domestic trade remedy legislation. Some of these cases result from different forms and levels of protection for primary agriculture in the NAFTA, and others have no foundation in basic economic principles.

This publication presents all of the papers and most of the discussion comments that were presented at the workshop in Puerto Vallarta March 7 to 9, 2002. As in other workshops, participants were drawn from academia, the agribusiness sectors, government officials with policy making responsibilities and interest groups in each of the three NAFTA signatory countries. This workshop was conceived within the general backdrop of the discussion immediately above as well as some devastating evidence from the UK of what happens when borders close due to outbreaks of

serious diseases like BSE and foot-and-mouth. Little did we know that before this publication was released, the Canadian cattle, sheep, goat and wild game sectors would be rocked by the discovery of one cow in northern Alberta with "mad cow disease." The borders did not stay open.

This workshop is focused on policy inconsistencies in the NAFTA region involving:

- different rules and procedures surrounding food safety, and animal and plant protection; and
- the continued use and potential abuse of trade remedy laws.

The workshop begins with an overview paper that highlights the current rules in the NAFTA member countries as they relate to human, plant and animal health. There is little doubt that sanitary and phytosanitary measures can be used as a trade barrier, but there is also no doubt that sanitary and phytosanitary measures are required. Hence, the issue is one of striking a balance and it seems unlikely that the best way of fighting and eradicating disease is on a nation-by-nation basis. Can scientific rules be established and enforced in a way that preserves most of the economic benefits of North American market integration, while at the same time being effective in preventing plant and animal disease problems? If so, what new institutions are required and what role should trinational or international organizations play in establishing the co-operation and harmonization among national regulatory bodies?

Following the overview paper on sanitary and phytosanitary issues the workshop turns to specific problems in three commodity sectors:

- cattle, which involves the movement of live animals and meat between all three member nations;
- fruits and vegetables, with an emphasis on avocado's, where most of the problems have been between the Untied States and Mexico; and
- grain diseases, in particular wheat karnal bunt, which has influenced United States wheat exports to and through Canada and Mexico.

For each of these commodities the authors were asked to discuss the regulatory framework that surrounds the SPS issues in that particular sector. In addition, they were asked to address the use of risk analysis in relation to the economic costs and benefits of SPS problems. Finally, the presenters were asked to discuss options for harmonizing regulations among the NAFTA partners with the goal of minimizing the economic costs of SPS problems.

The next paper in the SPS session deals with the current regulatory structure in the farm chemical industry. This is an area in which the NAFTA working group on pesticides has been quite active and yet the perception of significant regulatory differences among NAFTA member countries remains. There are perceptions in this market that the playing field in registered chemicals and pricing is far from level. The final paper in this session presents policy options for SPS issues. These include: 1) the status quo, 2) mutual recognition, 3) equivalency and/or harmonization, and 4) joint NAFTA agencies.

The second major issue considered in the workshop was the use and potential abuse of trade remedy laws. Both Canada and Mexico tried to get exemptions from United States trade remedy laws when their free trade agreements were signed. Neither was successful, although new dispute settlement mechanisms were created. However, the fact remains that private business practices that would be legal when used within a NAFTA country can be subject to successful legal challenges when used outside the home country. This session begins with an overview paper that describes domestic trade remedy laws in each of the three NAFTA member countries. These laws are expected to be compatible since they are all based on the relevant World Trade Organization provisions. However, the WTO rules are not self-executing and have to be translated into domestic laws and specific rules for their application developed. Hence, there is the potential for the application of these laws to be different.

There is a general impression of an increasing number of trade disputes since the formation of the NAFTA. The second paper in this session addresses this question. The authors examine the frequency of

trade disputes before and after the formation of the NAFTA and also the frequency of agri-food disputes in relation to all trade disputes. The authors address the question of whether trade remedy actions within a free trade area make economic sense, and if there are alternatives to anti-dumping and countervailing duty actions.

These two general papers on the application of trade remedy laws provide the "facts;" the program was designed to then present four case studies to see how trade actions have worked in practice. The first paper dealt with the United States anti-dumping case against Canadian green house tomatoes, and Canada's counter case against United States field tomatoes. The second case study dealt with the countervailing duty action that Manitoba corn growers brought against the United States. The third case study dealt with the on going dispute between the United States and Mexico regarding trade in sugar and sweeteners. This problem was, in theory, "solved" during the NAFTA negotiations but it remains a source of trade tension today. Finally, the case studies conclude with a discussion of the Section 301 case brought by the United States against the alleged unfair trading practices used by the Canadian Wheat Board, another in a long string of similar actions since 1988.

Section 1

Health, Plant and Animal Protection and Food Safety

The objective of this section is to provide background on sanitary and phyto-sanitary rules, policies, and procedures within NAFTA and their role in trade disputes.

HEALTH, PLANT AND ANIMAL PROTECTION, AND FOOD SAFETY: WTO AND NAFTA

Paul Haddow

INTRODUCTION

The number of issues that this presentation was designed to cover is broad ranging, from the role of science, politics, institutions, to who makes decisions and how they are made. The paper will cover as much as possible in the time available, but in a fairly broad sense. We will not examine any particular disputes, but we will try to provide a sense of the structure that exists, how it is working, how it is changing, and illustrate some of the challenges we are facing today and into the future.

The trade rules component is probably the part that people are most familiar with. There is the WTO Sanitary and Phyto-Sanitary (WTO/SPS) Agreement, the basic WTO Agreement, as well as the NAFTA. There is today ongoing discussion toward creating a free trade agreement within the hemisphere, the Free Trade of the Americas Agreement (FTAA) but that one is not here yet. Also increasingly important, something Bill Kerr will discuss later in his paper, is the role of international standard setting bodies: CODEX for food safety; the OIE for veterinary issues and the IPPC for plant health issues; and NAPA was the regional component of the IPPC network.

These three international standard setting bodies are explicitly referenced in the WTO and the work that they do has huge implications for trade in the sense that *if they succeed in setting a technical standard then that is automatically deemed to be WTO consistent.* This will be discussed later. Back in the pre-1995 era, before the present WTO Agreement, these standard setting bodies were very scientific and very technical. Increasingly, people are recognizing the significance of their work and we are increasingly seeing trade policy types showing up at these meetings internationally.

The third group is international environmental agreements. Some might say -- what does that have to do with SPS issues? The answer is found in the bio safety protocol which is developing an international regulatory system for shipments of genetically modified organisms (GMOs). There are also certain rules for deliberate release of living organisms such as seed, seedlings or fish stocks. There are also rules for trade in GMOs which are for food, feed and processing. So this is a very contentious agreement but it is a sign that the SPS world is broadening out. It is not just the WTO which is relevant today, a whole range of international agreements is covered.

THE WTO AND ITS RELATION TO NAFTA

The WTO Agreement is about 600 pages thick but it's principles can be summarized in three propositions:

- *countries should not discriminate between foreign goods and their own goods;*
- *importing countries should not discriminate between foreign goods from one country and the foreign goods from another country; and*
- *the only instrument available for protection of domestic industry is a tariff.*

These principles occupy a page and a half in the WTO document. The other almost six hundred pages provide elaboration, exceptions and detail. Services and intellectual properties are part of the coverage. But for goods,

these are the three fundamental disciplines. In the NAFTA context, we are not supposed to have any tariffs, so perhaps it could be argued that the WTO agreement boils down to two disciplines vis-a-vis the NAFTA countries.

SPS Rules

There are many exceptions identified in WTO, among them subsidies, product code, Article 11, and so on. For discussion here the critical ones relate to SPS measures. Before the WTO was put in place, there were disciplines on SPS, called Article 20, which essentially said that you can break your WTO obligations for special circumstances providing you do it in certain ways. One of those special circumstances is to protect human, plant, animal health or life according to Article 20 (b). This provision has been around since 1947 and was actually invoked in a few panel cases over the years. But in the 1995 agreement the SPS agreement became an elaboration of Article 20 (b), and says that if you are going to invoke Article 20 (b) you have to do it in the following ways, and the SPS Agreement essentially describes rights and obligations that all countries have in invoking any exception related to human, animal, plant health or life.

We are going to touch on NAFTA throughout the paper because that is a primary focus of this group. In the SPS area, NAFTA SPS negotiations were going on at the same time as the WTO negotiations which produced provisions in the separate agreements that are very similar. There are some significant differences but for all intents and purposes, *the two agreements are remarkably similar.*

The scope of the SPS Agreements deal with measures to protect human, animal and plant health or life, from food or feed borne risks, and from pests or disease related risks. For example, anti-smoking legislation has to do with human health but it does not fall under the SPS because it does not deal with these particular types of risks. The important thing to remember about the *SPS Agreement is that it is risk-based not product-based.* The scope of the Agreement is not the same as the scope of the agricultural agreement which is product specific.

In Canada, United States, and Mexico, measures are taken in pursuit of animal, plant, human health on a range of products. For example, Canada impounded a ship load of British tanks during the foot and mouth crisis in 2001 because of concern that the tanks had potentially dangerous dirt on their tracks. So it doesn't matter what the product is, it could even be a human being for that matter so it is not a HSF tariff line- based agreement. *It is a risk- based agreement.*

Characterizing the SPS Agreements is fairly simple. It is clear that every country has the right to regulate in these areas. This situation goes back to Article 20 (b) conditions from 1947 but it was elaborated in the WTO SPS Agreement to include that each country has the right to choose its own level of protection. *So on any particular plant health, animal health, or human health issue, Canada, Mexico and the United States do not have to have the same level of protection.* Individual countries can be fussier than another country. There is nothing wrong with that in principle. However, accompanying these rights are a series of obligations. While any country can choose its own appropriate level of protection, their application must be consistent. It is not allowable to be really fussy about a particular risk from imported products, but not really fussy about a similar risk that happens to occur domestically. So countries are supposed to be consistent. Perhaps we can talk about the European Union (EU) in that regard later on.

In addition, *countries are supposed to be fundamentally transparent*, and are supposed to notify trading partners if a measure is being put in place. Other countries are supposed to have the opportunity to comment. *Regulation is supposed to be based on science*, and the chosen *measure is supposed to be that which achieves the required level of protection with the least disruption of trade.* The action is not supposed to unnecessarily disrupt trade although trade will usually be disrupted.

Before discussing these points, lets return to the fundamental disciplines of the WTO which include no discrimination between domestic goods and imported goods and no discrimination among sources of imported goods, and use of only tariffs for protection. The reason for the

exception to this in an SPS world is because, obviously, if a good is coming in from one country that has a different risk profile than your own domestic production you can distinguish against that good in a sense that its importation can be banned because of the risks. You can distinguish between one country and another country in terms of imports if they do not have the same risk profile. So the whole point of the SPS Agreement might be said to be discriminatory. It is a rule upon which you are allowed to discriminate; and in terms of using the tariff as the only measure of protection obviously in a SPS context, if you have a good that is coming into a country and there are risks associated with that good, it does not make any sense only to put a tariff on that good. It has to be banned. So it is in that sense that the SPS Agreement breaches the three fundamental obligations within the WTO system.

Some of the other aspects of the SPS Agreement are on temporary measures. Essentially it says less than 100 percent certainty by scientific means is allowed when there are circumstances in which countries have to act. That is recognized in the WTO and in NAFTA except that the country that is putting, say, *a temporary measure in place pending finding all the science, they have an obligation in the WTO to seek out that additional information.* It is not allowable within this framework to put a measure in place and then ignore the file. Temporary measures can be used but there is the obligation to seek out missing data, and an obligation to review the basis for that measure. If and when the information is available, if the measure does not make sense, there is an obligation to review , revise or remove it.

The whole point about this is that in a situation, say, between Canada and Mexico, Canada has a certain appropriate level of protection and we regulate in a certain manner with certain measures to achieve that appropriate particular level of protection. Let us also say that Mexico wants to export to Canada, but they do not regulate in exactly the same way that we do. Mexico may claim that it can achieve Canada's appropriate level of protection but in a different way. In this instance, Canada has a obligation to respond. If it can be established that the way Mexico regulates, even though it is different, is able to achieve the appropriate level of protection

at the end of the day, then the WTO Agreement encourages Canada to recognize that there is "more than one way to cook a steak" that is, there is more than one way to regulate in a particular area.

The third area which is encouraged in the WTO is the whole idea of regionalizing measures. If there is a problem, say in the United States with a particular disease, that does not exist in Canada, but disease only occurs in a few states, then if Canada is putting a measure in place, it should only put that measure in place on those states which have the disease. It should not put on a blanket measure against all imports from the United States. Of course in order to apply that principle, there must be a level of confidence that the product or the disease from the infected states is not deflecting into other states. But if it can be established that there is a region within which that disease is prevalent and the disease does not get out of that region, then *countries are supposed to apply their measures on a basis of a region instead of on the basis of a whole country.*

International Standards

Turning now to international standards, you will recall that one of the fundamental obligations in the SPS Agreement now is to base measures on science. There are two ways to demonstrate a scientific basis of a measure:

- *through a risk assessment; and*
- *through using an international standard.*

There is an assumption within the WTO system derived from the WTO Agreement that any standard that comes out of CODEX, the OIE, or IPPC for certain classes of subject areas may be applied. It is not just any standard that comes out of CODEX, but a standard on CODEX that deals with positive list of risks or issues. That standard is presumed to be scientific. If a country puts a measure in place and says that the measure is based on this CODEX standard, then that is the end of the debate. It is deemed to be scientific and it is also deemed to be consistent with the rest of the SPS Agreement. As mentioned above, these are the relevant standard-setting bodies.

The TBT Agreement is very different, and consequently very interesting. It says that any standard from any international organization including those that are under development is deemed to be consistent with the TBT Agreement. That concept presents a huge open universe. The SPS Agreement is very specific, as is CODEX- alimentarius. If for some reason or other, a country decides to come up with a standard for plant health that does not count, it is only those three bodies for those three subject areas and they have to line up very clearly. So if the United Nations Environment Program (UNEP), for example, comes up with a standard on tolerances for environmental impacts of something, that does not count. But it would in the TBT context because the SPS Agreement was negotiated as an elaboration of an exception. The negotiators were very careful when they negotiated the SPS Agreement and it is very tight, whereas on TBT which has to do with labeling and other issues, it was more of a bottom up agreement. People said we need rules on standards, what should they look like? They were not as fussy when they negotiated.

Earlier it was mentioned that with the coming into force of the SPS Agreement, an intersection was established between what these previously very technical bodies were doing and the world of WTO rules and international trade. This has been a bit of a mixed blessing for these organizations. On the one hand what they do now is becoming really important and so the stakes are really high. The government officials who used to try to explain to their colleagues what they doing at some CODEX meeting on import/export inspection systems or some similar issue, they would just get glazed looks. Now the work that these people do is really important.

As mentioned before, delegations are changing. However, on the down side because of this enhanced importance of these first technical bodies, there is a temptation to use these bodies to undermine the SPS through the back door. So if you could come up with an unscientific CODEX standard for food safety and that standard is automatically sanctioned through the SPS Agreement, because it is a CODEX standard you have diminished the whole scientific basis of the system. There is a real threat to the WTO system if people start misusing these scientific bodies for non-scientific objectives. This is a problem that the Mexican, U.S. and

Canadian governments are all facing. The NAFTA partners are cooperating to address this problem.

NAFTA Rules

As indicated, NAFTA came into being about the same time as the WTO negotiations occurred but there are some little differences here and there in the two agreements. On provisional measures, NAFTA is the same as the WTO. But on the WTO and provisional measures, when all of the science is not available, there is an obligation as the country putting the measure in place to seek out the information that you need so you have to actively collect it. Under NAFTA, the only requirement is to receive the information. It is not required to look for it but if someone shows up with new information, you have to take it into account. So the NAFTA obligations are actually less onerous than the WTO in that area.

On the principle of equivalence, NAFTA is much more ambitious. The NAFTA Agreement makes equivalence look like the future. It implies that equivalence will be easy to achieve, that there will be whole universe of equivalence agreements, and that the world will be much friendlier place with equivalence. As it turns out, equivalence has not been the silver bullet that people thought in 1992, 1993 and 1994. Canada and the United States, given all the billion of dollars of trade that goes back and forth in agri-food products, equivalence is lacking although some would say on meat that we have something like an equivalence agreement. In my view it would be stretching the definition to call that an equivalence agreement.

We have been negotiating with FDA and USDA on fish inspection and fluid milk and dairy products for about seven years. We are still not there, and it is not because there is any kind of hidden agendas and any animosity. The reason is that the problem is really complicated, and regulatory authorities are very reticent to say that there is “another way to cook a steak” than their way. That is just life in the regulatory business. This whole equivalence thing that was so promising in the early 1990s has caused people to come to realize that it is a lot more complicated and a lot less fruitful than people thought. But maybe in the future things will be

simplified. Scientific expert groups and science has got no where under the WTO.

The Role of Committees

In the WTO when a problem arises, a country can go to the committee, raise the issue, and try to get agreement from the rest of the membership. The good offices of the chair may be used to try to facilitate some solution between two countries. But, at the end of the day, the only thing that is *not achievable by international persuasion must be pursued by a legal panel. Legal panels are expensive, time consuming, and increasingly legalistic.* Every time there is a win from a panel, the other side appeals; that appeal will be appealed , and the dispute is dragged out. Usually by the end of the day after the dispute has been won, the industry has moved on to another market and the outcome really does not matter.

This is a cumbersome and expensive process. Within NAFTA there are several options on these disputes. NAFTA countries can either go through committees, to the Commission, or set up a group of technical experts who will provide a scientific opinion. This is a unique feature of NAFTA, one that we could perhaps use a more effectively in other agreements. There an amusing provision in NAFTA resulting from NAFTA being negotiated at the time of the trade and environment debate reaching its peak. A lot of non-governmental organizations were very suspicious of the trade agreements and they were particularly suspicious of the WTO. There is a provision in the NAFTA Chapter that if, say, Canada wants to take a dispute against the United States on some SPS issue to the WTO, the *United States has the right to insist that the dispute be handled within the NAFTA. This provision relates to any SPS measure or any environmental measure.*

Also on the environment, there is a list of environmental agreements at the beginning of the NAFTA which was meant at the time to make the agreement environmentally friendly. There were three from the Brazil Convention Montreal Protocol and citations for endangered species. If a NAFTA country introduces a measure pursuant to one of those agreements, it's deemed to be almost sufficient reason to be consistent with NAFTA.

There are certain checks and balances included but a lot of credence is given to measures taken pursuant to those agreements. That does not exist in the WTO.

BioSafety Protocols

There is also the Cardahan Protocol which is a odd agreement coming out of UNEP, and it covered trans-boundary movements of genetically modified organisms. At the same time in the IPPC context there were people negotiating an agreement on the basis of species. The two approaches are not quite the same thing but you would have thought that if the whole GM issue had been given to IPPC rather than UNEP, we would have had a very different agreement today. And part of the problem there was that the IPPC people did not talk to the UNEP people and vice versa. A lot of what is going on today is that people are making connections between international agreements which they had not even thought of five years ago.

We could have had a much better Biosafety Protocol under IPPC than under UNEP. But life does go on, we did not do it that way, and we are stuck with what we have. Canada signed the Biosafety Protocol; the United States has not signed it; Mexico did sign. However Canada has not yet ratified the protocol. We are going through domestic consultations to look at ratification. The United States is not likely to ratify the protocol since it has not ratified the convention on bio security or diversity which came out of the Rio Conference in 1992/93.

In terms of the United States and Canada, we are a huge exporter of GM commodities and products. We have an significant interest in this Agreement. This Agreement imposes all the obligations on the exporters and none on importers. In the WTO system, most of the obligations are on importers, so this agreement a complete flip of how we are used to thinking the problem.

Dispute Resolution/ Panels

The salmon dispute with Australia a few years ago is an interesting case of why panels are not necessarily a good idea. They cost a lot of money, they consume a lot of time, involve a lot of lawyers and a lot of

trips to Geneva. In this situation we won the first round action, we won the appeal and then we went to receive the congratulations from the Canadian salmon industry. They said we do not want to bother with Australia anymore; we have moved on to another country. Not much return to a hard fought battle.

I think it is fair to say that the panel system, in terms of supporting the science rule-based transparent system, there has produced good results. However, one of my messages today is *that panels should be avoided if the issue is resolving disputes*. In the SPS committee, at every meeting countries show up and pound the table about some country, say Australia, has this measure and it does not make any sense. Mexico will take a run at the United States about avocados or some thing else. Someone will take run at Canada about Karnal bunt. We all take a run at the EU for everything that they do. The Australians are being hammered all the time and so this happens at every meeting. There are twenty issues out there that get bounced back and forth. People seek the views and seek the support of other countries around the table. They seek to put pressure on the importing country to review the measure. Through that cut and thrust, over the last five or six years, almost one hundred issues have been resolved where the parties come back to the committee and say we have sat down and sorted it out. The number of panels is not a good indicator of how many disputes have been resolved because a lot goes on before you get to the panel stage. In our mind, *the SPS committee has been quite helpful, useful, and effective in resolving disputes.*

NAFTA Panels

One could say that there has not been a panel under NAFTA which may lead one to say that there have not been any disputes. That is an incomplete picture, with an incorrect conclusion. Despite the fact that there is a provision in NAFTA that it rather than WTO can be used if parties have a problem. It should be mentioned that there have not been any panels in the WTO concerning the three NAFTA countries in the last five years on SPS issues. Most recently though, the disputes settlement committee provisions were invoked for the Canada/ U.S. potato wart issue as discussed by Robert MacDonald elsewhere in this publication. Essentially Canada

requested consultations on an expedited basis. The United States responded on an expedited basis because of the perishability of the product. But that simply served to raise the issue to a sufficiently high political profile that it was made a priority; the scientists got together and sorted it out. So the dispute settlement provisions were invoked to simply underscore the importance of the issue to the parties concerned. Then it was resolved outside the context of NAFTA.

Committee and Working Groups On SPS Measures

When NAFTA was created, there was a committee created which has met every year since. It is a mechanism whereby issues can be addressed and resolved before going through the formal dispute settlement provision within NAFTA. *Within the committee structure, there are seven or eight technical working groups that report to the committee on a wide variety of issues in the SPS area.*

A new committee on food packaging labeling has just been created. This is something that reports to both the SPS committee and the committee on standards and related measures, TBT . Both committees have to agree at the same time to create this new committee. I think that the letters may have got lost in the mail but both committees have agreed to establish this working group. One of the first things that it is going to have to deal with is the whole question of GM food labeling. It is a kind of an issue that having a NAFTA type policy framework would be very useful. It does not make sense to have labeling standards in Mexico, Canada and the United States which are different given the amount of trade which goes back and forth. So the idea would be to set up some kind of common standard, or at least some kind of harmonized approach to that question. There are all kinds of mechanisms within NAFTA to deal with disputes and avoid them.

There is another unique aspect to NAFTA in the dispute settlement area, *the dispute resolution corporation*. It is a NAFTA instrument but it is run totally by the private sector. It is related *to ensuring that the provision of contracts are met*. There are about 750 or so companies, mostly Canadian and American to date that have joined this corporation. They use this

corporation to resolve contractual problems, more of a quality nature rather than a food safety nature. This is just another instrument that we have within the NAFTA context that other folks do not have. As mentioned before, the whole idea of expert groups, the SPS Committee can refer something to experts. *The Commission itself is a unique instrument. It is a committee of three ministers, and they can sort of resolve issues without going to a panel.* That process does not exist in the WTO system. So NAFTA has this political mechanism for resolving disputes.

I have mentioned the *NAFTA, TWGs (technical working groups).* Some of them have worked well, some have not. The animal health group is not very good and the plant health group, NAPO, has been very good. The veterinary drugs group, feed and the fruits, vegetables, dairy and processed food groups have not got off the ground well. Perhaps in the case of the latter, dairy, fruit and processed food, the area may be too big, the expertise may not have been tapped. We are looking within the NAFTA committee about whether these are the right groups, should they be changed, should some be deleted, others created or split some in two or three. This process is going on in Ottawa and other capitals now. But where they work, these groups have been very useful. They are really very helpful in, not necessarily resolving disputes, but in avoiding them. Again, it is not appropriate to look at official reports of NAFTA committees, panels, commissions to get a true picture of what is going on within the Free Trade Agreement.

Within our three countries, regulators are on the phone directly, or through our embassies, on a daily basis and hundreds of issues get resolved routinely at the technical level. Ministers never see them. NAFTA committees never see them. It is obvious that Canada has always worked closely with the United States but what the NAFTA has brought is that we are working increasingly closer with Mexico. It has certainly strengthened whatever was there before between Canada and, the United States has simply been strengthened by this initiative. For example, on foot and mouth disease we ran simulations of an outbreak, three countries together. Good results, good cooperation. We also cooperated on BSE in terms of doing risk assessments for each other so that the three of us do not have to do the

same risk assessments. So we share the risk assessment work. As another example, recently with Brazil, there was the U.S. government, the Mexican government and, the Canadian government all agreed on a line of action, based on a risk assessment which was done in Canada but which was approved in the other countries in terms of methodology. And so, the bottom line is looking at formal dispute settlement reports does not give you any indication at all as to how many disputes there are and how they have been resolved.

THE FUTURE

On the multilateral front, we have new diseases, new technologies and other change that will be a challenge. For example, recall that CODEX looks at food safety, the OIE looks at animal health issues, then something like BSE shows up. It is an animal health issue *and* a food safety issue. So CODEX and the OIE have reason to start to work together, but they represent two totally different cultures. CODEX is very transparent, OIE is not. The officials all meet in Paris once a year but no one on the other committee knows when they are in town. The OIE is becoming more transparent. They are having to deal with more topical issues, not necessarily a bad thing.

There are some threats out there in terms of weakening the scientific basis of the regulatory system, in the form of animal welfare and process-based labeling. For example, how far apart were the chickens when they laid the eggs? Soon those data may have to be placed on the product. That kind of issue, which is coming out of Europe, is troubling in the sense that it is very difficult to deal with. And the whole issue of precaution in the context of Article 57. You can take a measure as long as you get the new science. Europe is saying that is not enough. They want to invoke something else that is even more loose and opaque, and not clear, but undisciplined. They are being very tenacious on these issues, and they are trying to slip it in through on CODEX so that they can get a standard on precautions which they could then use to slide into the WTO Agreement. So this sort of games that are going on.

Biotechnology is a new challenge which cuts across about ten different international agreements. How do we make sure we respond to it in an efficient way? Another issue which is not really a concern within NAFTA but it is the whole issue of- -can developing countries implement the SPS Agreement? If the SPS Agreement is not going to be implement by three quarters of the members of the WTO, is this a good thing? We are trying to wrestle with getting technical assistance to countries so that they can support and implement a science-based regulatory system.

Within the hemisphere, there are some other challenges. Earlier discussion indicated that we may want to fine tune the technical working groups. Within the hemisphere to which NAFTA applies, the whole idea of trying to come up with some kind of consultative mechanism for SPS issues before 2005 and 2006 when the FTAA agreement is supposed to come into legal effect is upon us. There are many problems within the hemisphere of an SPS nature and the only place we can talk about them is in Geneva. A lot of the countries in the hemisphere cannot afford to go to Geneva, so where do we talk? Consideration is being given to this within the FTAA negotiations that are now ongoing.

That is it: a snap shot of the framework, all the components, how it works, the last five years and some of the challenges we see coming down the road.

Section 2

Three Commodity Studies

The objective of this section is to analyze cattle, fruits and vegetables, and grain disease issues in the context of their regulatory frameworks and trade disputes.

SANITARY BARRIERS AND INTERNATIONAL TRADE GOVERNANCE ISSUES FOR THE NAFTA BEEF MARKET

William A. Kerr

INTRODUCTION

> *One has a very hard time persuading a vet that animal disease is not an important phenomenon of veterinary science that also has financial implications, but is fundamentally an economic problem that has some veterinary science aspects.*[1]

Until recently, in North America livestock disease issues benefitted from a low profile. This low profile had continued over a considerable period. As a result, public veterinary services were able to go about their business with little public scrutiny and received little attention from politicians. Their work was perceived as being in the purview of scientific experts and best handled by knowledgeable professionals. Of course, the low profile was largely the result of the past successes of the public veterinary services in eliminating or effectively controlling a range of animal diseases in their respective domestic markets. If North America had been isolated as effectively from the international media as it had been from

[1] McInerney (1996), p. 301.

livestock diseases, probably little would have changed. Events that unfold in far off places, however, are now instantaneously on the evening news and the general public needs to be reassured that what they are witnessing on television cannot happen close to home.

There is little doubt that the revolution in electronic communication has altered the environment within which public veterinary services in North America operate. The stark and disturbing images of the burning carcasses of animals slaughtered in the fight to control foot and mouth disease in the United Kingdom in 2001 put the topic of animal disease control into the living rooms of millions of (urban) North Americans, whether American, Mexican or Canadian. When the last widespread outbreak of foot and mouth disease in a major developed country took place, it was reported on less emotionally charged newspaper pages as a problem of interest only to the farming community. The internet provides instantaneous information on almost any topic, including animal diseases, for anyone sufficiently concerned by the images presented on their televisions who wish to know more. Of course, the internet provides no check on the validity of the information presented and is open to misinformation provided by those with particular agendas. Public veterinary services and officials responsible for food safety have had to become much more proactive in their provision of information and in debunking misinformation.

There are, however, a large number of other issues that have raised the profile of animal diseases and food safety among members of civil society. The world is becoming globalized not only because of the revolution in electronic information, but also due to the increased movement of people and commodities arising from improvements in transportation. The large scale transatlantic movement of individuals raised worries about the ability of people to act as a vector for foot and mouth disease. Of course, the problems that British authorities had in controlling the recent outbreak of foot and mouth disease relative to past outbreaks arose because animals are now moved much longer distances and more quickly. The distances traveled are not solely the result of improvements in transport but also reflect economies of scale in livestock slaughtering.

The appearance of a new livestock disease- -bovine spongiform encephalopathy (BSE) with its apparent ability to affect human beings, new variant Creutzfeldt-Jacob Disease (vCJD), and a "made for media" common name of mad cow disease- -has also done much to put animal disease issues on the radar screen of many consumers. The difficulties authorities in the United Kingdom had in dealing with the evolving information concerning the possible linkages between BSE and vCJD, as well as the widespread perception that the veterinary service was captured by farming interests, had a profound effect on public confidence in the systems for animal disease control and food safety, in Britain and in the entire European Union (Gaisford et al., 2001). The scrutiny with which animal disease control administrations were subject to in the EU in the wake of BSE had some spillovers in North America. In addition, there were more direct personal effects of BSE in North America such as the prohibition on giving blood for individuals who had spent time in Britain- -again tending to increase the profile of animal disease concerns. Further, the suggestion that BSE may have resulted from feeding animal products to beef cattle raised suspicions among urban consumers regarding the ethics of production methods used in intensive livestock operations and tied animal management directly to food safety.

Of course, the other major change affecting the profile of the regulation of animal industries has been rising concerns over food safety. As the veterinary profession has a role in food safety inspections for meat products and residual traces of drugs and hormones used to treat animals, as concerns over the safety of food have risen, so has the level of scrutiny to which regulators have been subjected.

The bottom line of all these changes is that animal diseases and food safety have now become important issues on the political agenda, particularly in Europe, but also in North America. Governments are re-evaluating their animal disease and food safety systems and are attempting to strengthen them so that confidence is maintained or enhanced.

Other forces have been at work that affect the regulatory administrations for animal disease control and the safety of products derived from

animals. Improved transportation, refrigeration, packaging and cold chain product management has meant that fresh (chilled) livestock products can be delivered anywhere in the world at a competitive price- -the manifestation of globalization in the livestock industry (Kerr, 2001a). These changes have meant that domestic protocols and procedures that previously had only limited international impacts began increasingly to act as trade barriers. Rising concern over the use of sanitary and phytosanitary (SPS) regulations as barriers to trade led to the negotiation of the Agreement on the Application of Sanitary and Phytosanitary Measures administered by the World Trade Organization (WTO) at the Uruguay Round of General Agreement on Tariffs and Trade (GATT) negotiations. One of the major changes for the administration of animal diseases was the provision in the SPS Agreement to allow for sub-national *disease free zones*. There were also provisions in the Canada/U.S. Trade Agreement (CUSTA) pertaining to the removal of border inspections (Hayes and Kerr, 1997). The stronger dispute mechanisms embodied in the WTO have made it more difficult for countries to ignore their international trade obligations (Gaisford and Kerr, 2001). The high profile WTO dispute over beef produced using hormones further raised the profile of SPS issues in the international sphere (Roberts, 1998).

These changes in the international environment have also served to increase the political profile of animal disease and food safety issues because they raise questions of sovereignty. A further deepening of North America economic integration will require a greater degree of cooperation and harmonization among those charged with controlling animal diseases and ensuring the safety of food products derived from animals (Hayes and Kerr, 1997). The increasing political profile of animal disease and food safety issues raises the issue of sovereignty and the relationship between border measures and the cross-border management of animal diseases and food safety.

THE TROUBLE WITH BORDERS

If we start from the perspective of an international trade economist rather than that of a policy maker charged with the management of an

animal disease or a threat to food safety, the use of border measures[2] to restrict trade suggests, first and foremost, opportunities to extend economically motivated protection to domestic vested interests. Opportunities to provide economic protection can arise from the "illegitimate" imposition of border measures or the abuse of border measures put in place for "legitimate" reasons. It has long been recognized that sanitary regulations justified on the basis of human or animal health can be used to provide economic protection. While a policy maker charged with ensuring health or safety may perceive border measures as one of the tools available to accomplish their mission, trade economists see border measures as opportunities for protectionism. Allowing those who are charged with providing health security or safety to make policy in isolation will likely mean that the trade implications of their actions will be ignored. On the other hand, those making trade policy need to understand how trade measures can be used to bolster science-based animal health and food safety regimes. If they do not, opportunities to better manage threats in these areas may be lost in the pursuit of the benefits of trade. Of course, good public policy making requires both objectives be taken into account when putting border measures in place. In general, the international regimes put in place to regulate animal health and food safety represent reasonable compromises between the two objectives. The policy environment is dynamic and the rising profile of animal health and food safety issues over the last few years, and the politicization of the issues that naturally followed, has meant change. As a result, there has been some progress and some slippage in the trade facets of the public policy regimes addressing these issues.

Figure 1 can be used to illustrate the problem of borders from the perspective of a trade economist. The example illustrated in Figure 1 is the more complex case of animal disease management although much of the discussion could be applied to border measures put in place for food safety reasons as well. To think about the question of animal disease management from the perspective of an international trade economist, let us begin

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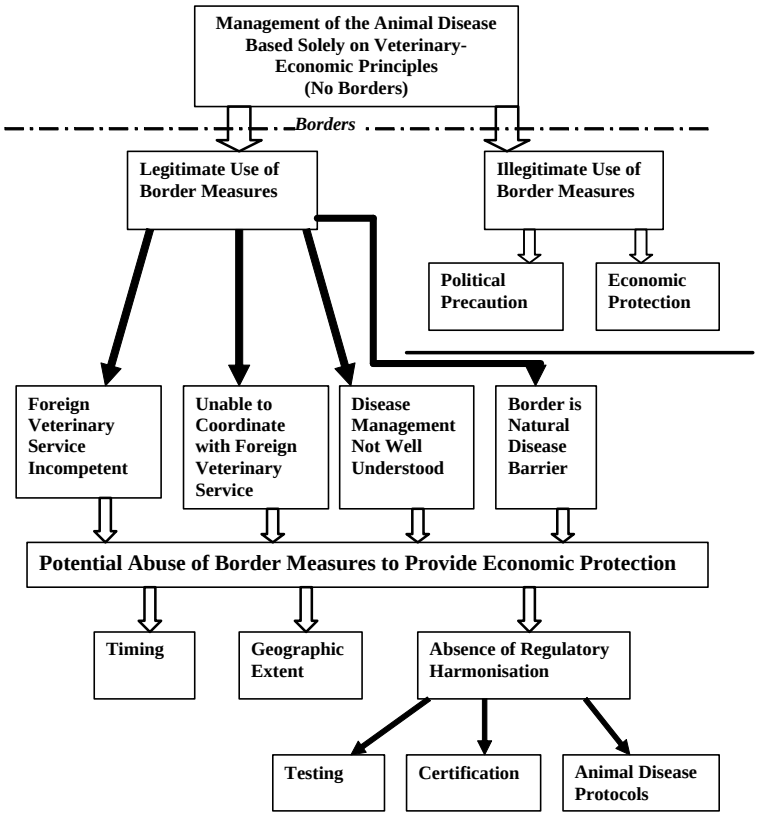
[2] The term "border measures" is used broadly in this paper and may include measures that are not applied directly at the border, e.g. inspection of foreign slaughter plants or requirements for veterinary certification that, while not applied at the border, hinder the cross-border movement of livestock or meat products.

Figure 1: Animal Disease Management and Border Measures.



with a world without borders- -or how the disease would be managed within a single unified state.[3] In this "no borders" case, the veterinary service would manage the disease on the basis of the dynamics of the disease within the animal population alone. For example, bans on the movements of animals or animal products would be based on the requirements of scientific management. Animals in areas of low risk would not be affected by

[3] The assumption of a unified state is made to abstract from the administrative borders and shared governance that arise in federated countries with state or provincial administrations.

the policy and commerce would not be disrupted in those areas. While there may be arguments among members of the veterinary profession regarding the degree of precaution necessary to ensure that a disease is managed, commerce in animals and animal products will not be artificially restricted.

In the science of animal disease control, international boundaries are artificial constructs -- mere lines on a map that have no bearing on the dynamics of a disease in an animal population. In a sense, either the lines on the map are non-binding on the scientific management of the disease or they represent an artificial constraint on scientific management.[4] In either case, they should have no bearing on the management of the disease. Borders, however, divide government responsibilities and controlling borders is a central aspect of sovereignty. Sovereignty means that governments guard the right to impose border measures closely, which does not mean that they will not, at times, voluntarily agree to limit their control of borders by international agreement. Relaxing sovereignty in this manner is the essence of trade agreements such as the WTO and the NAFTA. However, what is voluntarily agreed to can be abrogated or re-negotiated. Even in the European Union, where countries have agreed to eliminate border measures, individual member states retain the ultimate right to leave the EU and re-assert their sovereign right to control their borders.

Border measures are policy instruments used to eliminate, to restrict or to tax the movement of goods or services into (or out of) the territory of the country imposing them. The imposition of any border measure has the potential to confer an economic benefit on some group in society.[5] In international trade, it has typically been domestic producers of goods or services that compete with imports that benefit from protection

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[4] Of course, it may be that by chance the international boundary conforms to a natural place to initiate disease management activities on the basis of good science. This case is dealt with later.

[5] Even export controls will help certain groups, e.g. domestic consumers of the product who benefit from the lower price that reduced exports will bring. Of course, any change in border restrictions will create both winners and losers—higher prices for producers also mean higher prices for consumers.

and, thus, have an incentive to ask for protection (Gaisford et al., 2001). In international trade theory, the imposition of border measures is generally seen as welfare decreasing.[6] Government trade policy generally represents a balance between the desire for the benefits of free trade and the political necessity to extend protection, at times, to domestic vested interests. The ability of governments to capriciously impose trade barriers, however, significantly increases the risks for firms that wish to engage in international commerce. As a result, they will underinvest in those activities and hence, the potential benefits of trade are not realized. This unrealized potential represents the major externality of border measures and considerably raises the costs of protectionism beyond the direct welfare trade-off made in a market where the decision to extend protection has been made.

International trade agreements can be seen as attempts to reduce the level of risk arising from the imposition of trade barriers by governments for firms that wish to engage in international commerce. Risk reduction is accomplished by mutually agreeing to limits on the ability of governments to impose trade barriers and by making the circumstances under which they can be imposed transparent to those that wish to make investments in international commercial activities. In other words, trade agreements are designed to reduce the long-run negative externality associated with the imposition of trade barriers. Trade agreements recognize the need, at times, for countries to respond to domestic pressure for protection and governments are always afforded an escape clause whereby they can impose trade barriers if domestic political pressure is sufficiently great- -but there may be cost associated with doing so.[7] Hence, international trade agreements represent a political compromise between the need of firms that wish to engage in international commerce for strong rules pertaining to the imposition of trade barriers by governments and the need of governments, at times, to extend protection to domestic vested interests (Kerr and Perdikis, 1995).

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[6] Leaving aside academic arguments such as those pertaining to ‘optimum tariffs.”

[7] For example in the WTO countries are always allowed to ignore their commitments but the cost is that the Member Country injured by such an action is entitled to compensation or has the right to retaliate by imposing trade barriers on the goods of the offending country.

Governments, having voluntarily agreed to limit their ability to impose trade barriers (for example to eliminate all tariffs in NAFTA, and more importantly, never to impose them again when faced with political pressure from domestic vested interests looking for protection) will seek to find ways to provide protection without incurring the cost. As governments have, over time, agreed to limit their use of traditional border measures such as tariffs and import quotas, they have increasingly turned to non-tariff barriers to satisfy demands for protection. Non-tariff barriers tend to be much less transparent than traditional border measures and more complex because they often have a legitimate domestic policy goal as their rationale- -they come as shades of grey rather than being black or white. Border measures put in place for the purposes of animal disease management and food safety concerns fall into this category and hence, are viewed with suspicion by international trade economists.

Returning to Figure 1, once there is an animal disease problem in, for example, a livestock or meat exporting country (meaning that borders now exist in our model) opportunities are created to provide protection. In the case of an animal disease, two possibilities exist - -border measures can be imposed for illegitimate reasons or for legitimate reasons. Let us deal with illegitimate border measures first. These are found on the right side of Figure 1.

Illegitimate Use of Border Measures

Traditionally, the reason underlying the imposition of illegitimate border measures is to provide economic benefit to domestic producers that arises from protection from imports. The most obvious way to accomplish a benefit is to impose a barrier on imports when there is no or minimal risk such as a prohibition on imports into a country with a temperate climate from a country with a tropical disease that cannot survive in a temperate environment. The potential abuse of sanitary regulations has long been recognized. According to the web site of the Office International des Epizootics (OIE), the international organization that establishes the standards for trade in animals and animal products:

> *The ratification of the 1924 Agreement creating the OIE reflects a desire clearly expressed by the Secretary General of the League of Nations that year. He invited various governments to designate veterinary experts "to examine the health guarantees that could be provided by cattle-exporting countries, the facilities that importing countries could accord on the basis of these guarantees and, in general, to determine the most effective means of enabling statutory veterinary measures to be applied, taking into account the economic interests of exporting countries and without prejudicing the interests of countries wishing to protect themselves against animal diseases.*

The Economic Committee of the League of Nations thus, in 1924, proposed to facilitate international trade in animals and animal products to try to reverse the *often highly overt tendency of numerous countries to use sanitary arguments purely for the purpose of economic protection* (emphasis added).[8] It should be remembered that the early part of the 20th century was a period prior to governments having encumbered themselves with international trade agreements and, thus, the unilateral imposition of tariffs and import quotas was easy. Even in this era, there was considerable temptation to impose trade barriers in the name of sanitary concerns for the sole purpose of providing economic benefit.

The second illegitimate reason for the imposition of border measures in relation to animal diseases is what can be termed "political precaution." It has come to the fore recently as a direct result of rising awareness of these issues among civil society and the their subsequent politicization.[9] Political precaution arises when politicians are being pressured to "do something, or to be seen to be doing something" in the face of strongly expressed concerns by members of civil society even when risks are very

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[8] Downloaded from www.oie.int/eng/OIE/en_histoire.htm

[9] This statement is not to suggest that political precaution is a new phenomenon, only that it does not become an important reason for the imposition of trade barriers unless an issue is politicized.

low or largely speculative.[10] A prominent example might be the EU ban on the importation of beef produced using growth hormones where the concerns relating to human health are speculative (Kerr and Hobbs, 2002).[11] A similar argument might be made regarding the European Union's evolving policy toward genetically modified organisms (Gaisford et al, 2001). Politicians fearing an adverse voter reaction either from "inaction" on their part or because voters do not have a sufficient "comfort level" with the existing scientific consensus, are driven to imposing border measures even in the absence of any group seeking economic protection.[12]

The restructuring of the U.S. food safety system in the 1990s was, in part, motivated by political precaution. There was rising consumer concern with food safety, a subsequent politicization of the food safety issue, the government reacting to do something and the threat to impose border measures on imports from NAFTA partners if their products did not conform to the new U.S. regulatory regime. The failure in the regulatory regime in the United States was not perceived as a failure of science, but rather a private sector failure in the meat industry (Spriggs and Isaac 2001).

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[10] Isaac (2002) provides the following taxonomy of risks: "Another important debate associated with the Risk Analysis framework involves the type of risk targeted where three types may be identified: recognizable risks, hypothetical risks and speculative risks. . . . Recognizable risks can be identified through experience (data) and the application of accepted analytical methods such as statistical inference and probability theory, and they include a clear causal-consequence mechanism. Hypothetical risks lack experience or data, but, with the help of assumptions and/or likelihood functions they can be assessed within an accepted analytical method. Speculative risks lack experience, data, a causal-consequence mechanism and an accepted analytical method for assessment. They are logical possibilities- -irrefutable, but untestable as well."

[11] North Americans tend to perceive the beef hormone ban as purely "economic protection". While the ban provides positive economic externalities for some EU interests, the primary motivation appears to be "political precaution" (Gaisford and Kerr, 2001).

[12] For example, there seems to be little pressure for economic protection from either the biotechnology industry or agricultural producers in the European Union (Gaisford et al., 2001). It is easy to see how civil society's "comfort level" with the existing scientific consensus on animal diseases can be reduced. From the perspective of a politician, the reversal of the official "scientific" position on BSE represented a clear electoral danger.

Thus, it did not lead to a decline in the public's "comfort level" with the scientific consensus as was the case in the European Union. Removing the threat of U.S. trade barriers, however, did impose considerable costs on NAFTA partners. It has also meant that the U.S. system may now diverge to some degree from the international approach to food safety (Spriggs and Isaac, 2001). According to Spriggs and Isaac for the United States:

> *The major internal driver for change has been a series of well publicized food contamination crises. These [crises] have combined to rock consumer confidence in the safety of the U.S. food supply, but more importantly, they have led to a political motivation to restructure the food safety system.*[13]

They go on to discuss the Canadian situation:

> *With a significant reliance upon export markets, the Canadian beef industry and the food safety system are well aware of the structural changes occurring in important export markets. These [changes] include both the legislated and market regulations adopted as part of the foreign food supply chain. For instance, recent domestic crises in the United States have motivated structural change in the U.S. food safety system which, in turn, has altered the market access rules for Canadian beef products. In order to ensure market access and industry competitiveness, the Canadian food safety system has had to restructure in a manner at least equivalent to the restructured U.S. system.*[14]

Politicized unilateral rule changes that affect market access are the antithesis of the surety sought in trade agreements such as NAFTA and the WTO.

The imposition of trade barriers for reasons of political precaution affects exporters in exactly the same way as barriers put in place to pro-

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[13] Spriggs and Isaac 2001, p. 29.
[14] Ibid., p. 56.

vide economic benefits to domestic producers. If the ability to impose trade barriers for reasons of political precaution is unconstrained, or not transparent, then risks are created for exporters and investments in international commercial activities are reduced.

Legitimate Use of Border Measures

While sanitary arguments can be used to justify the imposition of illegitimate trade barriers, there are also legitimate reasons for a country to put border measures in place. These are found on the left side of Figure 1. The problem with the legitimate imposition of border measures from the point of view of a trade economist is that they may be open to abuse to provide economic protection either in their design or their application.

Borders divide administrative responsibilities. Public veterinary services are constituted nationally. If for example, the professional veterinarians in an importing nation consider the veterinary service and/or its co-requisite enforcement administration in an exporting country to be incompetent, then the importing country has a legitimate reason to impose border measures. Of course, the type of border measures that typically restricts commercial flows of livestock or meat products may not be effective in controlling disease. For example, in the case of "blue tongue" the vector may be wild ungulates that do not respect "official" border crossings. The optimal animal strategy would have little to do with controlling borders. In other cases, border measures, while sub-optimal from an animal management strategy, may provide the best line of defence when faced with an incompetent foreign regulatory regime.

Even if the foreign veterinary service is competent, there still may be a legitimate reason to impose border measures. If it is not possible to co-operate with the foreign veterinary service, either because of other political concerns, e.g. Taiwan and China, or a clash of professional cultures among the veterinary services, then border measures may be an appropriate way to manage a threat. If for example, an agreement cannot be reached on the exporter's veterinary service issuing of export certificates, then border measures to require quarantine or testing upon import may be appropriate disease management measures.

If there are differences on how to effectively manage a disease, i.e. a scientific consensus does not exist, the national veterinary services in different countries may not agree on the best management strategy to protect their domestic interests. There may be legitimate disagreements based on the best available scientific information. In these circumstances, countries must have the legitimate right to protect their own interests by acting in a precautionary fashion. This "incomplete information" rationale for the imposition of trade barriers is well accepted and embodied in the SPS (Kerr, 1999).

Finally, border measures may be justified if the border, by coincidence, is where a veterinary service would choose to impose a barrier to movement for strictly animal management reasons. Probably the most obvious examples are oceans or other large bodies of water. Water is unlikely to be the barrier, however, along the arbitrarily drawn U.S./Canada or U.S./Mexican border. The efficacy of a natural boundary should never be confused with the administrative convenience of a national frontier. As national frontiers exist, they become administratively convenient places to implement disease management strategies. The problem with seeing national borders as administratively convenient is that it ignores the economic cost border measures imposes on exporters. Not "to see" national frontiers can be a major challenge for those charged with managing animal diseases.

As suggested above, once the decision to impose regulatory barriers is made, then those barriers are open to abuse both in their design and in their implementation. Returning to Figure 1, there are a number of ways that border measures may be used to provide protectionist economic benefits in excess of those that would naturally arise from the imposition of the barrier strictly for disease management purposes. The avenues for abuse pertain to timing, geographic extent and the absence of regulatory harmonization.

In one case, timing relates to when action is taken to impose border measures once an exporter has a disease problem where border measures are appropriate. For example, a decision to close the border to im-

ports may be taken before the disease in the exporting country is confirmed. More open to abuse, however, may be the timing of re-opening the border once a threat has passed. Veterinarians' primary concern is preventing the disease outbreak or limiting its extent, not the facilitation of international trade. Thus, while they may not be open to "other" influences when faced with a new threat, once the threat is passed, they have little interest in whether the trade barrier remains in place. In fact, the decision to re-open the border may lie with other officials subject to receiving a go ahead from the veterinary service. Certainly, there is considerable suspicion in Canada that this was the case in the recent closure of the U.S. border to potatoes originating in the Canadian province of Prince Edward Island. The rate at which countries receive the "all clear" in cases of foot and mouth disease has also been contentious. The UK government feels abused in this fashion by some other members of the European Union in the case of BSE.[15]

The geographic area from which exports are banned, or into which imports are restricted, can exceed those suggested by prudent animal disease management. Exports of products from an entire country may typically be banned even if the outbreak is localized and the veterinary service of the exporting country has the problem contained. Imports into an entire country may be restricted even when a disease cannot thrive in large areas of the importing country. The absence of regulatory harmonization can lead to abuse of border measures in aid of economic protection. This problem can manifest itself in a number of ways. For example, if testing procedures are not harmonized, requiring specific tests prior to export may prohibit exports if the tests are not available in the exporting country or may raise costs if additional, but redundant, testing is required.

The certification of export facilities, the effort required in the certification process for live animals for export, the verification of certificates and border inspections are all open to abuse (Hayes and Kerr, 1997; Kerr, 1988a; Kerr et al., 1986). Part of the problem with certification and related barriers is that the rules cannot be sufficiently well defined to limit indi-

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[15] This may however, be a case of "political precaution."

vidual latitude. As a result, control of abuse may require removal of the measure entirely.

If animal disease protocols are not harmonized, then countries may be able to impose barriers to trade based on differing standards or procedures. One recent example is the decision of Japan to ban imports of U.S. poultry products in early 2002 in response to an outbreak of avian influenza (AI) in Pennsylvania. According to Shane (2002):

> *Japan's actions are contrary to standard practice, as the strain of AI in Pennsylvania is deemed low pathogenicity. Unlike other international authorities, veterinarians in Japan make no distinction between low and high pathogenicity, despite the differences in the epidemiological and consequences of infections with the different strains. Only AI of high pathogenicity must be reported to the Office International des Epizootics in Paris.*
>
> *. . . There is, however, substantial evidence that low pathogenicity strains of AI can mutate into highly pathogenic forms, as seen in Pennsylvania in 1984 and 10 years later in Mexico.*
>
> *USAPEEC [United States of America Poultry and Egg Export Council] spokesman Jim Sumner said, "Japan has clearly demonstrated its protectionist policies with this action—and we must encourage our government to take all steps necessary to see that Japan reconsiders its decision."*[16]

While the taxonomy of opportunities for abuse of legitimate border measures presented in Figure 1 may not be comprehensive, a wide range of protectionist opportunities are suggested. Non-tariff barriers to trade are only restricted by the inventiveness of the bureaucrats charged with devising them and hence, are difficult to anticipate once border measures have a legitimate raison d'Ltre.

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[16] Shane 2002, p. 1.

LIMITING OPPORTUNITIES FOR THE MISUSE AND ABUSE OF BORDER MEASURES

It is not possible to discuss control of the misuse and abuse of border measures in NAFTA without referring to multilateral initiatives, particularly the OIE because it has been recognized as the international standards setting authority by the WTO; regional trade agreements such as NAFTA are expected to conform to the WTO disciplines. Thus, NAFTA may go further in a particular area than is required by its WTO commitments but it cannot contradict them. It appears that in many areas affecting trade in beef cattle and beef, the NAFTA partners have not been willing to exceed the OIE/WTO norms. This unwillingness suggests that there is little commitment to deepening the NAFTA relationship contrary to what was expected when the NAFTA was signed (Clement et al., 1999).

As suggested above, a primary rationale for the establishment of the OIE was to prevent the illegitimate use of border measures put in place under a sanitary justification. The method of control is simply requiring that sanitary barriers have a scientific basis and that the country wishing to impose the barrier has undertaken an analysis of the risks. The WTO dispute panels have upheld these dual requirements in the North American/ European Union dispute over the import of beef produced using growth hormones (Kerr and Hobbs, 2002). These types of trade barriers have not been a major problem for trade in cattle and beef among NAFTA countries. Trade barriers imposed for reasons of political precaution have proved much more difficult to control in international forums because the requirement for a scientific rationale and a demonstrable risk are trumped by sovereignty arguments. According to Layard (1997):

> *Though the proponents of free trade often wish to minimize regulation, this article will argue that the BSE crisis in particular, demonstrates that whether desirable or not, national sovereignty is still vitally important to the United States both legally and politically.*[17]

[17] Laynard 1997, p. 144.

While there has been some evidence of political precaution in NAFTA countries, as yet there has been no large scale playing of the sovereignty card. However, there has been no major crisis in the area of animal health or food safety. As there are no international controls on political precaution, sovereignty is likely to be exercised in a time of crisis. In theory, the European Union has much stronger controls on the exercise of sovereignty than has yet been envisioned in NAFTA, yet sovereignty was snatched back quickly from the European Union Commission in both the case of BSE and the outbreak of foot and mouth disease in Britain in 2001.

This example suggests that it is important, particularly for Canadian and Mexican veterinary and food safety administrations, that they be diligent in preventing a crisis and in ensuring that confidence in the scientific consensus remains high. Given the heightened political profile of food safety and animal diseases, a crisis could lead to measures with serious long-term ramifications for beef exports.

Internationally, political precaution is at the heart of the debate between the European Union on one side and the United States and Canada among others on the other side, over the inclusion of the "precautionary principle" in international trade agreements and multilateral environmental agreements. This principle, stripped of its pseudo-scientific rhetoric, is nothing more than a retreat from decision making on the basis of scientific principles so that political precaution is allowed to dominate decision making (Isaac et al., 2002). While the recent experience in the EU can explain the move away from science-based decision making, and it may be good politics, it is bad trade law. Allowing political factors to dominate the ability to impose border measures for reasons of human and animal health opens the system for capture by other (economic) interests and greatly increases the risks for firms wishing to invest in international commercial activities.

Considerable progress in the control of abuse of legitimate border measures has been made in recent years, but a great deal remains to be done. The abuse of timing has as yet been little addressed. As suggested above, the abuse of timing is asymmetric. While there may be cases where trade barriers are imposed too quickly, it is unlikely that such "jumping the

gun" is motivated by economic protectionism.[18] On the other hand, decisions regarding when to lift trade restriction imposed for human or animal health reasons may well be influenced by economic protectionism. The OIE puts no time limits on how fast a country must lift its trade restrictions once the embargoed country has informed the IOE that its disease status has returned to a state where trade no longer presents a risk. Ongoing debates over the status of foot and mouth disease in some Latin American regions may be an indication of timing abuse.

Over the last few years the greatest progress has been made in the area of the "geographic extent" of protection, that is allowing for sub-national zones to be cleared to engage in international trade, instead of having to wait until an entire country receives a clean bill of health. This step was a significant breakthrough, important particularly for large countries with considerable variations in their climatic regimes such as Canada, the United States and Mexico. The move to allowing sub-national disease free zones has, for example, already considerably liberalized U.S./Canadian trade in feeder cattle. For example, A Record of Understanding between the Governments of Canada and the United States regarding the Area of Agricultural Trade was signed in December 1998. That record involved a number of provisions that directly affect livestock trade. The most successful of these was the Restricted Feeder Import Program (RFIP) which facilitates the export of U.S. feeder cattle into Canada. The Record invited additional U.S. states to participate. Further, Canada initiated a review of regulations governing the import of animals with a focus on regionalization (i.e. allowing imports from some regions even though other regions of the United States do not satisfy Canada's health regulations for imports). The Record also works toward addressing inconsistencies between U.S. state and federal brucellosis and tuberculosis requirements as well as co-operating with the Canadian Food Inspection Agency. Based on a scientific risk assessment, Canada modified its swine quarantine regulations to allow swine for slaughter to be imported from states that are pseudorabies free.

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[18] Of course, it may be a manifestation of "political precaution."

The RFIP -- originally the Northwest Feeder Project -- has been a considerable success. It allows imports of feeder cattle from low risk areas for blue tongue and anaplasmosis in the United States. It led to a rapid rise in imports of feeder cattle into western Canada. This type of co-operation ties the Canadian and U.S. markets closer together and gives U.S. cow/calf producers a stake in an open border, and hopefully will make it more difficult for groups such as R-CALF (an upstart producer group behind the 1998 U.S. trade actions against Canada and Mexico) to obtain standing. Lynn Cornwell, then the President-Elect of the National Cattlemen's Beef Association publically stated:

> *. . . I believe in trade. In fact the highest priced feeder cattle my family has ever sold went last Friday to Alberta feeders.*[19]

This comment does far more to ensure an open border than any formal agreement. Further, the major beef packers operating in western Canada are U.S.-owned and will not want their cattle supplies jeopardized by Canadian retaliation- -even unofficial tightening of red tape- -for future contingency protection harassment from U.S. producer groups. Moves to expand the RFIP are being made. Industry groups have been co-operating with these initiatives. As Young (2000) suggests:
Recognition of the degree of interdependence between the U.S. and Canadian industries may motivate formulation of an industry group to pursue joint interests. These actions are likely to facilitate dispute avoidance.[20]

The process of regulatory harmonization is extremely slow both at the OIE and at the Codex Alimentarius Committee (Codex), which handles human health issues. Such a slow pace however, should not be unexpected given the large number of countries involved and their different levels of development and technical capacity. One of the reasons for having regional trade agreement such as NAFTA is to escape the "large numbers" bargaining problem so that progress can be more rapid (Yeung et al., 1999).

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[19] National Cattlemen's Beef Association, August 29, 2000. Downloaded from www.beef.org/newsroom/ncba/ncba00_0829a.htm.
[20] Young 2002, p. 33.

Unfortunately, NAFTA lacks the necessary mechanisms to force progress. There are no deadlines or closure mechanisms built into, for example, the NAFTA Committee on SPS measures. As a result, it can be a place simply to talk and raise issues rather than to resolve them. A reading of the recent minutes of the NAFTA Committee suggests that some progress is slowly being made but that a great deal of inertia exists. Given that non-trade ministries have little interest in concepts such as "deepening economic integration," they give them only a low priority which means there are large transaction costs like "fulfilment costs" that are faced by private sector interests that wish to move the agenda forward (Hayes and Kerr, 1997). As a result, NAFTA looks very much like a "one-shot" deal rather than a mechanism for promoting further economic integration among the member countries (Kerr, 2001a).

In 1988, I wrote the following on the Canada/United States Free Trade Agreement (FTA) and the livestock sector with its second stage negotiations (Kerr, 1988b,):

> *While the FTA will mean a considerable liberalization of the trade in livestock and meat products, the agreement also leaves many important points for future negotiation. In particular, . . . the harmonization of technical standards remains to be determined. The negotiations surrounding those issues will require considerable forethought and determination if effective trade liberalization is to be accomplished.*[21]

These same comments apply in 2002 and still reflect the NAFTA reality. The "Second Stage Negotiations" continue.

One other aspect of NAFTA needs to be discussed- -the dispute settlement mechanism. NAFTA countries have the choice of selecting either the NAFTA dispute mechanism or that of the WTO. The NAFTA dispute mechanism has a number of aspects that may favour the United States.

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[21] Kerr 1988b, p. 902.

As a result, Canada and Mexico are more likely to choose the WTO mechanism in the case of a dispute over sanitary issues with the United States, while the United States is more likely to choose the NAFTA mechanism (Kerr, 2001b). This dichotomy suggests that there will be less reliance on NAFTA in the future, both for negotiations on sanitary issues and for the settlement of disputes.

CONCLUSIONS

While the original NAFTA negotiations did much to promote the integration of the North American cattle and beef markets, further deepening of market integration remains illusive. While there have been no major crises in the area of sanitary risks among the NAFTA partners from an international trade perspective, market access is neither secure or predictable. Opportunities for putting what have been referred to in this paper as illegitimate border measures in place remain and "legitimate" border measures are open to abuse. From a trade perspective, having border measures available for use suggests the need for ongoing vigilance to prevent their capture by non-sanitary- -economic- -interests.

One of the more worrying trends that has arisen from recent animal disease problems, primarily in the EU (BSE in particular), is that members of civil society have rising concerns regarding animal and food related human health issues. As a result, issues that have largely been left in the domain of veterinary and human health professionals are becoming politicized. The consequence is that "political protection" issues may increasingly define the trade agenda for livestock and meat products. This new element of public decision making will increase the level of risk faced by those who wish to invest in international commercial opportunities in these products.

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U.S.- MEXICO FREE TRADE: ANIMAL HEALTH ISSUES

G. Gale Wagner

INTRODUCTION

Successful free trade between the U.S. and Mexico requires judgments about the hazards posed by infectious disease agents and ectoparasites from Mexico to the livestock and poultry industries in the United States. Tuberculosis, classical swine fever (hog cholera), Newcastle disease of poultry, and babesiosis are examples of diseases which are serious threats. Ectoparasites such as ticks seriously affect the livestock industry by the diseases they transmit and the debility caused by their infestation. The diseases and ectoparasites of most concern at present are:

- tuberculosis — affecting cattle and deer;
- brucellosis — in cattle, goats and wild ungulates;
- exotic Newcastle disease (END) — in fowl;
- classical swine fever — affecting pigs;
- babesiosis — in cattle, horses and deer;
- *Boophilus* spp. (ticks);
- epidemic Venezuelan equine encephalomyelitis — affecting horses;
- vesicular stomatitis — in cattle, horses and pigs;
- fowl typhoid — in fowl;

- pseudorabies — especially in feral pigs; and
- ehrlichiosis — affecting cattle, sheep and goats.

The risk to U.S. agriculture posed by the agents of each of the above diseases in Mexico should be assessed by a systematic and objective procedure. It should also be evident that animal diseases endemic to the United States (avian influenza in poultry, bluetongue in cattle, sheep and goats, and scrapie in sheep are examples) could do immense damage in Mexico. Finally, several dangerous diseases and ectoparasites have been excluded from Mexico and the United States, but are present in Central or South America. These include aftosa (foot and mouth disease), screwworm and trypanosomiasis. Both the United States and Mexico have a major interest in keeping these agents at bay. Thus, risk assessment and planning toward disease control and elimination should include our counterparts in Mexico.

INFORMATION NEEDS AND STRATEGIC PLANNING

Studies of the economics of animal diseases are limited. Estimating losses by calculating the market value of severely ill or dead animals is misleading; there are far more biologic and economic interactions in the system. A better procedure is to develop models of disease and ectoparasite behavior based on field observations, which assess the risk of disease introduction and the relative susceptibility of the U.S. livestock and poultry populations. With such information, economic models can then predict the impact of a disease outbreak, giving more realistic costs that reflect the effects of supply changes on consumer price. With such models, the economic benefit of targeted research on disease and ectoparasite control (and perhaps elimination) measures can be predicted.

The relationship between U.S. veterinary regulatory authorities and their Mexican counterparts has focused on three areas: trade policy, regulatory issues and research collaboration. Animal health authorities from both countries meet quarterly to discuss mutual concerns. Their goal for food-animal trade is not only free trade but safe trade. Neither country has

any intent to ignore risks or to lift restrictions which have a valid biologic basis.

The current goal in strategic planning for the binational committee (animal health authorities and government officials from both countries) is twofold; to encourage Mexico to design a national plan of infectious disease and ectoparasite control and eradication that will compliment similar efforts in the United States, and to work together to provide the scientific knowledge needed to eliminate the threat that infectious diseases and ectoparasites pose to the livestock industries in both countries. Issues of equivalent export certifications, harmonized test protocols, designated disease-free zones, environmental protection, etc. all are integral to the combined planning effort. A good example of a binational program is the bovine TB/brucellosis program which currently promulgates harmonized test protocols and designated disease-free zones within participating states.

A critically important role is played by outside groups, including state agencies, the food animal and food animal product industries, and universities. There is the sense that the U.S./Mexico binational committee is addressing specific, high priority emerging disease issues relative to trade agreements. Clearly, the universities are expected to be involved as centers of excellence to identify animal health investigative, diagnostic and research issues and needs.

Risk Assessment

Risk Assessment starts with an evaluation of the risk of introduction of any disease agent currently exotic to either country. We need to know where and when a particular disease is active and how often an effective link exists between the disease location and susceptible animals in Mexico and/or the United States. There are many diseases that are considered endemic, that is, the disease agents are sometimes active, sometimes inactive, usually depending on the concentration of susceptible animals, or the number of vectors (such as ticks). There might be a “region” in northeastern Mexico, for instance, where a disease babesiosis is considered endemic. The larger the region and the closer it is to the United States, the greater the chance that a diseased animal (asymptomatic reser-

voir) or infected vector (such as a tick), will complete the linkage. The 1971 outbreak of Venezuelan equine encephalomyelitis (VEE), for instance, occurred as a result of infected mosquitoes carrying the virus from Mexico into Texas.

The epidemiologic factors that facilitate transmission and establishment of most infectious diseases are well known. Using babesiosis (Texas cattle fever) as an example, the factors include the *Boophilus* tick vector, an infected cow as a reservoir of the *Babesia* parasite, and the susceptible host. Recent collaborative research in Mexico gives added understanding to the relative risk. We now know that we need to be especially concerned about the relative ability of ticks from various parts of Mexico to transmit the parasite, as well as the effect of stress such as shipping on an infected animal (disease reservoir if ticks are present). The presence of vectors and other facilitators required to sustain disease transmission need to be analyzed. Disease transmission depends on a series of events occurring in proper sequence and within certain time constraints, bringing the susceptible population of either livestock or poultry into contact either with the potential disease reservoir or the disease vector or both. The probability that these events might occur is often remote, and surely this is true or many more diseases would be introduced.

We need to be confident about our ability to recognize and contain a disease outbreak. Tests for early recognition and diagnosis of livestock and poultry diseases are effective and in place at the veterinary medical diagnostic laboratories in Mexico and the United States. But, timely diagnosis depends on the specimen getting to the laboratory quickly, and the appropriate tests being completed quickly and efficiently. This is not difficult if the animals in question come through an import facility, as most do. However, cattle, horses and birds are smuggled in by road, by air, and by individuals walking across the border. Such animals can carry diseases and ectoparasites transmissible to livestock.

Science, social change, management practices, and transportation have affected the selection of disease and ectoparasite control strategies. A good example is the situation with *Boophilus* ticks. Only one pesticide

of one chemical group, organophosphate, is licensed for use directly on animals in the in the United States By contrast, in Mexico, several formulations of pesticides of three chemical groups, organophosphates, amidines and pyrithroids, are available to control ticks on animals. As a result, tick populations that are resistant to the pesticides are prevalent in Mexico. Several small "pockets" of resistant ticks have been found in Texas, usually on smuggled cattle. A major concern are the white-tailed and exotic deer which are numerous in Texas and the rest of the U.S. and provide economic benefit to landowners. In certain locations, however, these deer present a substantial risk as they are alternate hosts to ticks and cannot be effectively treated with pesticides. They are also known to be carriers of disease agents (often without showing symptoms themselves) such as the bacterium causing tuberculosis in cattle.

As suggested above, evaluating the significance of a potential disease outbreak, especially in economic terms, is problematic for the binational commission. As an example, there is no consensus on the status of Newcastle disease in poultry, known to be regularly present in Mexico. The occasional appearance of Newcastle in the U.S. has been assumed to have been be the result smuggling of infected birds. However, the disease could cause the demise of the commercial poultry industry in a state or region or region of either country. Another example would be classical swine fever, which has been eradicated from the United States but remains enzootic in certain areas of Mexico. If the disease appeared in feral swine in the Gulf coast states of the United States, the implications relative to control and elimination are grave.

Safe Trade

There are many strategic opportunities for ensuring safe trade. Conventional methods of disease control, for instance, are based on data often obtained from studies in temperate climates and ecology. These methods generally do not work in the long term in relatively well managed tropical and sub-tropical areas such as Mexico. It is obvious, therefore, that they are not going to work in those areas of Mexico with poorer management. Recent experience has shown that an integrated approach is essential because management, and concepts of disease control are often

misleading. The first surprise, for example, when farmers gather with disease investigators to discuss problems, is when the farmers begin to understand that infections with multiple disease agents, for example babesia and tuberculosis, are more often the rule than the exception.

CONCLUSION

A comprehensive multidisciplinary approach is needed to utilize the advances in the genetics of resistance and transgenic animals, the strategic use of chemicals and biologics, and integrated methods for the control of disease vectors. Also, tropical animal health has become a significant element in developing strategies for increased food production with conservation of renewable natural resources. The science that uses the new and highly useful biotechnology-based methods for the detection and prevention of infectious livestock diseases and ectoparasites has also provided major opportunities for marketing animals of high potential production and performance in areas of endemic or epidemic disease, while preserving biological resources by minimizing the use of chemicals.

Additional research needed to reduce the risk posed by disease agents and ectoparasites in Mexico and, at the same time, increase the export marketability of livestock includes:

- Studies on the genetics of natural disease resistance in all animal species that are key to increased meat, milk and agricultural production in tropical Mexico. Such studies would include brucellosis and tuberculosis in cattle, ascites in chickens, helminths in goats and reproductive diseases in mules and burros.
- Collaborative studies on the integrated control of diseases such as tuberculosis, brucellosis, babesiosis, and classical swine fever, especially in disease-free zones in both countries.
- Emphasis on developing a geographic information system (GIS) based decision support system for surveillance, control and elimination of disease vectors.

MEXICO-U.S. AVOCADO TRADE EXPANSION

David Orden

INTRODUCTION

Recent attention to agricultural trade policy has turned to issues of technical barriers, particularly sanitary and phytosanitary (SPS) regulations, that constrain movement of products across international borders. It is intuitive that there are public good arguments that make some SPS restrictions necessary to insure a safe food supply and protect domestic animal herds and plant stocks from pests and diseases. In other cases, regulations rationalized on technical grounds seem to lack firm scientific foundations and appear, at least to potential beneficiaries of expanded trade, to be imposed primarily to shield domestic producers from competition. That such controversies arise is not surprising. Their likelihood is suggested by the economic theory of regulation, sometimes referred to as "capture" theory. Applied to technical trade barriers, the theory suggests that when there is doubt about the merit of a technical restriction, domestic interest groups will often succeed in obtaining protective decisions from domestic regulatory agencies.

Both NAFTA and the WTO address issues of SPS and other technical trade barriers. Under NAFTA, it was agreed that each country retains the right to adopt SPS measures to protect human, animal, and plant life

and health, that each country has the right to establish appropriate levels of protection, and that SPS measures must be based on scientific evidence, be non-discriminatory, and be applied only to the extent necessary. The WTO provides even stronger language about the use and misuse of technical trade barriers. In both cases, multilateral dispute settlement procedures are established. If an arbitration panel decides that an import regulation violates the NAFTA or WTO provisions, the non-compliant country has the option of either changing the measure or keeping it and compensating the challenging country for the value of impaired trade.

In light of the economic theory of regulation, the NAFTA and WTO provisions that address technical trade barriers are institutional innovations intended to moderate the influence of domestic interest groups on their national regulatory agencies. One hope of these agreements is that the enunciation of the principles for SPS regulations and the existence of binding adjudicatory mechanisms will contribute to negotiated resolution of some disagreements without recourse to the formal dispute settlement process.

One approach to easing technical trade restrictions is to shift from most restrictive instruments such as complete bans to less restrictive instruments of pest control. The key to such an alternative is often a "systems approach" to risk management, whereby a set of procedures are specified that in principle reduce the externality risk associated with trade of a commodity. Adoption of systems approaches rest on a firm foundation in Article 5.6 of the WTO SPS Agreement, which states that Members shall ensure that their measures "are not more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection" (WTO, 1994).

Since 1997, a long and contentious dispute between Mexico and the United States over U.S. restrictions on importation of Hass avocados has been partially resolved by replacing an import ban with limited trade under a system of risk mitigation measures. This case illustrates that progress can be made through adoption of a systems approach -- at least when the risk issues can be sharply delineated and addressed, and governments are

firmly committed to the negotiations. Easing of the full import ban that has occurred must be counted as progress, but it has opened access to less than 10 percent of the U.S. market to Mexican producers. It remains uncertain how much more trade opening will eventually be achieved.

THE AVOCADO QUARANTINE

The ban on imports of Mexican avocados was promulgated in 1914 when there were no known controls (chemical or natural predators) for certain host-specific avocado pests prevalent in Mexico but not present in the United States.[1] Subsequent development of modern pesticides and cultural practices has allowed the Mexican state of Michoacan to establish an industry of approved export-oriented avocado orchards. These orchards have successfully met the pest control standards of countries such as Canada and Japan, where there are concerns about transmission of fruit fly infestations. Mexican quarantine authorities have argued that the Michoacan avocado export protocols also provide adequate protection against pest risks of U.S. concern, i.e., that the region has low incidence of pests of quarantine significance, that the Hass avocado is not a preferred host for some pests of concern, and that a systems approach to handling fruit for export has proven effective in eliminating risks of pest infestations being carried abroad. Mexico contends that the U.S. ban cannot be justified on a risk basis, but is maintained to protect the U.S. industry economically. The U.S. avocado industry, concentrated in southern California, has bitterly opposed opening the U.S. domestic market to Mexican avocados. The industry acknowledges that it has received prices well above those of Mexican exports, but asserts that it fears pest infestations associated with trade not competition in the marketplace. Domestic U.S. producers have challenged Mexican assessments of pest risks and the effectiveness of the systems approach to risk management.

Caught in the middle of this controversy has been the U.S. Department of Agriculture. Twice during the 1970s USDA took preliminary steps

[1] Roberts and Orden (1996) provide a detailed analytic chronology of the avocado dispute.

to ease the avocado import ban, but in both cases the decision was aborted. The issue lay unresolved through the 1980s, but NAFTA negotiations provided an opportunity for Mexico to raise its concerns again. Avocados dominated the agenda of many meetings of a joint Phytosanitary Working Group, where scientists from USDA and Mexico's Direccion General de Sanidad Vegetal (DIGSV) sparred over data requirements, research design, and interpretation of research results concerning possible lifting of the import ban. The technical debates centered on assessment of pest populations, the host status of Hass avocados for fruit flies, and the adequacy of various proposed pest-risk mitigation strategies.

It took four years of bi-lateral procedural negotiations, data collection and analysis before USDA agreed to consider a Mexican plan for easing the avocado quarantine under a systems approach to pest risk mitigation. With some further safeguards, a proposed rule was published by USDA in July 1995 to allow imports of Mexican avocados grown and processed under specified conditions. The proposed systems approach included pre-harvest, harvest, packing, transport, and shipping, measures designed to reduce pest risks. The distribution of imports was to be further limited to the northeastern United States, to avoid geographic proximity with regions susceptible to pest risks, and to four winter months when the risk of establishment of pests was mitigated by adverse weather.[2] USDA concluded that its proposed approach would provide an adequate level of security to domestic growers. Overall, USDA reported that with the proposed systems approach in place, a seed pest or fruit fly outbreak was estimated to occur on average less than once every 1,000,000 years and a stem weevil outbreak might occur on average once every 11,402 years. A recent USDA assessment of pest risk reductions from specific measures is shown in Table 1.

[2] The region referred to as the northeastern United States or northeast in this paper includes two regions often separated in avocado shipment data: the northeast and east central regions.

Table 1. Pest Risk Reductions Under a Systems Approach to Importation of Mexican Avocados

Risk Mitigation Measures	Pests of Quarantine Concern					
	Fruit flies: *Anastrepha* spp.	**Small avocado seed weevils:** *Conotrachelis* spp.	**Avocado stem weevil:** *Copturus aguacatae*	**Large avocado seed weevil:** *Heilipus lauri*	**Avocado seed moth:** *Stenoma catenifer*	**Hitchhikers and other pests**
	Percentage risk reduction					
Field surveys	40 – 60	95 – 99	80 – 95	95 – 99	95 – 99	40 – 75
Trapping and field treatments	55 – 75	0	0	0	0	3 – 20
Field sanitation	75 – 95	15 – 35	70 – 90	15 – 35	15 – 35	20 – 40
Host resistance	95 – 99.9	0	0	0	0	0
Post-harvest safeguards	60 – 90	0	0	0	0	40 – 60
Packinghouse inspection and fruit cutting	25 – 40	50 – 75	40 – 60	50 – 75	50 – 75	30 – 50
Port-of-arrival inspection	50 – 70	50 – 70	50 – 70	50 – 75	50 – 75	60 – 80
Winter shipping only	60 – 90	0	0	0	0	50 – 75
Limited U.S. distribution	95 – 99	95 – 99	90 – 99	95 – 99	95 – 99	75 - 95

Source: United States Department of Agriculture (2001).

DOMESTIC OPPOSITION TO CHANGE

With the geographic and seasonal restrictions in rule proposed by USDA, partial easing of the ban opened less than five percent of the annual U.S. market to Mexican avocados. Even this partial access was fought aggressively by the domestic industry. The opposition was coordinated by the California Avocado Commission (CAC), which had closely monitored the deliberations from the outset of the NAFTA negotiations. The industry made the argument that the avocado quarantine should not be sacrificed to the political imperative of achieving a trade agreement. This was an aggressive strategy by the industry that turned on its head the conventional perception that regulatory processes are often under excessive pressure not from foreign but from domestic interest groups. Numerous declarations were made by the U.S. growers to the effect that "science might be traded off in a rush to sign a trade deal."[3] The CAC argument was that imports of Mexican avocados under the proposed systems approach posed an unacceptable risk of pest infestation to domestic groves. The industry asserted that the surveys of pest incidence had failed to establish low population levels in the Michoacan growing area, that the proposed monitoring protocols were inadequate, and that Hass avocados were a better host of fruit flies than Mexico acknowledged.

Technical criticism of the pest surveys were detailed, including, for example, objections to incorrect trap placement, weak trapping bait, insufficient climatological records, and inadequate trapping densities.[4] Any infestations of domestic groves that resulted from importation of Mexican avocados would be costly to contain due to U.S. pesticide regulations and the close proximity of the domestic groves to residential neighborhoods. Thus, the CAC recommended that Mexico should be allowed to export avocados only under stringent conditions which included 1) that it could establish pest-free zones, 2) that the imported avocados were treated with a pesticide which assured at a very high probability level that exotic pests

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[3] Betsey Blanchard Chess, "Free Trade with Mexico", *California Grower* . June 1991, p. 19.

[4] Statement by the California Avocado Commission, Docket No. 94 -116-1. January 3, 1995.

were eliminated, or 3) that additional scientific research unequivocally established that Hass avocados were not hosts of pests which are injurious to avocados and other fruits and vegetables grown in the United States.[5]

The conditions specified by the CAC for amendment of the avocado quarantine could effectively have precluded importation of Hass avocados from Mexico for the foreseeable future. The first condition, establishing and maintaining a pest free zone, requires substantial eradication, monitoring, and quarantine enforcement costs well beyond the perimeters of commercial export groves in Mexico. Although it might eventually prove feasible technically, such an approach was regarded as uneconomical by Mexican officials who believed pest risks were already negligible. On the second condition, all parties agreed that no adequate post-harvest treatment was available. The third condition, strictly interpreted, also could not be met. The results of DIGSV's fruit fly host status research had already indicated that fruit flies will attack Hass avocados shortly after they have been harvested. Additional research to rigorously establish the host status of unharvested Hass avocados could only confirm that they are non-preferred hosts, instead of the higher standard of "unequivocal non-host" that the CAC recommended.

Industry opposition orchestrated by the CAC was effective in temporarily blocking change to the quarantine when USDA announced it would not make a decision on a final rule to allow avocado imports in time for the 1995-96 winter shipping season. The CAC kept up its pressure in 1996. It threatened legal action to block lifting of the ban and attempted to circumscribe USDA authority through an amendment to appropriations legislation. Full-page advertisements were placed in several national newspapers by the CAC. Against the backdrop of a hangman's noose or smoking gun, these ads claimed that "The USDA is about to sign the death warrant for a billion dollar American industry."[6] The CAC also filed a new petition with USDA in March 1996, asserting that pest surveys results for 1995-96 showed higher levels of host-specific and fruit fly infestations in

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[5] Statement by the CAC for Docket No. 94-116-1, ANPR Concerning the Importation of Fresh Hass Avocado Fruit Grown in Michoacan, Mexico. February, 1995, p. 2.

[6] For example, The Washington Post. March 11, 1996, p. A16.

Mexican orchards than had previously been reported, and that there had been procedural irregularities in the rulemaking process that involved violation of federal conflict-of-interest law.[7] The CAC petition argued that the new pest survey results and procedure irregularities invalidated the rulemaking process and requested another public comment period before a final ruling was made to allow avocado imports from Mexico.

ECONOMIC ASSESSMENT

USDA's regulatory procedures for SPS decisions require sequential analysis -- first determination that there is essentially no risk associated with a proposed rule and second, on that basis, that economic impacts of the rule be assessed. Such a sequential approach to decision making of this type places greater emphasis on risk assessment than on comprehensive cost-benefit analysis. When the mandate of regulatory authorities is stated in such strong terms as protecting the domestic economy from negative SPS externalities arising from trade, as it often is, then product bans and other severe quarantine measures emerge quite naturally as policy outcomes. A product ban is a high level of intervention to address an SPS externality, but a ban does eliminate the externality risk to the extent that trade is its proximate cause.

Even within the risk assessment dimension, there is plenty of room for dispute. First, issues arise about whether an externality threat exists in a given situation. Second, a ban may or may not be least trade distorting- - perhaps there is another way to eliminate the externality risk, one that allows the product to be traded under some specified conditions. Either way, when the policy decision is perceived only in the risk assessment dimension, there is no impetus to ask whether the cost of the policy is warranted by the benefits, that is whether the level of intervention needed to achieve the risk-reduction objective is also desirable on economic criteria, such as maximizing the expected contribution of the affected markets to national welfare.

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[7] "American Avocado Growers Uncover New Field Surveys on Mexican Avocado Pest Infestations," *PR Newswire*. March 28, 1996.

Figure 1: Free Trade.

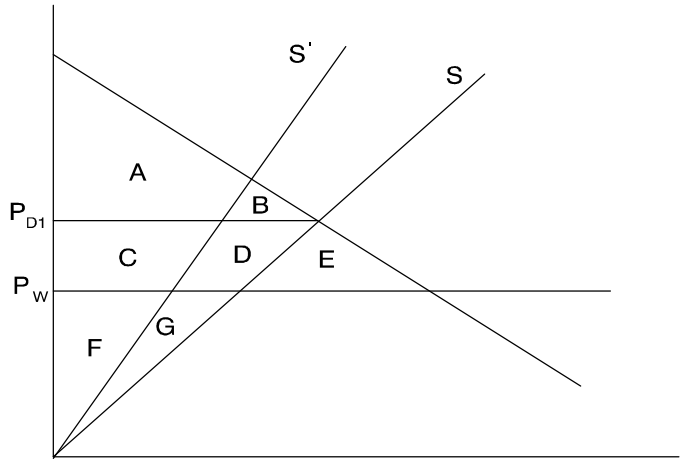
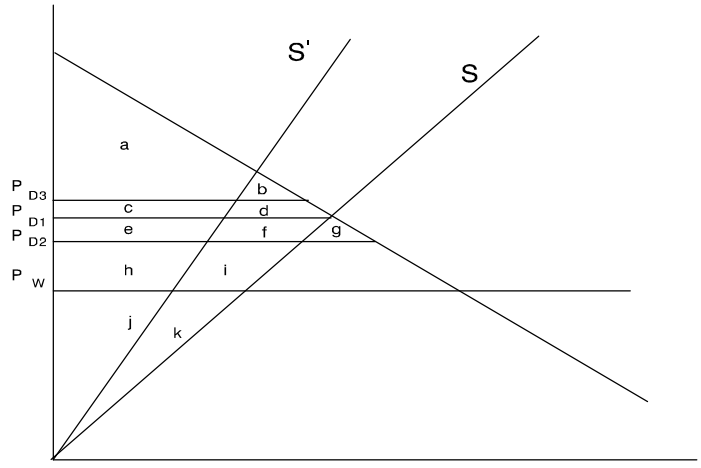


Figure 2: Limited Trade -- Effects of Trade When Pest Infestations Raise Domestic Production Costs.



In the avocado case, the contestation over the proposed rule brought to light information about pest risks that provided the basis for a cost-benefit analysis taking into account uncertainty about pest infestation (Orden and Romano, 1996). The issues that arise in evaluating the economic ef-

fects of either full or partial easing of an import ban are illustrated in Figure 1 and Figure 2, assuming a fixed world price for the product. The first figure shows the effects of free trade when a pest infestation may raise domestic costs. The domestic price PD1 falls to the world price PW, and consumer surplus increases (by C+D+E) whether or not an infestation occurs. Producer surplus falls by C+D (the trade effect) and additionally by G (the infestation effect) if pests raises production costs and lower yields with certainty, shifting domestic supply from S to S'. Consumers are always better off, producers are always worse off, and the net effect on welfare (E- G) can be positive or negative. On a probabilistic basis, the expected domestic supply function will lie between S and S', with its location depending on the assumed level of pest infestation risk.

The analysis is more complicated when only a limited quantity of imports are allowed. Ignoring regional considerations, the limited imports would lower the domestic price if there is no pest infestation, but to PD2 in Figure 2 not to the world price level. The effects on consumers, producers and net welfare are fractions of the outcomes with unrestricted free trade. Pest infestation reduces domestic supply and affects the domestic price in the opposite direction from imports. The equilibrium price can rise or fall. When the domestic price rises, as shown from PD1 to PD3 in Figure 2, consumers are worse off (by c+d). Producers surplus rises (by c) with the higher prices but falls due to higher production costs (by f+i+k). Producers may be better or worse off than at the initial equilibrium (better if c>f+i+k). Producers may also be better or worse off than with trade but without a pest infestation (better if c+e>i+k). Whatever the outcome for producers, social welfare falls (by d+f+i+k) compared to its level at the initial equilibrium, or (by d+f+i+k+g) compared to its level with trade but without pest infestation.[8]

[8] If the net effect of trade and a pest infestation is for the equilibrium domestic price to fall (not shown), consumers are made better off and producers worse off than without trade or pest infestation, consumers gain less, and producers may lose more or less than with trade but without pest infestation, and net welfare may rise or fall (compared to the initial equilibrium) depending on whether the net consumer gain from lower prices exceeds the infestation losses of producers.

In their empirical analysis, Orden and Romano divided the domestic U.S. avocado market into two submarkets- -the northeastern winter regional market and the national aggregate for all other regions and seasons. In the northeastern winter regional market, the domestic price was assumed to fall to the price level of exports from Mexico, substantially below the earlier domestic price. For the rest of the United States, an equilibrium price was determined by domestic supply and aggregate demand with the northeastern winter regional market excluded.[9]

The proposed partial easing of the avocado import ban had expected effects if no pest infestation occurred. In the northeastern region, the winter season price fell by 35 percent and consumption increased. The domestic price for the remaining aggregated U.S. market fell by 1.3 percent, as displacement effects from the northeastern winter market were absorbed by a combination of expanded consumption elsewhere and reduced domestic supply. A net national welfare gain of $2.5 million resulted (about 2 percent of initial total consumer plus producer surplus), mostly due to the lower price in the northeast. Consumer surplus increased by $2.2 million outside of the northeast, but producer surplus fell by a similar amount, so the net welfare gain was small outside of the northeastern winter market. In contrast, a full liberalization of trade (which was not under consideration by USDA) was estimated to depress domestic avocado production by as much as 50 percent after full adjustment to lower prices, and to raise consumer surplus by nearly $90 million nationwide.

Orden and Romano also considered the economic effects of the proposed rule if a pest infestation occurred. A pest infestation increased marginal costs and lowered yields, reducing domestic supply. In the worst-case scenario, reduced availability of avocados under the partial easing of the import ban pushed up the equilibrium domestic price (excluding the northeastern winter regional market) by 30 percent. The domestic price increase partly offset the effects on producers of lower output and higher production costs but their net loss was $14.7 mil-

[9] See Orden and Romano (1996), Roberts Josling and Orden (1999), and Orden, Narrod and Glauber (2001) for more detailed descriptions of the analysis.

lion, almost seven times as large as from partial easing of the ban alone. A larger economic effect of the pest infestation was felt by consumers outside of the northeastern winter market: their surplus fell by $43.5 million with the increased domestic price. Partial easing of the avocado quarantine would not be sound phytosanitary or economic policy under these circumstances. Yet on a probabilistic basis, it took a much higher likelihood of pest infestation than reported by USDA to turn expected net welfare effects negative. For full trade liberalization, even under the worst-case pest infestation, there was a positive benefit-cost relationship as consumer gains from lower prices more than offset the domestic producer losses.

EASING OF THE BAN IN 1997

Despite continued industry opposition, in February 1997 USDA issued a final rule permitting limited importation of avocados from Mexico under the systems approach. In rejecting the industry arguments about pest risk, the agriculture department reasserted its positive assessment of the safety of the proposed approach and responded to numerous comments received during the public comment period of the rulemaking process. It also responded to the concerns raised in the March 1996 CAC petition and subsequent CAC communication about the pending decision. It found neither substantive nor procedural grounds for further delay of a decision to allow limited imports under the systems approach being adopted (USDA,1997). In its economic assessment, USDA evaluated effects of the rule based on diversion of from 10 to 50 percent of past Mexican exports during November-February to the U.S. market. A diversion of 50 percent resulted in imports near the level estimated by Orden and Romano. For this level of imports, USDA found similar price effects in the Northeast region and the rest of the country, but its estimates of producer surplus losses and consumer surplus gains were larger. Once the final rule was published, and imports scheduled to be allowed for the first time starting in November 1997, the domestic avocado industry did not file suit to block the decision.

Under the USDA ruling, Mexican avocados began to enter the U.S. market during the winter of 1997-98. After four shipping seasons, no pest infestations traceable to avocado imports had been detected, lending credibility to the systems approach. Shipments of California avocados to the northeast winter market were largely displaced by imports from Mexico- -the California shipments fell to just 1.1 million pounds during 1999-2000, from an average of 7.7 million pounds during 1986-94 (USDA/APHIS, 2001). Wholesale prices of avocados imported from Mexico have averaged about 25 percent less than wholesale prices of domestic avocados since 1997. This differential is consistent with predictions of a regional price difference from the rest of the U.S. market once imports from Mexico became available in the northeast. Avocados from Mexico and California also appear to be imperfect substitutes in the northeast market, where a similar wholesale price differential has persisted. Wholesale prices have remained above import prices, which have averaged about $0.72 per pound. This is consistent with historical import price-wholesale price differentials observed for avocados from Chile in earlier years (USDA/ APHIS, 1997).

The limited opening of trade under the 1997 rule has provided more export opportunity to Mexico than expected. Imports after the first year have averaged over 23 million pounds from over 500 separate shipments (21.5 million pounds in 560 shipments in 1998-99, 25.9 million pounds in 669 shipments in 1999-2000, and 22.5 million pounds in 576 shipments in 2000-01). The level of imports from Mexico has been well above the displaced California shipments and nearly double the import demand of 13 million pounds in the Northeast winter market predicted by Orden and Romano at the lower prices expected once imports from Mexico were allowed.

The extent to which Mexican imports have exceeded either displacements of California sales or predictions from the economic model suggest that one effect of easing of the quarantine has been expanded consumer demand due to better seasonal availability of avocados. To the extent that market expansion occurs, it provides benefits to consumers and Mexican producers at little cost to domestic producers.

Prior to 1997, Chile was the major producer of avocados during the September-December period, and Chile still accounts for nearly five times as much of the total U.S. supply as Mexico. Avocados from Mexico compete with Chilean exports, but have not dampened total Chilean market sales. The value of avocado imports from Chile has grown from $16 million in 1997-98 to $51 million in 1998-99, $35 million in 1999-2000, and $74 million in 2000-01. Simultaneous growth in imports from Mexico and Chile has occurred in the context of a drop in U.S. production, which fell by an average of 35 million pounds during the three seasons 1997-98 to 1999-2000 compared to the average for the two preceding seasons. This shows that imports can serve to stabilize the market in the face of domestic supply variability, thus stabilizing consumer product availability and prices, as well as offering a product competitive with domestic production.

INCREASED ACCESS IN 2001

Based on early success of the avocado import program, in September 1999, Mexico requested that USDA expand its geographic and seasonal access to the U.S. market. USDA acted within a year to obtain public comments on this request and by November 2001, issued an amended final rule. The revised rule added access for avocados from Mexico to a west-central region and increased the shipping season to six winter months. Adding the west-central region increased the domestic shipments with which Mexican avocados would compete from a past average of 7.7 million pounds over 1986-94 to 10.5 million pounds. Increasing the length of the import season increased the domestic shipments with which the Mexican avocados would compete from 7.7 million pounds to 14.1 million pounds for the original access area, and to 19.3 million pounds for the expanded area. Thus, the market access is increased substantially for Mexico by the 2001 rule. Issuance of the revised rule encountered less industry opposition than the initial easing of the quarantine. But USDA had to overrule a late CAC petition to suspend its decision process based on a court ruling against the U.S. government on an earlier decision to permit citrus imports

from Argentina, and the CAC filed a suit (still pending in March 2003) to overturn the new USDA avocado rule.

SUMMARY AND CONCLUSION

The sequential issuance of the 1997 and 2001 USDA rules allowing avocado imports from Mexico are an example of successful adoption of a systems approach to risk mitigation that is less trade distorting than a complete ban. The 2001 ruling more than doubled the proportion of the total U.S. market to which Mexico has access, but that proportion remains less than 10 percent. Some further progress toward trade liberalization may be possible under the precedent set in these two rules. USDA's systems approach rests on numerous risk mitigation measures. Among these, the seasonal restriction "winter shipping only" is estimated to reduce risk for just two types of pests and by only 50-90 percent, which is relatively low compared to other measures (Table 1).

Completely relaxing the seasonal restrictions on shipments of Mexican avocados to the northeast and west-central regions would again more than double the proportion of the U.S. market to which Mexico has access, and might be relatively easy to justify. Attaining access to additional regions in the southeast, southwest and pacific could prove more problematic. Limited U.S. distribution is credited with reducing all pest risks by as much as 99 percent. Current access is subject to a court challenge and unless a future case can be made that other measures provide sufficient pest risk protection without the geographic restriction, the scope for Mexican access to the U.S. market may be permanently constrained to those parts of the country where consumption is relatively low. Thus, the avocado case also illustrates how difficult it is to make progress on trade expansion when there are complex risk issues at stake and a strong domestic industry is affected by the decision making outcome.

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MEXICO-U.S. AVOCADO TRADE EXPANSION

Robert MacDonald

As a potato farmer from Prince Edward Island (P.E.I.) in maritime Canada, my experience and knowledge on avocados and their marketing is very limited. Therefore my comments on the paper presented by David Orden will be short. However, the experience that the P.E.I. potato industry has gained in the recent dispute with the United Sates concerning the quarantinable disease potato wart has, to me, some strong similarities which will be used in this discussion.

In the fall of 2000, a discovery of the quarantinable disease potato wart was found in some potatoes that were being harvested on Prince Edward Island. This discovery was voluntarily reported to local Canadian Food Inspection Agency (C.F.I.A.), personnel, and after the disease was confirmed, C.F.I.A. officials duly notified their USDA counterparts in Washington. This entire process from initial detection, to official conformation, to notification of the USDA took less than one week. Without relating all of the detail of subsequent events, the outcome was that for the rest of the shipping season until the spring of 2001 the P.E.I. potato industry was shut out of the U.S. market.

Although there was sound scientific evidence in both Canada, including laboratory analysis of close to 10,000 soil samples (showing that the disease was confined to a small corner of a single field of processing potatoes), and evidence (from the United States and European countries dating back many years) which indicated that safeguards could be put in place so that trade could safely resume by late fall 2000, there was a strong lobby by the U.S. potato Industry that was successful in stalling the process until most of the 2000/01 marketing season had finished. The fact that the 2000 North American stocks were high and prices were low likely contributed to the U.S. potato industry lobby effort. After long and arduous negotiations with the United States, Canadian officials were finally

able to agree on a very restrictive systems approach to mitigate risk and allow normal trade to resume.

There are some comparisons that can be made between the this case and avocados. The Mexican avocado industry wanted access to the U.S. market and the P.E.I. potato industry wanted to regain access to that market. In both cases their efforts were stalled by the lobby effort of the U.S. special interest groups, the California Avocado Commission (CAC), and the National Potato Council (NPC). The delays in gaining access came despite the strong scientific evidence that was available in Mexico, United States and Canada indicating measures could be put in place to mitigate, at an acceptable level, the risk to the importing countries' industries. In both cases the regulating agencies were in favor of allowing trade to take place if the proper measures were put in place. The lobby efforts of the CAC and the NPC circumvented the decisions made by the regulating agencies.

The claim by the CAC and the NPC that their respective industries would be adversely affected if an infestation occurred after imports of the products was allowed to happen, is true **but only if** the systems approach failed. In both cases the CAC and the NPC raised the concern that the cost to their respective industries, should an infestation occur, was too great a risk to take. To date there has not been a reported infestation in the importing country that can be associated with any imported product which indicates, as Orden points out in his paper, that a systems approach to risk mitigation is less trade distorting than a complete ban.

In his opening paragraph Orden states that "there are public good arguments that make some SPS restrictions necessary to insure a safe food supply and protect domestic animal herds and plant stocks from pests and diseases. In other cases, regulations rationalized on technical grounds seem to lack firm scientific foundations and appear, at least to potential beneficiaries of expanded trade, to be imposed primarily to shield domestic producers from competition." From the producer prospective, I have

to agree with these statements. The comparisons that I gave earlier give credence to this statement.

Orden also states in his paper that both NAFTA and WTO address issues of SPS and have mechanisms in place to handle disputes that may arise. Again, as a producer, I feel that even though there are mechanisms in place to handle disputes these mechanisms are often time consuming and very costly to the producers involved. By the time an agreement is reached the producer has lost the market for his/her produce, and has suffered a severe financial penalty if the commodity is perishable. Perishable farm products can not wait for a time-consuming, dispute resolution process to run it's course.

As a producer, it is my view that the challenge for our respective commodity groups and for governments is to find a way that trade can be continued and expanded between all three NAFTA countries in a manner that is fair and cost effective to all parties involved. To do this, we need to design a faster way of resolving SPS disputes that is both safe from a scientific point of view and cost effective from a producer point of view.

TRADE AND POLICY IMPLICATIONS OF THE WHEAT DISEASE KARNAL BUNT

Robert Riemenschneider

INTRODUCTION

This paper will discuss the particular case of a wheat disease, Karnal bunt, which many scientists claim is insignificant, but which has numerous trade, economic and regulatory implications. Although the United States was aware of this disease through dealings with other countries, including Mexico, we have learned much more about the disease since its discovery on U.S. soil in March 1996. Since that time, the U.S. views regarding Karnal bunt have changed and our attitude about how this disease should be managed has changed. This, of course, has implications for our grain trade with Canada and Mexico, as well as the rest of the world.

We will discuss briefly what happened in the United States when Karnal bunt was discovered, what we did immediately to maintain our exports, how we have worked with Canada and Mexico on this issue, and a little bit about what the U.S. government is working on for the future.

Karnal bunt of wheat is a disease caused by the smut fungus *Tilletia indica mitra*. It was first discovered in 1931 in Karnal, India and is now common in the Punjab region. The disease is also found in Pakistan, Iraq,

Nepal, Afghanistan, parts of Mexico and the United States. The main effect of extensive Karnal bunt is to reduce yield slightly and cause wheat flour to have a fishy odor, thus reducing the quality of the flour. It poses no risk to humans. Yield and quality losses are considered by many scientists to be minor. Despite this, since Karnal bunt wheat is restricted by many wheat-importing countries and it can have severe impacts on international trade.[1]

BACKGROUND OF THE ISSUE IN THE UNITED STATES

Following is a brief chronology of the events and government actions taken after Karnal bunt was first discovered in the United States. On March 8, 1996 the U.S. Department of Agriculture and the Arizona Department of Agriculture announced the discovery of Karnal bunt in Arizona. Efforts were immediately made to quarantine the suspect wheat fields. Subsequently some bunted seeds were found in samples of wheat seed that had been planted in Texas and New Mexico. Fields which had been planted with these seeds were plowed under.

On March 21, the Secretary of Agriculture announced a "Declaration of Extraordinary Emergency" to be able to compensate growers and handlers for losses due to quarantine actions. On March 26, a federal quarantine for Karnal bunt was placed on the entire state of Arizona, and parts of Texas and New Mexico. Later, a few counties in southern California were added to the quarantine. In July 1996, USDA removed areas in Arizona, New Mexico and Texas which do not produce wheat from the quarantine. In October 1996, USDA broke the quarantine areas into "restricted" and "surveillance" areas. Restricted areas included fields that tested positive in a 1996 preharvest survey. Surveillance areas included fields that were associated with contaminated seed or equipment.

In May 1997, APHIS adopted the bunted kernel as the standard to classify a field as regulated. This was opposed to testing for Karnal bunt

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[1] Morris R. Bonde, Gary L. Peterson, Norman W. Schaad, Joseph L. Smilanick, "Karnal Bunt of Wheat". USDA, ARS, published by American Phytopathological Society. 1997.

spores. This step was taken after the discovery of a previously unknown smut that affected ryegrass for which the teliospores looked identical to Karnal bunt teliospores. Accurate identification of the spores and which of the two diseases they represented could only be accomplished by complicated and time consuming DNA testing.

In May 1999, APHIS simplified the regulations on Karnal bunt greatly reducing the size of the area affected by Karnal Bunt in the four states. The regulated area was further reduced in 2000. In May 2001, Karnal bunt was found in an elevator in Young County, Texas. Three other counties in Texas were eventually added to the regulated area. This will be discussed further below.

MEASURES TAKEN TO CONTROL KARNAL BUNT

A whole set of USDA rules were put in place in 1996 regarding movement of wheat, other agricultural products and farm equipment within and out of the Karnal bunt regulated areas. These regulations have changed gradually over time, but significant regulations remain in place. In general, for wheat within regulated areas, a sample is taken at harvest or while in storage. If no bunted kernels are found, the grain is allowed to move to available markets. If one or more bunted kernels are found, an emergency action notice (EAN) is issued and the grain is sealed in a storage facility for approved treatment or disposal. If seed wheat tests negative for both spores and bunted kernels it can be planted in the regulated area, but cannot move out of the regulated area. Equipment used to harvest, transport, or process wheat within a regulated area must be thoroughly inspected, cleaned and disinfected to prevent the possible spread of Karnal bunt outside the regulated area.

In addition to these regulations, USDA decided to initiate an annual National Survey to monitor which areas should remain or be added to regulated areas. USDA's Karnal Bunt National Survey provides information about potential Karnal bunt infections in new areas as well as identifies areas that are free of Karnal bunt. The National Survey covers areas that are not regulated for Karnal bunt in all States that produce wheat.

Samples which are found to have Tilletia indica-type spores are tested further for bunted kernels. If bunted kernels are found, USDA will regulate the area. Every year since the harvest of 1996, USDA has compensated producers affected by the fungus. This does not include the 1998-1999 crop season because no wheat grown in the regulated areas tested positive for the disease. Only positive-testing wheat is eligible for compensation.[2]

MAINTAINING U.S. WHEAT EXPORTS

When Karnal bunt was discovered in 1996, one of the immediate threats was to U.S. export markets. The United States is the world's leading wheat exporter, accounting for one-third of world wheat exports valued at approximately $US 3.4 billion in 2000. At that time, there were 37 countries which listed Karnal bunt as a quarantine pest. So, from the date of the discovery, APHIS could not officially issue a phytosanitary export certificate for U.S. exports to these countries.

Immediately, the Foreign Agricultural Service (FAS) and APHIS contacted importing countries' plant protection and quality (PPQ) authorities through our agricultural offices overseas to determine what they would accept as language for an "Additional Declaration" on USDA phytosanitary certificates. The majority of countries accepted the following language: "The wheat in this shipment originated in areas of the United States where TILLETIA INDICA (Karnal bunt) is not known to occur."

However, several countries did not approve that language and a negotiation on the language had to be pursued. To make matters more complicated, numerous other countries which had never had a Karnal bunt requirement suddenly asked that the United Sates now provide the additional declaration. However, within a few weeks, export certification issues were resolved for those countries accounting for approximately 98 percent of affected U.S. exports. For several countries, i.e. Chile, Italy, South Africa, certification issues lingered on much longer.

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[2] Taken from APHIS website, www.aphis.usda.gov/ppq/emergency programs.

The domestic actions taken under the Karnal bunt program were all part of the effort to make the additional declaration possible. These actions included testing, restricting movement of grain, seeds and equipment, etc. The ability to continue to provide the additional declaration was also heavily dependent on the United States' ability to conduct a national survey.

A SHORT HISTORY OF THE DISEASE IN MEXICO

As the United States was implementing its Karnal bunt regulations, it was very conscious of the fact that this had happened previously in Mexico. Karnal bunt was first reported in Mexico in 1972. It has been well established in areas in the states of Sonora and Sinaloa in Northwestern Mexico since 1982. The United States implemented a quarantine on all Mexican wheat imports in 1983 due to Karnal bunt. In the early 1990s, Mexico initiated domestic quarantines to prevent Karnal bunt wheat from expanding into free areas such as the Mexicali Valley. Subsequently, Mexico began conducting surveys for Karnal bunt in the Mexicali Valley. Based on four years of negative survey data, in June 1998, the United States published the final rule officially recognizing the Mexicali Valley of Mexico as an area free of Karnal bunt, allowing Mexico to export wheat to the United States from that area.

U.S. RESPONSE TO THE KARNAL BUNT INFESTATION

Mexico

On March 20, 1996, the Mexican government informed the United States that it was closing the border to U.S. wheat imports until USDA/APHIS provided sufficient information so that Mexico could carry out a Karnal bunt risk evaluation. After the relevant information was provided, an agreement was reached on phytosanitary certification for U.S. wheat exports to Mexico. Wheat imports were prohibited from Arizona, New Mexico, California and 4 counties in Texas. Mexico would accept wheat from other areas without an additional declaration, but the wheat must either undergo testing to show it was free of Karnal bunt or undergo fumigation (which was already a requirement). Over time, these testing re-

quirements were dropped. The current certification requires an additional declaration which states that "Wheat grain in this shipment did not originate from Arizona, California, New Mexico and the regulated counties in Texas."

Canada

After the discovery of Karnal bunt in the United States in March, 1996, an agreement was worked out in April on how U.S. wheat exports to Canada would be handled, including U.S. wheat that transits through Canada to be exported. First of all, wheat from Arizona, California, New Mexico and Texas was prohibited. Wheat that was destined for Canada from other states needed an additional declaration that the grain was free of Karnal Bunt based on official laboratory examination in the United States. It was also agreed that ships carrying U.S. grain which were not stopping at Canadian ports, or stopping only to be topped off with grain, could move through the Great Lakes/St. Lawrence Seaway system without meeting Canadian import requirements. The final category was wheat which was loaded into U.S. vessels but then off-loaded into Canadian elevators for future export. The USDA/Grain Inspection Packers and Stockyards Administration (GIPSA) was required to take a sample of the grain and provide negative testing results to the Canadians.[3]

Requirements in relation to Canada have eased since 1996. Wheat is still prohibited from Arizona, New Mexico, California and Texas. Now an additional declaration that "The grain originated in an area free of Tilletia indica on the basis of official surveys" must accompany shipments.

What Has Been Learned About Karnal Bunt Since 1996?

Research had been done on Karnal bunt in India, Mexico and other countries which the United States used and began making public 1996. As well as prior research, the United States initiated some of it's own research. Through this public familiarization and through further research we have learned much more about the disease than was known previously.

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[3] USDA, APHIS, Phytonsanitary Note, April 5, 1996.

These are some of the major points to keep in mind which affected how USDA regulated the disease. Karnal bunt is spread mainly by the planting of infected seeds. Infection occurs during the flowering stage of the host plant. The ideal conditions for infection are cool weather, rainfall and high humidity at the time of heading of wheat. In other words, much of the infection rate depends on having the right condition in a particular year. In soil, the spores may be able to survive as long as 5 years. Spores can be carried on a variety of surfaces- -plants, seeds, soil, elevator, building, farm equipment, tools and vehicles.[4]

Karnal bunt seldom results in significant economic losses to wheat in the field. Typically, the disease causes less that 1 percent loss in production.[5] However, Karnal bunt affects flour quality if more that 3 percent of the grains are bunted. The fungus does not produce any toxic compounds in leaf and stem tissue or in the seed that pose health risks when consumed. The American Phytopathological Society has taken the position that Karnal Bunt is of little agronomic significance and should not be regulated.

Discovery Of Karnal Bunt In Texas In 2001

In May 2001, USDA confirmed that wheat in an elevator in Young County, Texas tested positive for Karnal bunt. Further tests in the region found harvested grain with Karnal bunt that originated in 3 other adjoining counties. These four counties are approximately 125 miles outside of the areas previously regulated for Karnal bunt. This was the first time since 1997 that Karnal bunt was detected outside of a regulated area. APHIS added these four counties to the regulated area. USDA halted grain movement, began traceback surveys, and tested surrounding fields for the fungus to prevent the spread of the disease.

Since this most recent outbreak of Karnal bunt in the United States, USDA has only received inquiries from one wheat importing country- -

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[4] USDA, APHIS website, www.aphis.usda.gov/ppq/emergency programs.

[5] Cunfer, Barry M. et al., *Karnal Bunt Tilletia (Neovossia) indica*. The University of Georgia. Cooperative Agricultural Pest Survey Program Publication. GACAPS0297-1, 1997.

Canada. It seems that the majority of wheat importers are confident in the regulatory system that USDA has in place.

Current and Future U.S. Strategy Regarding Karnal Bunt

In November 2001, APHIS sponsored a workshop in Oklahoma City, Oklahoma to gather information that would enable APHIS to develop a strategy for dealing with Karnal bunt in the future. The objective was to bring government and industry stakeholders together to discuss methods to reduce the threat to livelihoods of producers and handlers currently and in the future, while at the same time maintaining our export markets. The complexity of Karnal bunt issues became clear since stakeholders and scientists consider the disease insignificant, while major wheat importing countries continue to regulate Karnal bunt as a quarantine pest. USDA now has the task of ensuring wheat exports meet importing countries regulations while minimizing program impacts on U.S. producers and handlers.

As a result of this workshop, USDA is now putting together a strategic framework for dealing with the U.S. Karnal bunt program. The framework includes issues about trade management, compensation, pest risk assessments, best management practices, research and economic impacts among others. A major objective of the strategy is to change the quarantine status of Karnal bunt in the United States and internationally from a quarantine pest to a "regulated, but non-quarantine pest" as defined by International Plant Protection Convention (IPPC). This would essentially allow the movement of wheat other than for seed to be deregulated in the United States.

WHAT ARE THE POLICY LESSONS LEARNED FROM THIS CASE STUDY?

First, there is no substitute for a thorough scientific evaluation of pest risk before setting phytosanitary import requirements. A lot of the problems the United States has faced with Karnal bunt were the result of prior limited research on the disease that hindered an adequate risk assessment of Karnal bunt when U.S. import requirements for the disease were first introduced. Scientific information on the disease threat from Karnal

bunt was limited or hard to find 20 years ago. However, U.S. officials knew it was not present in the United States, but it was present in Mexico, and the simplest way to avoid any threat to U.S. wheat was to ban imports from countries with the disease. The fact that this approach was urged by U.S. wheat growers, and that U.S. imports of Mexican wheat were small at the time, made it an easy step to take for U.S. regulators. However, the seriousness with which the United States treated this disease no doubt influenced other countries' regulations -- regulations which are now confronting the United States, within Mexico, and elsewhere.

Second, openness and transparency pay off in the long run. USDA has received some criticism from domestic interests for publishing on the internet every little detail of the Karnal bunt outbreak in 1996 and beyond. Producers and handlers in the regulated areas felt that the trade problems the United States encountered immediately after the outbreak were increased because of the publicity generated by USDA's information dissemination campaign. The fact that eleven new countries were added to list of those requiring Karnal bunt certification seemed to confirm that. However, in the long run, the openness displayed by the United States with its trading partners on the steps being taking to contain the disease and, most importantly, protect the integrity of the Additional Declaration have paid off. The fact that there was little or no concern expressed by wheat importing countries when the new Karnal bunt outbreak occurred in 2001 seems to indicate that a high level of confidence exists among U.S. trading partners in the ability of the United States to assure the plant health safety of its exports.

Third, good lines of communication and working relationships between countries' plant health and trade policy officials are vital. When Karnal bunt was found in the United States in 1996, U.S. PPQ and trade officials had to negotiate alternative phytosanitary certifications with 48 countries. In some of the larger U.S. markets with large volumes of trade at stake, the ability to pick up the phone and discuss the issues involved with counterpart officials in other countries facilitated the quick reestablishment of trade. This was true with both Canada and Mexico. While market conditions at the time were conducive to resolution of the certifica-

tion issues, the ability of U.S. officials to complete negotiations and reopen 98 percent of the affected trade, encompassing more than 30 countries, between March 8 and mid-April 1996 was made easier because of the pre-established relationships.

Fourth, changing the pest risk status of Karnal bunt in the United States and internationally will be long and difficult. It will require a simultaneous effort in international scientific fora like the North American Plant Protection Organization (NAPPO) and the International Plant Protection Convention (IPPC), combined with bilateral discussions with countries that have Karnal bunt concerns. It will also require continued research on this disease to demonstrate convincingly the geographic limits of its viability and its lack of significant risk to wheat production in areas where it is viable. The completion of an internationally recognized pest risk assessment will be a key component of this work. In the mean time, pressure to complete this process in a more timely fashion will continue to be applied by a U.S. wheat industry anxious to get out from under the burden of quarantine regulations.

Finally, North American cooperation in the effort to internationally deregulate Karnal bunt will be in each country's interest. The benefit to Mexico is in reduced potential barriers to its wheat exports. For Canada, the benefits are in the removal of the risks to its wheat sector that now exist as long as this disease is considered significant and remains on the continent. Should further major outbreaks of the disease in the United States force the U.S. government to abandon its regulatory program and allow unrestricted movement of Kb wheat and associated equipment throughout the country, Canada could find itself in much the same position as the United States 20 years ago when the disease became widespread in Mexico.

In summary, Karnal bunt has every appearance of being a minor disease of wheat from an agronomic point of view. Its potential economic impact, however, is anything but minor.

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WHEAT KARNAL BUNT AND OTHER GRAIN DISEASE ISSUES

W.M. Miner

INTRODUCTION

Bob Riemenschneider provides a useful summary of the background and trade issues related to wheat karnal bunt. I have some observations to offer on the proposal to change the quarantine status of the fungus but first I will make some comments on the general policy situation of relevance to handling agricultural disputes.

The role of technical regulations in border disputes affecting the North American grain trade should be examined in the context of the overall policy environment. That framework will indicate the types of disputes that are likely to arise, and the political and economic difficulties to be overcome in resolving them. Each dispute should be handled on the basis of the facts in relation to the relevant rules and commitments but in reality they are often linked to the situation in the policy environment and to more than one program or regulation. While it should be possible to separate technical disputes from other policies and political developments, particularly those dealing with plant and animal health and food safety issues, separation has proven to be difficult, particularly in the case of Canada/U.S. grains irritants. These observations reinforce the importance of developing effective trade rules and dispute settlement mechanisms including initiatives to try to manage the political pressures to allow the mechanisms to work.

THE POLICY ENVIRONMENT

It is now widely accepted that the North American agriculture and food sectors are operating in a continental market setting, and as Paul Haddow emphasized in his opening presentation, the world is changing.

The policy environment is being driven by the dominant influences of advances in technology, changes in consumer tastes and life styles, and the progressive integration of marketing activity. These trends lead directly toward more segmented markets, a broadening range of differentiated products, and a growing demand for information on food safety, nutrition and processing methods. Although government policies and regulations, and even trade agreements, generally trail these developments, and some policies may seek to confront or to offset them, the benefits of freer trade, compatible regulations and harmonized standards have become increasingly apparent to most countries. As a consequence, the negotiation of NAFTA followed by the WTO Agreement on Agriculture provided much stronger rules and enforcement mechanisms to handle policy and technical trade disputes.

Although the NAFTA partners did not agree to implement common agriculture and food regimes, they are committed to move toward policies that are less trade distorting. Under NAFTA it was also agreed to establish a framework of rules and disciplines based on science, covering sanitary and phytosanitary (SPS) measures that may directly or indirectly affect trade between the partners including formal mechanisms to guide the development and enforcement of these measures.

The WTO Agreement on Agriculture took a further useful step in defining the more acceptable forms of support policies combined with modest commitments to reduce the aggregate level of trade distorting support. The WTO Agreement on SPS measures extended the NAFTA precedent on a multilateral basis. Thus NAFTA and the WTO established the basic mechanisms for dealing with disputes in the grains sector whether these disputes arise from farm support policies or border and technical regulations. Of course, to these multilateral mechanisms must be added the use of domestic trade protection laws which in turn are subject to some but insufficient international discipline. As trade barriers come down, and competition increases, greater attention is paid to differences in domestic policies and systems and technical regulations, which in turn give rise to irritants and disputes.

THE GRAINS EXPERIENCE

Overall, the NAFTA and WTO dispute resolution mechanisms have worked effectively. However, the progress that has been made in developing a framework for long-term solutions to trade irritants has been inadequate to handle trade tensions in the North American grain sector. Grain production, handling and processing developed separately in each country, and this difference is largely true for grain policies and regulations. Although the policy frameworks are being adjusted toward a more open and integrated market-structure, the changes are slow, fragmented and at times regressive, as evidenced by the proposed (2002) U.S. Farm Bill. There is no doubt that existing policies and regulations in addition to market developments are contributing to continuing trade friction and a number of problems and trade irritants are related to technical standards and regulations. The developments in the policy environment, particularly the integration of markets, place greater pressure on governments to take additional steps to manage and resolve trade difficulties. In the case of grains, several special initiatives have been taken.

The Canada/U.S. Joint Commission on Grains was one such initiative taken by the two governments in the mid 1990s to examine a range of disputes and irritants affecting the sector. The Commission undertook a side-by-side comparison of both countries' policies and regulations in 1995, including quality assurance systems, in part because trade irritants are often linked. This comparison identified differences that give rise to irritants as seen from both sides of the border. The objective of the Commission was to reach "long-term solutions to existing problems in the grain sector." A number of recommendations were made to both governments, including several related to grading and technical regulations. An emphasis of many of these recommendations was the need to undertake a regular and structured consultative process at the policy and technical levels, some involving the industry, to reduce trade distortions. Since policies and programs do differ, in some respects quite significantly, it was considered necessary to add additional mechanisms to try to manage disputes. Although the key and toughest issues remain, Bob and I agreed in earlier discussions that some progress has been made on all of the other issues.

Subsequently the U.S. and Canadian governments undertook a series of bilateral discussions in an effort to resolve key issues in bilateral agricultural trade, including a number of trade irritants related to plant and animal diseases and cross-border movement of grains. These discussions did not cover differences over basic policies such as U.S. crop subsidies or the Canadian Wheat Board due to persistent political differences and pressures. In the 1998 Record of Understanding, the two governments described in strong terms their commitment to problem resolution and keeping the borders open. Although it is almost embarrassing to reproduce the commitments in the light of recent events, the two governments agreed to five actions:

- They reaffirmed their commitment to maintaining an open and dynamic trading relationship in agriculture and food products.
- They affirmed their commitment to market oriented agricultural policies and more open and fairer trade.
- They agreed that actions that disrupt trade should be avoided.
- They emphasized the importance of the SPS agreements in NAFTA and the WTO, and rejected the use of SPS and other technical measures as barriers to legitimate trade. And
- They agreed to meet at the ministerial level at least annually to review the state of bilateral agricultural trade and trade problems, and to encourage industry associations to engage in a similar cross-border dialogue.

A specific action plan was agreed which included several grain-related issues dealing with disease control for in-transit movement such as Karnal bunt, phytosanitary certification, and the harmonization of pest control products. Regular meetings are ongoing at the federal ministerial and official levels, at provincial levels, and among industry associations aimed primarily at avoiding disputes and resolving differences.

Despite the existence of a stronger rules-based continental and multilateral trade system, and extensive activity bilaterally to address grains issues before they become formal disputes, or to settle them expeditiously, long-standing issues remain unresolved. The U.S. Trade Representative

issued an affirmative finding following the Section 301 investigation of the Canadian Wheat Board which included four proposed actions:

- an examination of a possible WTO dispute settlement case;
- an examination of options with petitioners regarding counter vail and anti-dumping petitions;
- further work on identifying specific Canadian import impediments with a view to improving access to Canadian markets; and
- further negotiations to discipline state trading in the Doha Development Round.

At the same time, the Canadian Minister of Agriculture mounted an attack on the U.S. Farm Bill which threatened to raise further the level of support provided to U.S. grain farmers. This support already far exceeds grain support provided in Canadian programs, and indeed, for the first time, exceeds that available to grain farmers in the European Union based on OECD comparative data. These developments demonstrate that the basic differences not only remain, but underlie and aggravate other grains issues. While much of the tension is politically driven, the differences over U.S. subsidy levels and the Canadian marketing system are sharp, and they are perceived as very important in farm circles.

ASSESSMENT

There are several levels of rules, understandings and dispute resolution mechanisms in place to deal with grains issues among the NAFTA partners. For wheat Karnal bunt and other grain disease issues, the mechanisms are being used and are proving to be effective although not always to the full satisfaction of the complaining parties. Underpinning the dispute resolution process are two key factors:

- the rules themselves, and
- the mechanisms to consult, share information and to co-operate at the technical level between the regulatory agencies, the Canadian Food Inspection Agency (CFIA), the USDA Animal and Plant Health Inspection Service (APHIS), and the Canadian Grain Commission (CGC).

Regarding this process, I agree with Riemenschneider's comment that there is no substitute for thorough scientific evaluation, and that openness and transparency are essential. Good communications and sharing information on procedures and results are important parts of the process. Regarding a Canadian inquiry over the status of the recent outbreak in the United States, I am confident that officials were seeking to satisfy their certification requirements, i.e. to be able to certify in relation to trans-border movement that the fungus does not exist in Canada. Although Canada initially banned all imports including transshipments of U.S. durum wheat, and all grain imports from the four states where Karnal bunt was detected, the restrictions were lifted from all sources apart from the infected states following consultations and testing. Canada also agreed to relax this prohibition based on adequate survey and sampling information which so far, I understand, has not been provided.

A similar situation exists over U.S. imports of wheat from Mexico. The United States banned imports of Mexican wheat in the early 1980s due to Karnal bunt. Following consultations under the SPS Committee established under NAFTA, some Mexican wheat was allowed to enter. Mexico also restricts wheat produced in the four states in the United States where the fungus was found. Wheat from U.S. areas not under quarantine is allowed to enter if certified free of Karnal bunt, or if it is fumigated.

Regarding other SPS-related grains issues identified in the Canada/U.S. action plan, progress has been made through the consultative process on all of them. The certification program developed by the CFIA permits in-transit movement of U.S. grain through Canada, and considerable volumes are moving. Steps were taken by the CGC to facilitate the access of U.S. wheat to Canadian licensed primary elevators. In addition to plant health requirements, the Canadian system of varietal control and kernel visual distinguishability is the reason for the restrictions on access of U.S. wheat to Canadian primary elevators. Advance authorization to handle U.S. wheat is given to those primary elevators that indicate a desire to participate in the certification program. Although little use is being made of these access arrangements, this appears to be for economic reasons.

A further SPS procedure to facilitate access of U.S. wheat and other cereals into Canada has been developed through the cooperation of the inspection agencies in both countries to reduce the amount of sampling and testing required. Individual growers may ship wheat under a "Master Phytosanitary Certificate" without requiring testing each shipment. Growers in fungus-free states must be approved to be eligible, and must have samples tested annually. The Certificate must satisfy the requirements for freedom from Karnal bunt, dwarf bunt and flag smut.

These examples demonstrate the effective use of existing mechanisms to address trade irritants and to avoid formal disputes. They also show linkages between SPS issues and differences in policies and regulatory controls in each country. Riemenschneider also related the resolution of technical disputes to market conditions, which, of course, may contribute to political pressures in resolving issues. Although the speed in which the U.S. authorities were able to obtain acceptance of their certification from some importers may have been linked to their need for wheat, this factor would not apply to Canada. While progress has been made in many technical areas, it is obvious that issues will continue to emerge, and are likely to be aggravated as long as policies and regulations are not compatible. I conclude that there is considerable progress being made in harmonizing health, SPS requirements and procedures, and these efforts need to be continued.

Turning to Riemenschneider's indication that U.S. authorities may propose a change to the pest risk status of Karnal bunt through the appropriate international institutions, I am sure that Canadian officials will examine a proposal openly and in a scientific manner. I am surprised at the comment that Canada should cooperate because the fungus may become endemic in the United States and their agencies could abandon their control program. A great number of markets list the fungus for quarantine purposes, and do not want its undesirable characteristics in their bread. I would expect both the U.S. and Canadian authorities to support the control and elimination procedures for both scientific and marketing reasons. The best option at this time certainly appears to be along the lines being adopted.

The key will be to have the approach based on science and to avoid undermining basic plant health disciplines for economic reasons.

CONCLUSION

Returning to the broader picture, we see there are even indications of practical steps toward applying regulations and enforcement at both ends of the trade transaction rather than at the border. Contract buying to precise specifications combined with identity preserved grain movement is an example. This example appears to be the direction of the future. The evolution of markets and their integration is forcing governments toward compatible policies, harmonized regulations and their cooperative enforcement. In the longer term, this is the only way to open borders, and to keep them that way.

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ACCESS TO PESTICIDES AS A SOURCE OF TRADE DISPUTE

Cameron Short and David Freshwater[1]

INTRODUCTION

Pesticide use has two significant implications for trade disputes in agricultural products. The first is that SPS rules in trade agreements allow individual countries to establish the maximum allowable level of exposure for their citizens to pesticide residues in food by setting maximum residue levels (MRLs) or tolerances for various food products. This clearly provides an opportunity to set levels so low that they exclude imports from countries that may use either unapproved compounds or allow higher residue levels. This has obvious trade implications. The second mechanism is more subtle since it involves farm level production effects. If specific pesticides are available in one country but not in another, this can affect both crop yields and quality, and relative costs of production, thereby affecting the competitive position of a country.

Because pesticides can only legally be used in a specific country if they have a label that is approved by that country, it is virtually impossible for farmers or anyone else to import pesticides. An important consequence

[1] The authors express their thanks to Ken McEwan for sharing his data for this paper. Any errors are the sole responsibility of the authors.

of these government created barriers to trade is that they essentially encourage chemical companies to practice price discrimination. Thus the case of pesticides is also of more general interest because it illustrates how regulation and strong product differentiation can have the same effects in terms of market segmentation- -with differences in prices and product availability -- as tariffs and quantitative restrictions. Pesticide regulation is also of interest because it is one of the areas where there is extensive cooperation among the regulatory agencies in Canada, Mexico and the United States to bring about harmonization. So there is a clear effort by regulators to try to find ways to resolve the problems of differences in national regulatory standards. However these efforts, while addressing some of the current trade issues, are not likely to resolve all of them.

At present the most visible form of dispute stems from perceptions and specific observations by producers that certain pesticides cost more on one side of the border than on the other. Higher prices are seen as creating a competitive disadvantage relative to farmers growing the same crop for the same international market. Price differential issues tend to be mainly found for pesticides used on high volume crops that are sold as commodities, where controlling costs is a critical element in determining levels of profit among producers.

A somewhat less visible dispute area involves the availability of specific products. Some pesticides may not be available in one country but are in the other. On a more refined level, some may be available in both countries but are licensed for application on a different set of crops, once again creating access problems. In general, the current concern with access is more common for minor use pesticides, that is, uses where demand is relatively low and there is the possibility that the pesticide cannot be supplied on a cost effective basis under the standard regulatory scheme. However there are occasionally cases where a product is available for a specific use on a major crop in one country and not in others, often because of lags in the regulatory process. In the long run, access may become an even more important issue if regulation reduces the incentive for companies to develop and register pesticides in certain countries.

Because pesticides are an increasingly vital input for farmers, significant differences in availability or in prices will continue to cause complaints. As other trade barriers are dismantled SPS, decisions that influence pesticide regulation could create significant trade barriers. Our analysis suggests that the primary beneficiaries of barriers to the free flow of pesticides across national borders are the pesticide manufacturers. Such barriers to arbitrage create an ideal environment for price discrimination. Thus it should not be surprising to economists to see significant price differences in prices among countries. Harmonization of regulation is thus the first step in removing the regulatory barriers that create incentives for price discrimination by pesticide producers.

Background information, which provides a context for access to pesticides as a source of trade disputes, is presented in the next section. This is followed by a brief description of the regulatory process including a description of harmonization goals and steps being undertaken to achieve this goal. Price and availability issues are then described with conclusions presented in the final section.

THE CONTEXT FOR DISPUTES

The Role Of Pesticides

Pesticides are a class of compounds used in agriculture to enhance the quality and/or quantity of desirable species of plant or animals. Pesticides control pests by either killing or weakening them, or by making the treated product unattractive to the pest. Pests take the form of animals, insects, plants, fungi and nematodes, but the defining feature of a pest is that it causes an adverse effect upon some species of plant or animal that the farmer is trying to produce. While natural forms of pesticides have been employed since the very early stages of agriculture, pest management took on new significance following World War II as advances in chemistry and biology combined with the mechanization of agriculture and wide spread use of synthetic fertilizer to transform production technology. USDA estimates that 86% of the acreage planted to five major crops (wheat, corn, cotton, soybeans and fall potatoes) were treated at least once with a herbicide (USDA 2000, p. 19). Of these crops cotton

made the most use of all forms of pesticides and wheat the least . Other USDA analysis shows that fruits and vegetables have a far higher per acre use rates and employ a broader spectrum of pesticides (USDA 2001, p. 13). In production systems that are based upon intensive land management, there is an inevitable development of significant pest problems. This means there is a steady demand for new compounds to replace those that become less effective. Pest control products provide a means to sustain the production methods that have increased food production at a faster rate than world population growth, facilitate a reduction in the share of total employment required in farming, and lower the real cost of food for consumers. Although outlays on pest control products represent a relatively minor share of the total cost of food and fiber production, the timely application of pest control products can mean the difference between no production and a normal crop.

But pesticides have significant costs inherent in their use. Because they are toxic by design, they can harm non-target species, including applicators, bystanders and wildlife. Pesticide residues can become embedded in food products with possible harmful effects for consumers. In addition, intensive use of pesticides often leads to species evolution in the target pests so that they become resistant. As our understanding of the adverse consequences of many older pesticides has grown they have been removed from use and replaced by other compounds that have fewer negative effects. However the search for effective but safe pest control products has become more difficult over time due to, pest resistance, government imposing more stringent limits on acceptable risks to non-target species, and the simple fact that we have made all the easy discoveries.

While the use of pesticides carries an inherent risk, there would be severe costs if their use were prohibited. Table 1 demonstrates the importance of pesticides for the production of some major crops world wide. Without Crop Protection (CP in the table) lower yields, greater field and post harvest losses and declines in the quality of product lead to a reduced supply of food and fiber and consequently higher prices. As a result, there would have to be a significant expansion of land under cultivation, which would bring its own problems in the form of lost species habitat, and in-

Table 1: Impact of Pesticides on Production of Major Crops.

Crop	Theoretically Attainable Production	Actual Production Avg. 1990-98	Estimated Production w/out CP	% Decline in Production w/out CP	% Increase in Land to Restore Actual Output
Rice (mt)	1047	509	184	64%	280
Wheat (mt)	831	548	400	27%	140
Barley (mt)	244	172	129	25%	130
Maize Grain (mt)	729	449	295	34%	150
Potato (mt)	464	273	123	55%	220
Soybeans (mt)	152	103	63	39%	160
Cotton (kt)	84.1	52.4	13.9	74%	380
Coffee (kt)	9.8	5.9	3.0	49%	200

Source: E-C Oerke, H-W. Dehne, F. Schonbeck, and A. Weber. *Crop Production and Crop Protection Estimated Losses in Major Food and Cash Crops*. Amsterdam: Elsevier Science B. V. [1994]

creased levels of erosion. Finally cultivation practices would have to return to more intensive use of plows, discs and harrows.

Stakeholder Interests

Because pesticides are both useful and dangerous, they have fallen into the class of products that is subject to significant government regulation. In many ways pesticides are like pharmaceuticals, and many of the pharmaceutical companies either still produce pesticides, or once did. Both types of compounds are used to reduce or prevent an undesirable effect. Both types of compounds result in the potential for adverse side effects. And our knowledge of the full effects of these products often comes only well after they have been in use for a significant length of time. While we can devote resources to predicting the effects of the introduction of a chemical compound, be it a drug or a pesticide, into the human population and the environment we can never be certain that we have identified all the consequences.

Government regulation of how pesticides are tested, which ones are deemed acceptable to use, how they are produced and marketed and how they are used provides a means to identify and manage risks. Regulation involves benefits and costs for the various parties involved in the process. These are the chemical companies who produce and sell pesticides, the general public who consume food treated with pesticides, farmers who buy the pesticides, bureaucrats who regulate their use, citizens with special concerns about the environment and food safety, and government itself.

While chemical companies often object to the costs incurred in getting a compound through the registration process, they also derive significant benefits from the existence of regulation. While a long registration process is a burden to firms that are trying to receive registration, it is a clear benefit to firms that will face competition from a competing compound once it too clears registration. The combination of a patent and a difficult registration review can provide a significant window of protection.

The general public faces significant information problems in dealing with pesticides in terms of food safety and adverse environmental impacts. Absent regulation they would have great difficulty in determining which food products had been treated with which compounds and in ensuring that non-target species are not being harmed. Regulation provides the assurance that only specific chemicals that have been rigorously tested are being used and that farmers have instructions on the safest way to use those products. Thus the regulatory process is an important part of persuading consumers that food production is being carried out in a manner that protects their interest and it reduces the amount of time that individuals have to spend individually trying to ascertain food quality. Because the costs of ensuring food safety have been reduced, the aggregate demand for food is higher than it would other wise be. This outward shift of the demand curve results in increased consumer surplus and in benefits for farmers and, indirectly, for chemical companies.

As a group, farmers benefit from regulation because there is an enhanced demand for food, but also because regulation results in their having uniform access to information on how to appropriately use chemicals. The costs of registration are passed through to farmers and they in turn pass some portion of them on to consumers depending on farmers market power as a group and an upward sloping supply curve . But since pesticide use is so widespread in agriculture, it is likely that even with regulatory costs the net effect of pesticides is beneficial for most farmers. Farmers also benefit from the development of new pesticides for two significant reasons. The first is the common problem of pest resistance that makes many compounds less effective over time. The second is a trend to more pest specific compounds that have shorter half-lives, which when combined with lower levels of applicator exposure, reduces the health risk to farmers and field workers. Initially farmers relied upon regulation as a way to ensure efficacy, at a time when firms providing pesticides were less reliable providers of high quality compounds. Indeed the original function of regulation was to guarantee that pesticides worked as their promoters promised. Over time, as the production of pesticides was taken over by large firms and the registration process became more costly, the regulatory

concern with efficacy became less critical because firms would not bother to register ineffective compounds.

Government has a significant incentive to engage in regulation because of its responsibility for maintaining both public health and a high quality environment. While a scheme of self-regulation by the chemical industry might provide many of the benefits of regulation, there is a larger danger that a major adverse event could occur if a company acted outside the set of internal rules. Government would then be faced with having to reverse any damage to people or the larger environment and then restoring public confidence in pesticide use. Also by being directly engaged in the registration process, the government has better information on the potential risks and benefits associated with each compound that is on the market.

From an operational perspective, there are potential problems associated with government regulation. These are primarily traditional principal-agent issues involving the bureaucracy. There is the potential for regulators to be captured by special interests who either favor or oppose the use of pesticides, or regulators may shirk their responsibilities to act efficiently, resulting in higher costs. The creation of NAFTA may create a new set of principal-agent problems, where regulators may oppose harmonization because of its implications for their autonomy, staffing levels or perhaps only due to organizational inertia.[2]

THE REGULATORY PROCESS

In both Canada and the United States the original objective of pesticide regulation was the protection of farmers from inaccurate promises that pests would be effectively controlled by a given compound. Departments of Agriculture were the obvious location for this function since efficacy issues were best addressed by agencies with a technical knowledge

[2] The agent is hired by the principal and given certain responsibilities. Principal-agent issues arise when the principal cannot easily monitor the agent's actions or assure that they reflect his interests.

of farming. In the 1960s a growing body of information on the persistence of pesticides in the environment and their harmful effects upon non-target species of wildlife, especially birds and fish, prompted demands for more thorough assessments of pesticides to determine their environmental fate. Concerns over applicator safety and potential hazards from pesticide residues in food also became significant. This led to a major redirection of pesticide regulation away from efficacy and toward the unintended consequences of pesticide use. Through the 1960s and 1970s, as scientific knowledge improved and the ability to detect pesticide residues grew, there was increased evidence that many older chemicals had adverse effects that exceeded their benefits. This led to pressure to remove registration from agriculture agencies because of a recognized conflict of interest between safety issues and the core agency concern with optimizing the production of food and fiber. In the United States regulatory- responsibility rests with the Environmental Protection Agency with a focus on the broad protection of human, wildlife and natural habitats, while the Pest Management Regulatory Agency of Health Canada is charged with protecting human well-being. Consequently, the impacts of pesticide regulation on farm profitability and the competitive position of agriculture are now secondary elements in the decision process.

In the last decade both Canada and the United States implemented major legislative changes in pesticide regulation. In the United States the Food Quality Protection Act (FQPA) of 1996 significantly changed the way pesticides were regulated although there was no major change in the nature of the agencies responsible for pesticide regulation. The major elements of FQPA were: repeal of the Delaney Clause to allow the presence of carcinogenic compounds in food if the level of presence is considered to pose no risk; creation of a new standard for assessing exposure, the "risk cup" that looks at all pathways of human exposure to classes of compounds, instead of focusing on exposure on a compound by compound basis; explicit attention to the possibility that infants and children may have more adverse consequences from a given level of exposure than adults; creation of a relatively short time-line for reassessing the registration status of all licensed pesticides using current standards; and elimination of economic benefit as a factor in the registration decision.

One consequence of FQPA has been a focus on two broad classes of compounds, organophosphates and carbamates, that are widely used ingredients in insecticides used on both major field crops and on fruits and vegetables. In many cases there are no obvious substitutes for insecticides based upon these materials and there is a concern that if these products are de-licensed there could be significant impacts on production. These impacts could include production practices in other countries if EPA set maximum residue levels (MRLs) or tolerances at a point where crops treated with the compounds could not enter the United States. However a more likely outcome is that de-licensing in the United States would result in similar action in Canada and probably in other countries.

In Canada, the Pest Control Products Act of 1995 transferred authority for the regulation of pesticides from a number of agencies including Agriculture Canada to Health Canada, and created the Pest Management Regulatory Agency (PMRA) within Health Canada to carry out all federal pesticide regulatory functions. PMRA is mandated to protect human health and the environment by minimizing risks associated with the use of pesticides. In general, PMRA and EPA follow similar procedures when evaluating pesticides for registration. PMRA continues to examine efficacy as part of the Canadian registration process and like EPA considers exposure levels for children separately from adults. Unlike EPA, PMRA has an explicit responsibility to investigate and promote non-pesticide based control strategies as part of its risk mitigation mandate.

Process For Resolving Trade Irritants

For more than a decade pesticide regulatory agencies in Canada and the United States have been involved in efforts to coordinate their regulatory processes. Following the introduction of NAFTA, this process expanded to include Mexico and resulted in the formation of the NAFTA Technical Working Group (TWG) on pesticides. Members of the TWG come from the various agencies with regulatory responsibility in the three countries. The TWG provides a forum for developing ways to better integrate pesticide registration within the context of each nation's specific legislative framework. In particular, the TWG has developed procedures for identifying and resolving five categories of trade irritants:

- Category A- -an MRL/tolerance exists in the exporting country but it is lower in the importing country so the product is out of compliance;
- Category B- -an MRL/tolerance exists in the exporting country but one does not exist, or is lower, in the importing country;
- Category C- -a pesticide-commodity combination is registered in one country but not in another, and growers in the country where the use is not registered wish to have that option;
- Category D- -a discrepancy is detected resulting from a non-registered use in the exporting country; and
- Category E- -the exporting country has established a time-limited tolerance but full registration does not exist in the importing country. (Trade Irritant Process Team, Dec. 18, 1998 p. 1-2)

In each case the cause of an irritant is defined as a mismatch in terms of registration status that results in a commodity entering a country without there being an appropriate tolerance level in place for residues. This addresses the first type of trade impact -- barriers to trade that arise because of inconsistent regulations on exposure levels among the three countries.

Farmers have complained both about price differences between the two countries and the differential availability of pesticides across the border. A striking element in this classification scheme is that price differentials are not even mentioned as a potential source of irritation. The simple explanation for the focus on residue tolerances is that registration agencies are not involved in the analysis of prices once a compound is on the market. Their role is to monitor safety and to some extent how well the pesticide does its job. Reinforcing this focus on residue levels is the right of countries under NAFTA to block imports only where they can show that the residue level is not consistent with domestic standards.

Category C issues do address the important question of differentials in registration status. In this case the remedy involves two distinct elements. The country where the pesticide-commodity pair is not registered should establish a tolerance level to resolve the issue of imported product. Then the company that produces the pesticide must decide whether

to apply for registration in the country where the use is not allowed. Note that from the perspective of the Trade Irritant Process Team there is no suggestion that equal access is a specific item that should be promoted by the governments as a way to diffuse irritants.

Current Harmonization Efforts

Some of the other NAFTA Technical Working Groups function mainly as a forum to exchange information on upcoming regulation or perhaps provide an opportunity to discuss trade irritants. The NAFTA Technical Working Group on Pesticides has gone further in clearly articulating goals of harmonization and working toward creating a North American market for pesticides in which "growers in all three countries can access the same pest control tools." The TWG on pesticides recognized, soon after it was formed in 1996, that the NAFTA free trade objective could not be met unless barriers posed by regulation were eliminated. They have approached harmonization through agreements on work sharing and the creation of a joint application process that includes a common data submission and format, and a coordinated review process. The working group has begun work on a NAFTA label that would be used in all three countries.

Joint submission is a significant step in reducing the cost of approval of new pesticides. Assembling the data required for registration is both time consuming and expensive especially in a country where the level of expected revenue after registration might be an issue. Work sharing offers potential of considerable cost saving on the part of the regulatory agencies. Each nation takes a piece of the data in a given registration package and performs an evaluation that will be accepted by the other parties. The additional time and expense savings and the chance that compounds will be registered in all three countries can have an impact on prices.

With a common label, issues of own-use importation would largely be resolved because every country would have agreed upon a common set of MRLs for the specific applications. Because the label would be legal in each country there would be no reason to block a farmer from crossing the

border to purchase a specific chemical. Note that a common label does not have to mean that all uses or application rates are standard. While a farmer in one country could purchase a product that had a common label, it could only be used for those purposes and at those rates that were legal within that country. In particular, differences in environmental fate and impacts on non-target species could still make some uses possible in one country but not in another. In addition allowable uses could vary from country to country because of differences in the patterns of exposure. In particular, the use of a "risk cup" (see p. 103) sets an upper bound on exposure to specific classes of compounds. Because patterns of exposure and use of the various classes of compounds could easily vary from nation to nation, even if all three countries adopted the same maximum exposure level, there could be differences in which pesticide-commodity combinations fill up the cup, and as a result differences in types of acceptable use for specific pesticides.

For agricultural producers, harmonization is mostly a positive thing. If the costs of producing a chemical are reduced, including the cost of registration, this should result in lower input costs. If companies can produce for a continental market, farmers may also reap the benefits from any scale economies available to the chemical companies. In addition aggregating demand over a continental market may allow chemicals to be developed or registered for uses that would not be economically viable otherwise. Similarly, while farmers may benefit from lower costs and a potentially larger range of products so too should farm chemical companies and food consumers. This suggests that efforts to harmonize pesticide registration procedures and establish uniform MRLs are beneficial to all parties. However this is possibly too simplistic a perspective on the subject. The most obvious issue is that there may in fact be fundamental differences in levels of acceptable risk among the three societies so that a common MRL is not possible. Without a common MRL it becomes almost impossible to treat North America as a single market for pesticides. Even if it is possible to resolve the registration package and MRL issue, regulators may still come to different conclusions based upon differences in environmental fate. If environmental differences are significant between nations then it is reasonable to expect different registration decisions.

Further, it is not clear that it is necessarily in the interest of chemical companies, and at least some producer groups, to move to a single market for pesticides. The current system, although imposing additional registration costs, results in the chemical companies being able to segment demand. The resulting ability to price differently in various markets could convey sufficiently higher revenues that more than offset the higher costs of multiple expenses for production and registration. In addition, given the usual assumption that the demand for food products is relatively price inelastic, it is possible that limiting access to chemicals makes sense for those farmers who already have access. Doing so results in a lower ability to compete in some countries and hence higher profits for farmers in the country where the compound is available. To the extent that harmonization facilitates higher levels of production in those places where it was previously difficult, and leads to lower prices for all producers of the crop, existing producers are worse off. Thus some commodity organizations in one country may oppose the development of a uniform pesticide registration procedure if they believe it will stimulate farmers in another country to increase their production.

While there has been considerable progress in finding ways to harmonize the registration process, it is really just beginning and barriers to free trade in pesticides will remain for many years. There is at present several outstanding differences in the regulatory approach between Canada and the United States such as the extent of cost recovery and the Canadian requirement for efficacy testing. Joint submission is currently only an option although there is attempt to encourage its use by expedited processing. Only a small number of completely new pesticides are evaluated each year and there are no plans to harmonize the relatively large number of pesticides that have already been approved. It is too early, therefore, to see whether this model of regulatory harmonization will be able create a single harmonized North American market within a reasonable time period.

SOURCES OF CONFLICT

Possible Causes Of Price Divergences

Implicitly patent and brand name rights allow a company to exercise market power as a means of recovering the research and development

investment needed to bring a new pesticide to market. Companies can therefore price their product at the point where marginal revenue equals marginal cost and there is no reason to think they would charge a lower price. In addition, geographic borders, when combined with the separate regulatory systems, provide a basis for price discrimination. In addition within a country common practices such as volume or other discounts can be seen as evidence of additional price discrimination. Under price discrimination, the monopolist prices in each country according to the following:

$$MC = MR_1 = p_1\left(1-\frac{1}{h_1}\right) = MR_2 = p_2\left(1-\frac{1}{h_2}\right)$$

where *MC* is marginal cost, MR_i, p_i and eta_i are marginal revenue, price, and demand elasticity respectively in country *i*. This implies that a higher price will be charged in the country with the less elastic demand and the price would only be the same if by chance the demand elasticity is the same.

Farmers demand for pesticides is a derived demand. We might expect that demand would be more inelastic if substitutes for the pesticide are not nearly as effective, if the pesticide is a small portion of cost and if the demand for the product produced by farmers is more inelastic. This will vary from one side of the border to the other both for economic reasons and because there are two regulatory systems. Differences in agricultural policy support programs affect the effective farm commodity supply functions thereby altering farm level demand for pesticides. In particular even though market prices for commodities may be about the same in both countries the aggregate return to farm production is made up from market revenue and government transfers. It seems reasonable that chemical companies would consider this in their pricing decisions. Differences in demand will also occur if the same pesticide is registered for different commodities on either side of the border. Availability of different substitute pesticides on both sides of the border can also have an effect.

Surveys of price differentials have been conducted for a number of years [McEwan and Deen, 1997 and Carlson, McEwan and Deen, 1999].

These surveys are all based upon asking pesticide dealers in both countries that are relatively close to the border to provide their retail sales price for specific compounds. The prices are standardized for units and concentration of the effective ingredient and then adjusted using the prevailing exchange rate. Carlson, McEwan and Deen [1999] report average prices for the period 1993-97 for 32 pesticides. Average prices are higher in Canada for 19 of these with the price differential being greater than 10% of the average price in both countries for 11 of the 19; U.S. prices are more than 10% greater than the mean price for four pesticides. Several factors may result in differences in mean price differences between the two countries, which has nothing to do with price discrimination:

- mean price differences may be within the price variability in both countries so that differences in the means are just chance outcomes rather than systematic results;
- price variability may be caused by variability in the cost structure of retailers;
- some retailers may be using particular chemicals as loss-leaders.

McEwan provided his 1997-2001 data on five pesticides to allow us to evaluate these possibilities. He collected price information from up to five retail outlets in eleven Canadian locations, eleven times a year. Similar information was collected from seven U.S. locations. He performed the adjustments to the U.S. data before forwarding the data. We regressed deflated prices against a system of trend and dummy variables by location to determine mean and variance by location. The estimated equations are summarized in Table 2; while Figure 1 shows results for the product Treflan.

Figure 1 shows a pattern of mean and variance that is highly homogeneous within each country and across the border. There is very little evidence of differences in cost structure, or that retailers in any of the locations use Treflan as a loss leader.

Figure 2 and 3 shows the very different results obtained for Roundup and Malathion (See Appendix for Furadan and 2,4 D 95% price confidence intervals). Roundup is much more expensive in the United States while Malathion is significantly more expensive in Canada. The

Table 2: Summary of Regression Results.

Variable / Statistic	Roundup	Treflan	Malathion	Furadan	2,4 D
Range of Location Coefficients					
Canada	-0.35 - 0.44	-0.43 - 0.33	-0.69 - 0.92	-2.26 - 1.48	-0.37 - 0.46
	(5 of 11)	(5 of 11)	(9 of 11)	(9 of 11)	(3 of 11)
United States	-0.82 - 0.80	-0.73 - 0.72	-0.60 - 0.82	-1.07 - 1.26	-0.17 - 0.22
	(5 of 7)	(6 of 7)	(6 of 7)	(3 of 7)	(5 of 7)
Trend in Canada	-0.017	-0.016	0.044	0.000	-0.002
	(-9.3)	(-10.5)	(29.7)	(0.1)	(-2.6)
US Trend Differential	-0.007	-0.021	-0.024	0.055	0.010
	(-2.5)	(-7.7)	(-10.6)	(8.7)	(9.3)
US Canada Differential	4.45	0.41	-0.76	-2.08	-0.18
	(96.0)	(9.9)	(-20.7)	(-18.3)	(-10.9)
CONSTANT	12.66	12.88	7.25	26.11	4.55
	(273.6)	(311.2)	(196.6)	(230.1)	(282.0)
R-squared adjusted	0.92	0.31	0.68	0.38	0.17
Mean Dependant Variable	11.27	12.13	8.23	27.51	4.64
Regression Standard Error	1.28	0.91	0.90	1.94	0.42

T-Statistics are reported in parentheses. For the location coefficients, the number significantly different from zero at the 95% confidence level is given.

Figure 1: Treflan 95% Price Confidence Intervals.

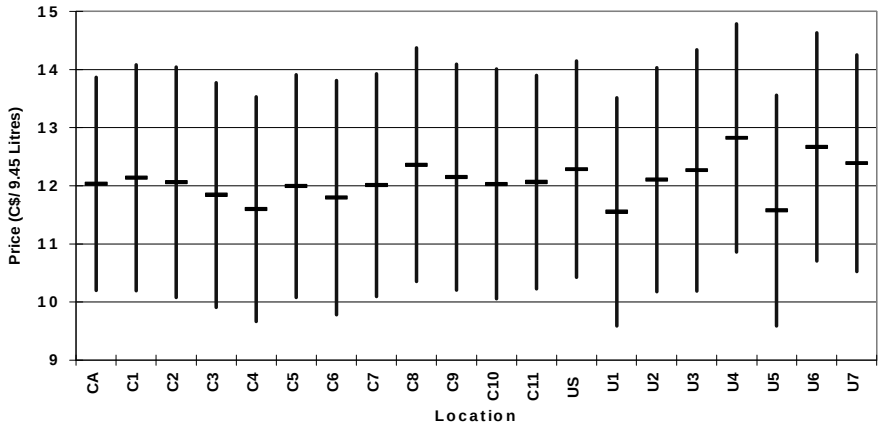
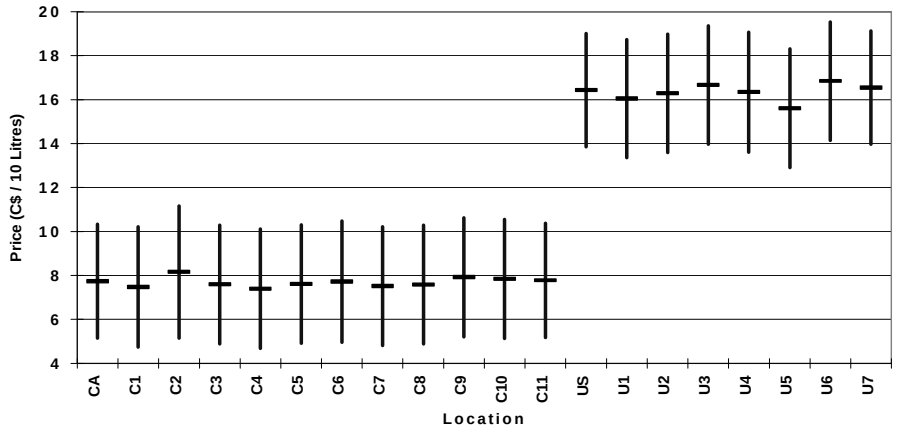
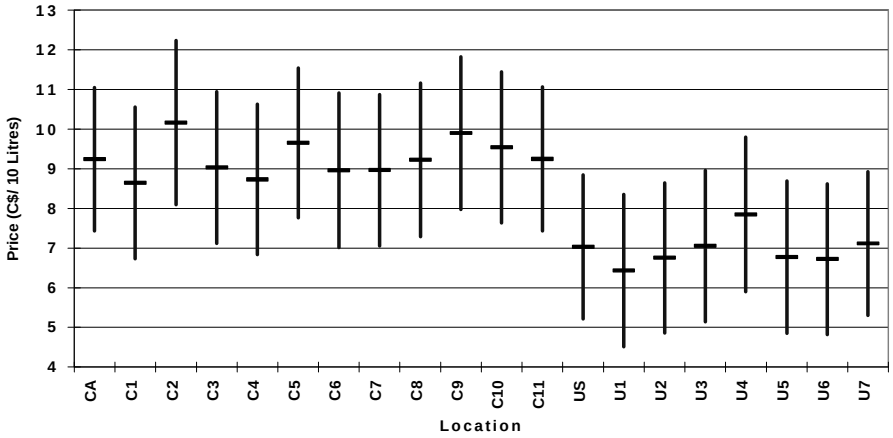


Figure 2: Roundup 95% Price Confidence Intervals.



homogenous price pattern within each country and the significant difference between countries imply that we are not seeing the effects of retail level phenomena but rather the effects of the pricing policy followed by the manufacturer such as simple price discrimination.

Figure 3: Malathion 95% Price Confidence Intervals.



Other more complicated marketing strategies could also result in the price patterns observed. Companies might be expected to recover the cost of registration in their wholesale prices and avoid cross-subsidizing registration costs in one country with revenues from another. In addition, each country provides patent protection for a defined length of time which creates and incentive for chemical companies to attempt to recover their investment costs within the patent life so they have adequate revenue to remain in business on an ongoing basis. The registration process takes place within this patent window, and as the regulators in Canada have already recognized that the process is longer in Canada, then there is a shorter period of time available to the company to recoup its costs, and hence a higher price is required. While these may be important factors in pricing policy, the contrasting results for Roundup and Malathion suggest that demand factors are more important at least for some pesticides.

However, it should be born in mind that there is nothing illegal or even immoral in price discrimination in this situation. Patents and other marketing rights are extended to the companies so that then can recover the cost of product development and approval. Indeed, it would be surprising if they did not practice price discrimination. To the extent that price

discrimination is a significant factor in providing a high enough rate of return to justify investing in research and development of new pesticides it may provide long run benefits even though it has short term costs.

The level of awareness of cross border price differentials and availability is generally a declining function of proximity to the border. Consequently those farmers arguing that they are being unfairly treated generally are correct in claiming that pest problems, broad environmental conditions, and production practices are similar on both sides of the boundary. In these cases, farmers justifiably wonder why it is possible for their neighbors to either have access to products they cannot use, or why in an era of free trade they are forced to pay a higher price for the same pesticide. So differential access can be important. Because a far larger share of agricultural production in Canada takes place in close proximity to the border and the size of the Canadian market for most compounds and uses is significantly smaller, both price and access issues have been more common in Canada.

Recently the most visible event took place in the United States and concerned price differentials on pesticides licensed for use on canola (see Taylor and Koo). Farmers in North Dakota argue they can buy pesticides for use on canola at lower prices in Canada, and that their growing environment is similar to that in Manitoba and Saskatchewan so that they should be allowed to use Canadian pesticides. Allowing these and other farmers to import pesticides for their own use would resolve price and availability differentials and be consistent with the principles of NAFTA.

The most persuasive bureaucratic case for own-use importation is in those instances where the irritant is strongest, right along the border. There is probably no compelling reason why a compound that is licensed in one country could not be used in another. Further, if the compound is licensed in both countries for the same use, and there are significant cross-border price differences then allowing own-use imports is the obvious way to equilibrate prices.

But own-use importation opens up other issues. For example, there is the question of cost recovery. Licensing a product is an expensive undertaking in both countries that companies have to recover through their retail prices. Significant levels of own-use imports could reduce the incentive to apply for a license, and without the data that is part of the approval process, we would be less sure that there are no adverse local consequences from pesticide use. Consider canola further. Canola is also grown further south in the United States in a double crop rotation. Here it is less clear that there would be no adverse consequences associated with importing product from Canada and using it according to Canadian label requirements. NAFTA harmonization with a NAFTA label would resolve this issue. Allowing own use importation would force the pace of regulatory reform needed to protect users and the environment while creating a single North American market.

Availability Issues

In the context of the existing regulatory structure the main issue with availability is that consumers are protected from exposure to residue levels from pesticide and farm product combinations that have not been explicitly registered. Implicit in this approach is a reliance on imports of food products to meet consumer needs in cases where specific compounds are not available and their absence limits the ability for domestic production. This approach is understandable from a public health perspective because it avoids all the costs associated with testing a large number of possible uses, as well as potential problems with worker exposure, environmental fate and non-target species effects in the importing country. However it does place potentially significant impediments on farmers as well as raising the interesting issue of government protecting imports at the expense of domestic production.

As noted earlier in the discussion of the procedures established by the Trade Irritant Process Team, the decision on availability is seen as being largely outside the domain of the regulatory structure. However other aspects of pesticide regulations make this an important topic. As regulations become more sophisticated, old products are re-tested to ensure they meet current standards and pesticides are grouped into classes with maxi-

mum exposure levels for the entire class (risk cup), with the result that the number of compounds farmers have for managing specific pests in a large number of crops is falling. Pesticides that have been in use for a long time are being withdrawn from the market either because they do not meet current standards or because they do not have a large enough sales volume to justify the expense of submitting a new registration package. This can leave producers with limited options in terms of pest control strategies and in extreme cases make the production of specific crops unprofitable

Pesticide manufacturers continue to submit both new compounds and new uses for registration but as the costs of registration increase, manufacturers are concentrating on providing compounds for large volume markets. As a result there is little effort to develop replacement compounds in minor use markets even though from a farmers perspective there may be no real alternative to a compound that is being withdrawn from use. To some extent minor use status is a relative concept. For example much of the fruit and vegetable production in the United States involves a minor use of pesticides relative to row and field crops like corn and wheat. But fruit and vegetable production in the United Sates still represents a large enough market that it is worth the support of chemical manufacturers. By contrast, fruit and vegetable production in Canada is both a minor market, relative to row and field crops, and small enough that the volume of sales may not be enough to warrant registering a compound for use in Canada even if it is available in the United States for the same crop. Thus, a government may be trying to establish high value agricultural production as a way to enhance farm incomes and increase the viability of farming in regions with large urban populations. But without effective pest control options, the long-term viability of these farms is doubtful. Although pesticide outlays are a fairly small share of total costs of production, if the substitute methods have considerably higher costs there may be a difficulty maintaining production. This suggests that the registration process should look beyond ensuring that exposure levels are harmonized and recognize that precluding domestic production may have adverse consequences in terms of farm structure, rural environment and seasonal access to fresh produce, as well as the already recognized indirect positive effects of lower levels of exposure.

In particular, producers of fruits and vegetables in Canada are concerned that they will soon be forced out of business if many more of the currently available chemicals are withdrawn from use and are not replaced with equally effective products. Even though it may be possible over time to adjust production practices to use alternative pest control approaches, it is unlikely that most of the existing producers will be able to do so. Their investments are tied up in a production structure that is predicated upon the use of pesticides, and changing that production structure can require major new investments that they cannot afford. If existing compounds were withdrawn in both Canada and the United States but new ones were registered only in the United States, a situation would be created for a significant trade dispute to develop. This means that enhancing harmonization is particularly important for minor use products.

CONCLUSION: LESSONS FOR DISPUTE RESOLUTION

Pesticides are controlled substances in all NAFTA counties, so how they are regulated greatly influences pest control strategies available to farmers. Because pesticides are an increasingly important part of the most common farm production technologies and, because NAFTA has essentially opened the borders to the free flow of agricultural products, differences in how pesticides are regulated can affect the competitive position of farmers in the three countries. A focus on agricultural trade suggests that harmonization of regulations is a desirable outcome because it would allow a level playing field in terms of farmer access.

However the other side of the pesticide issue is that pesticides can have undesirable consequences in terms of human health impacts and adverse environmental impacts. While the level of human health impact does not vary significantly from citizen to citizen, this is not as true for environmental fate. Different ecosystems may be more or less susceptible to the same quantity of pesticide. Moreover individual countries may choose to set different levels of acceptable risk for both their population and their environment. Thus even if everyone agrees on a common science protocol, the policy decisions may differ.

Despite the potential for different decisions to be drawn on appropriate levels of exposure, there are still strong arguments for harmonization. Indeed, NAFTA only extended prior efforts to reduce the costs of registration for companies and to adopt uniform protocols for assessing registration packages. Because registration involves large up-front outlays that can only be recovered over an extended period of time, cost reductions in the registration process can make a difference in the availability, especially for minor use compounds. Similarly, harmonization of registration procedures can also lead to simultaneous registration that is advantageous to farmers in countries that would otherwise have to wait longer for a product.

The potential for differences in pesticide regulations to affect trade flows among NAFTA countries has already been recognized and is being addressed. The current focus of the Technical Working Group on Pesticides is on ensuring that countries establish maximum residue levels on the basis of legitimate public health concerns not as a form of non-tariff barrier. National pesticide regulatory agencies are developing ways to share work loads in registration, ensure that common protocols are adopted and work toward common maximum residue levels of pesticides in food products. However this approach does not address the second trade issue of differences in access or prices affecting the competitive position of farmers.

Significant cross-border price differentials exist for some pesticides including large volume products and market size differences do not provide an obvious explanation. But for other compounds there is no significant cross-border price difference. These results can be interpreted in three different ways. The first is that the existing system in essence creates a segmented market that manufacturers can readily exploit to their advantage. Because a pesticide can only be used in a country if it has a national label, there is an effective barrier to arbitrage. Price differentials reflect the presence of this monopoly power. A second interpretation is that differences in price reflect differences in markets. These could include differences in registration costs or marketing and distribution costs. The fact that only some prices seem to be higher and that there is variability across

countries in terms of which has the highest price is not necessarily inconsistent with this perspective. The last interpretation is that both the previous models can apply. For some compounds, monopoly power may exist and be exploited and for others real cost differences may cause differences in price.

One way to resolve the price/availability issue would be to allow farmers to import pesticides for their own use from other NAFTA countries, providing that they followed the label directions on use. This policy is effectively a variation of recognizing the equivalence of the other country regulatory system and could be followed by each country individually or in partnership with other NAFTA countries.[3] A grace period could be specified, allowing the regulatory agencies to identify specific pesticides/use combinations that might need to be restricted because of special exposure issues. Currently all pesticide imports are "positive list" items which are prohibited because their import is presumed to lead to misuse. This solution would effectively transform control of pesticide trade to a negative list system. If adopted by all NAFTA countries it would pressure the regulatory agencies to implement a fully harmonized regulatory procedures in terms of chemical availability, accepted uses, permitted application rates, environmental restrictions and public health standards. That is there would be considerable pressure to develop a common label.

Such a policy would weaken the regulatory agencies' abilities to enforce their individual policies but might not make much difference if all three countries followed similar practices and if labels contained detailed geographic specifications. It would raise new issues for imported pesticides since tariffs would come into play. And it would be more of a problem in Canada where the border is generally nearby for most farmers. Transactions costs (information, distance, the red tape of dealing with customs) would limit this type of activity in the United States, except where demand is sufficient to justify the additional expenses. At the extreme, it

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[3] One of the problems of free trade, well known to anyone living near the border, is that cross border shopping has become much more complex because tariffs are far more complicated and regulations more pervasive. Most of the free trade happens at the wholesale level, while retail level trade has become much more restrictive.

might make it more difficult to establish a higher standard of risk avoidance and raises the (often imaginary) specter of the "race to the bottom."

But to the extent that price differentials reflect the real cost of serving a given market, the long-term consequences of free trade could be problematic. Pesticide manufacturers would no longer be in a position to allocate costs to the appropriate parties. If they price compounds so that all registration costs are embedded in a common price then producers in the low cost country are implicitly subsidizing those in the higher cost country. If they choose not to pursue registration in the high cost country because they cannot recover their costs, then they are not likely to be able to use a NAFTA label, and imports will not be allowed. If they choose to price in each country so they cover actual costs, then farmers will make their purchases in the lower cost country.

While farmers facing either higher prices or limited access, as well as policy makers may see short term benefits from harmonizing prices in a free trade zone it is important to separate short term and long term consequences. For the most part the short term benefits have been the focus of our discussion. However, in the long run one possible consequence of allowing prices to equilibrate is that lower profit margins for pesticide manufacturers could lead to lower investments in bringing new products to market. Because of pest adaptation, farmers and society may be worse off in the long run if new compounds are not available to replace existing ones when they are no longer effective. This suggests that it is important to assess the relative benefits of working toward a harmonized registration process that creates a single continental market versus the possible disincentive of lower profits on new product development.

In an environment where trade in the final agricultural product exists, without harmonization of prices and access for inputs, the logical result is differences in returns to fixed factors. Since farmers in all countries will receive the same market price for their product but farmers in one country will have higher costs, their enterprises will be less profitable. Over the long run this should lead to reduced levels of production and to

the extent that farmland captures rents, lower land prices in the country with less access or higher pesticide prices.

More stringent pesticide regulations have important implications for efforts to expand the production of high value crops. If national agriculture policy is to diversify agriculture and move to higher value plant products, especially in Canada, then attention must be paid to the availability of minor use chemicals. Not only do high value crops tend to use a broader range of compounds, but many of these compounds are relatively old and are facing a difficult time meeting current safety standards as their registration status is being re-evaluated. Because they are minor use products there is less incentive for companies to invest in developing substitute pesticides, which may threaten the viability of some parts of agricultural policy. However the ultimate pressure for harmonization is driven by economics and it will have to be balanced against other issues such as public health and environmental concerns.

Existing cooperation among regulatory bodies through the Technical Working Group provides the beginning of a model for trade harmonization- -it provides a set of ways to cooperate, from joint registration, to data exchange to informal consultation. This is a useful way to proceed, instead of establishing a formal agreement, because it allows flexibility and incremental extension once capabilities increase and demand is established. But the process needs nurturing and ongoing commitments.

Finally, there are some obvious impediments to cooperation among the pesticide regulatory agencies. These include bureaucratic inertia, regulatory capture, and ease of communication when three languages are involved. Although progress can be seen, there are also examples of inertia. However even with greater efforts to reduce trade frictions, there will still be problems because the degree of change may not be fast enough for some people and yet will be too fast for others.

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APPENDIX

Figure A1: Furadan 95% Price Confidence Intervals.

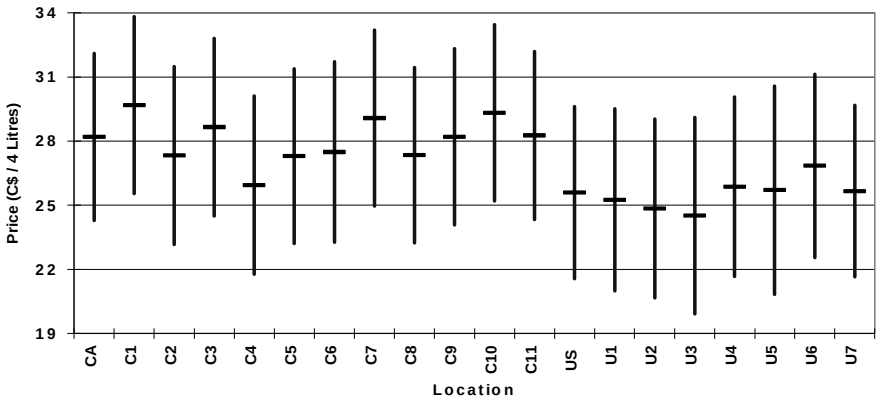
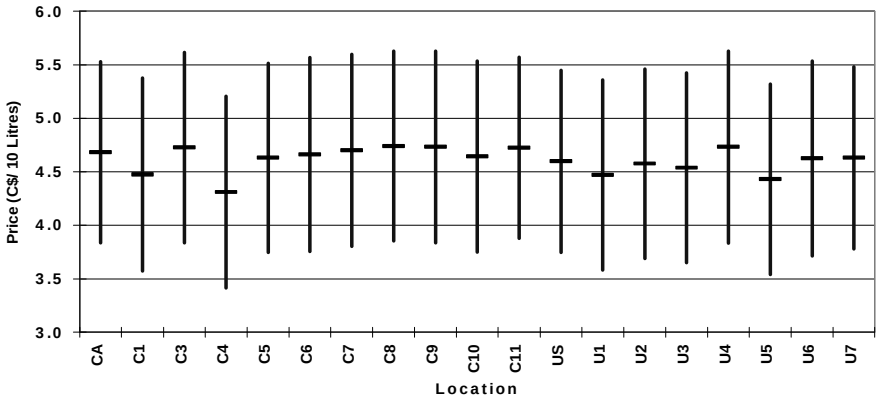


Figure A2: 2,4 D 95% Price Confidence Intervals.



ACCESS TO PESTICIDES AS A SOURCE OF TRADE DISPUTES

Thomas E. Elam

The authors are to be congratulated for offering up an interesting, lively and relevant paper on an important topic for this conference. Most of the comments they make on agricultural chemicals can also be applied to the animal health products industry where I work every day. After all, herbicides, insecticides, fungicides, antibiotics, parasiticides and vaccines are all highly targeted killers of organisms of one sort or another. In a sense, selectively killing undesirable plants, fungi, insects, bacteria and viruses are all similar processes. Concerns over potential collateral damage to harmless non-target organisms (including, but not limited to, plants, insects, bacteria, food consumers, dogs and cats) and to the environment are the basis of regulation, whether done by the likes of the Environmental Protection Agency (EPA) or the Food and Drug Administration (FDA).

The viewpoint offered here is from someone engaged in the day-to-day animal health business in Canada, the United States and Mexico, and my objective is to enlarge the scope of the differences among the three countries that need to be recognized as part of this conference. Unless stated otherwise, my comments apply to both the crop protection and animal health industries.

GOVERNMENT REGULATIONS

One thing that separates agricultural chemicals and animal health products from agricultural commodities is that both these markets are heavily influenced, some would say dominated, by government regulations. Companies must first prove to a government agency that their products are safe, effective and of an acceptable quality and purity before they can even be offered for sale. This is very different from food and feed made from GRAS (generally regarded as safe) materials. However, as the au-

thors point out, standards of safety, efficacy and quality are not absolute, leading to substantial debate over what is "acceptable risk". The authors point out that the product regulatory systems of the three NAFTA countries evolved over a long period of time and along different paths to get to where they are today. Reconciling the differences in the systems will not be easy, and in fact may not even be possible, or even desirable for that matter.

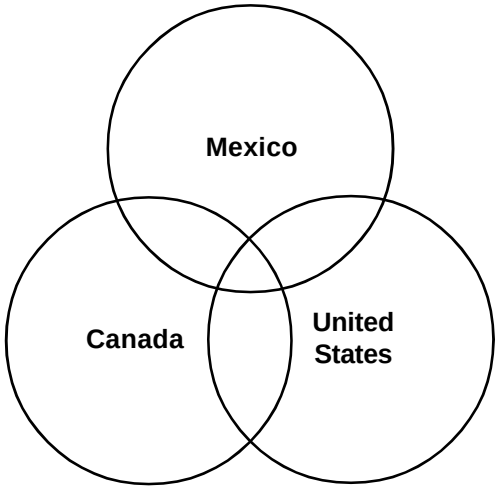
Also, there are other important differences that need to be incorporated into the discussion. Not only are each country's technical regulations for products and product use different, but the entire legal and social framework in which business takes place is diverse, and from my observations has a major impact on both pricing and product availability (for example, what can be registered and what can not).

From an industry point of view, the regulatory authorities in all three NAFTA countries have become more conservative in registration decisions over the past few years. This is particularly true for animal health products where the U.S. FDA has approved only one new drug for food animal use in the last three years. Fewer new products, and the lack of incentives for minor use registrations pointed out by the authors, is leading to reduced producer choice in general. Fewer choices means both less competition and increased use of "second-best" products.

HARMONIZING STANDARDS AND RULES

These considerations bring up a major issue with the concept of harmonization. In a debate over what standards are to be applied there is a real risk that the regulatory authorities of each country will insist on the maintenance of the most restrictive standard for each area of regulation. This could result in either the loss of currently registered products, or some very significant expenses for bringing product regulatory packages up to a more restrictive harmonized standard. A Venn diagram (Figure 1) can be used to illustrate this concern. With each circle representing a set of regulatory standards, the easily agreed standards are represented by the small

Figure 1: Non-Harmonized Regulatory Standards.



triangular area at the intersection of the three sets. Symbolically, and in practice, this set is small relative to the full set of tri-national regulations.

My hypothesis is that the intersection would contain, for the most part, the most restrictive of the entire sets of each country. If this were correct, such an outcome would lead to sharply higher registration costs, fewer new products, the loss of existing products, and virtually no new products for minor uses.

One example of this phenomenon from the world of animal health is BST. BST has been registered in Mexico and the United States for about a decade, but Canada has refused the application. The basis for the Canadian action was a different interpretation of the risk to dairy cows. Would harmonization force the Canadians to register BST? Not likely in my opinion. There are many other examples of different product registrations, some of which the authors allude to in their paper. Canada is also the only country among the three with a milk production quota system, also a source of considerable trade friction. I would propose that the differences we see are the result of very different attitudes regarding the dairy industry, not

just technical or economic arguments over the merits of BST or quotas. My point is that it will be difficult to have any regulatory authority adopt a more lenient standard based on an international panel's recommendation.

THE BUSINESS ENVIRONMENT

The legal framework is an important factor in accessibility of chemicals and drugs. The tort law system in the United States is probably the most liberal in the world. I would propose that the carte blanche given to sue anyone over any perceived damage raises somewhat the cost and risk of doing business in the United States relative to most other countries. To what extent are these risks incorporated into pricing and decisions on whether or not to register products with U.S. EPA and FDA versus other countries with less permissive law? Certainly, the risks involved with agricultural chemical and animal health products are potentially large. I don't know to what extent fear of being sued plays a role in the differences we see, but it could be significant. It is also difficult to see how technical harmonization on product standards could address differences in product liability unless tort law is also brought into line.

Another factor is the level of competition, and the effects of that competition on prices. Competition and prices are also very much affected by regulations. In general, the level of generic competition for off-patent products seems to be higher in both Canada and Mexico than in the United States. In part this is because both the U.S. EPA and FDA insist on the same standards for manufacturing of generics as for the original product. In both Canada and Mexico the standards are somewhat different for generics. As a result, we see differences in levels of generic competition that have influences on prices.

I suspect that this may be an important reason for the differences the authors observed in Roundup prices observed by the authors. Roundup just recently (September 2001) came off patent in the United States. It will be interesting to see if in 2002 prices in the United States fall to levels more comparable to those in Canada. Effective entry of alternative generic

glyphosate producers has, in other countries, had a significant effect on pricing.

Distribution margins are also generally higher in Mexico than in either Canada or, particularly, the United States. There are two major reasons for this difference in margins. Though Mexico has made tremendous progress in the past decade, its rural infrastructure is still at a disadvantage, resulting in relatively high transportation costs. For bulky products such as chemicals and feed additives this can be an important factor. Also, the distribution business in Mexico is still fragmented, and does not yet have the economies of scale seen to the north. It would be interesting to have data on distributor margins to see their effects on end-user prices. I know that there are animal health products that are moved through distributors at 5-10 percent markups in the United States, but are 20-30 percent in Mexico and 15-20 percent in Canada.

Although the authors do not mention it, exchange rates can have an important effect on observed prices in local currencies. Manufacturers are often reluctant to make short-term local currency pricing adjustments on imported products in response to exchange rate changes. Since most of the products being compared in this paper are made outside of Canada and Mexico, short term differences in U.S. dollar prices may be in part due to a lack of adjustment to local pricing and a rising or falling exchange rate against the U.S. dollar or other currencies.

I have also noticed that the social basis for doing business is different for Mexico, and other Latin countries, compared to both of the Anglo-centric cultures of the United States and Canada. What effect does this have? In Mexico business is done on a much more personal basis than by their neighbors to the north. The ability to negotiate pricing and other terms of trade is thus much more influenced by whom you know, how well you know them, and to what extent you can use personal ties to alter the effective level of competition. The requirement for personal contact also raises the relative manpower requirements for doing business in Mexico, and this may have an effect on selling costs and manufacturers' margin

requirements. While it may be impossible to quantify, I am convinced that the effects are real and significant.

The authors suggestion that producers be allowed to import products from other countries and observe the label of that country, would result in the U.S. EPA (or FDA in the case of animal health products) allowing uses for which products were not tested. Having worked with both EPA and FDA, I cannot imagine that either agency would be willing to allow producers to be used in a manner other than that which meets U.S. law. Similar comments also apply to both Canada and Mexico. In my mind, the only way that we could envision free cross-border trade would be for there to exist full harmonization, and identical standards and use labels for all three countries. To the extent that local conditions affect product efficacy, this might not be a desirable goal.

CONCLUDING COMMENTS

In summary, cross-border price differences are due to a complex set of forces that boil down to a combination of local intellectual property rights, regulatory, cultural, cost and competitive conditions. From the viewpoint of a private company, the dynamics of individual product pricing are complex, but it all boils down to product value versus cost in the eye of the customer in local markets. As long as there are three countries in NAFTA there will be three markets, and prices and products will be different across the borders.

In my opinion the most telling statement on harmonization that the authors make in the paper is "The most obvious issue is that there may in fact be fundamental differences in levels of acceptable risk among the three societies so that a common MRL is not possible." We have to face the fact that we are dealing with three very different countries with very different regulatory standards that have evolved over time to fit different sets of societal demands.

To try to resolve the technical, regulatory and marketplace differences in a vacuum is to ignore that there are other, very real, differences

that a technical solution might not address. If this is the case, harmonization on one front will inevitably lead to increased friction on another. This broader context for change is, to me, the real challenge to both this conference and the narrower interests of the paper. I fear that only by effectively resolving these broader issues can harmonization result in a set of standards that is not a subset of the most restrictive of each country.

POLICY OPTIONS FOR OPEN BORDERS IN RELATION TO ANIMAL AND PLANT PROTECTION AND FOOD SAFETY

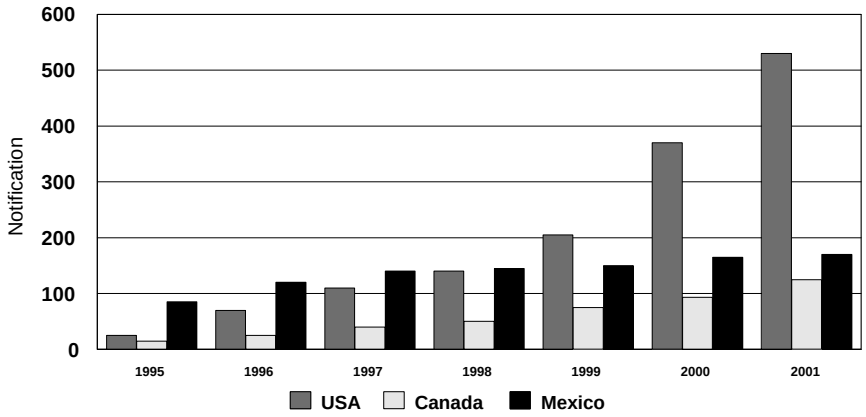
Spencer Henson and Maury Bredahl

INTRODUCTION

In recent years, increasing attention has been given to the impact of technical measures, and in particular sanitary and phytosanitary (SPS) regulations and standards, on trade in agricultural and food products. With the progressive dismantling of formal barriers to trade through international trade negotiations at both the bilateral and multilateral levels, analysts have focused in on other measures that have the potential to impede trade. Simultaneously, our understanding of the manner in which technical measures can influence trade has improved.

The range and diversity of SPS and other technical measures applied to agricultural and food products are typically large and increasing over time. For example, Figure 1 reports the numbers of notifications of new SPS measures by Canada, Mexico and Canada under the WTO SPS Agreement over the period 1995-2001. The number of annual notifications for the United States has increased from less than 50 in the each of the first three years of the Agreement to more than 150 for the most recent two years. In total more than 500 notifications have been registered by the United States, while Mexico has registered less than 200 and Canada only

Figure 1: Cumulative Notifications of SPS Measures to the WTO, 1995-2001.



Source: World Trade Organization.

slightly over 100. Simultaneously, the qualitative nature of these measures is changing reflecting advances in scientific understanding of risk and risk analysis, changes in priorities, the evolution of international standards, and changes in agricultural (bio)technology. Consequently, the task of analysing the impact of a SPS measures on trade in agricultural and food products has become even more problematic and resource intensive.

SPS MEASURES AS TECHNICAL BARRIERS TO TRADE

Non-tariff trade barriers (NTBs) are defined by Hillman (1991) as all restrictions, other than traditional tariffs, which distort international trade. Such measures directly impede the importation of products and, because they do not apply in an equivalent manner to domestic production, discriminate against imports (Beghin and Bureau, 2001). In some cases such measures are explicitly trade-related, for example import prohibitions and quantitative restrictions, aimed at restricting imports. In others, they do not explicitly aim to provide trade protection, but can act to restrict trade flows, for example technical barriers to trade (TBTs).

Table 1: Classification of Technical Barriers to Trade.

Import Bans			***Technical Specifications***		***Information Requirements***	
Total Ban	Partial Ban	Process Standards	Product Standards	Packaging Standards	Labelling Requirements	Controls on Voluntary Claims

Source: Roberts *et al*. (1999).

Roberts and DeKremer (1997, p. 1) define TBTs as:

> *Standards governing the sale of products into national markets, which have as their prima facie objective the correction of market inefficiencies stemming from externalities associated with the production, distribution and consumption of these products.*

These measures aim to prevent the entry into national markets of products that fail to meet pre-specified standards. In this context, 'standards' are technical specifications relating to characteristics of products or to the manner in which they are produced and processed. Equivalent measures may or may not be applied to domestic products, depending on their relative characteristics and the risks that pre-specified standards would be violated.

A variety of policy instruments can be employed by governments to correct (real or perceived) market failures. Our interest here is in those measures that are applied to imports (Table 1). Three broad categories of measures are applied (Roberts *et al*., 1999). First, import bans prohibit the entry of a product entirely, from a particular country/region, or at a specific time of the year. These are most widely applied to products that pose a great risk to human, plant or animal health and where alternative methods of control are technically or economically infeasible. Second, technical specifications define requirements that products must satisfy in order to be permitted entry. These can encompass the characteristics of the product itself, the process by which it is produced and the manner in which it is packaged. Predefined methods of conformity assessment are specified to determine whether the product is in compliance and can be permitted to

Table 2: Classification of Technical Barriers to Trade by Objective.

Societal Interests	*Risk-Reducing Measures*	*Non Risk-Reducing Measures*
Suppliers	Protection of commercial animal/plant health	Compatibility of products
Consumers	Food safety	Quality characteristics
Natural Environment	Protection of natural environment from harmful non-indigenous species	Environmental conservation

Source: Roberts *et al*. (1999).

enter. Third, information measures require certain information to be disclosed on the product label and/or control the claims that can be made about the characteristics of the product.

Technical barriers to trade are applied to address a wide range of societal interests, notably protecting the economic interests of suppliers (agricultural producers, food processors etc.), the health and economic interests of food consumers, and the natural environment (Table 2) (Roberts *et al*., 1999). For each of these objectives a distinction can be made between measures associated with risks to human, plant or animal health or the environment, and measures associated with other societal objectives, for example protecting the economic interests of consumers. The focus of this paper is on this first set of measures, which are commonly referred to as SPS measures.

Technical measures differ in the extent to which they discriminate between domestic and imported products. Non-discriminatory measures are applied equally to domestic and imported products, although differences may remain in the manner in which conformity assessment is undertaken.[1] Discriminatory measures apply additional and/or qualitatively different requirements to imported products. Furthermore, measures can be applied to all imports regardless of source or discriminate between individual exporting countries. The extent to which technical measures discriminate between products according to source is an important factor in-

[1] Imported products may be subject to border inspection, whereas no comparable system of inspection is applied to domestic products.

fluencing the impact on trade, both in terms of total trade flows and flows between particular countries.

Whereas much of the concern about the impact of technical measures on trade has concentrated on mandatory government requirements, there is growing awareness that voluntary standards can also impede trade. First, compliance with established voluntary standards may be essential because consumers require compatibility with complementary products or services (for example plastic containers and microwave ovens). Second, voluntary standards may be closely related to consumer preferences (for example safety marks that are seen by consumers as an essential guarantee of minimum product quality). Third, voluntary standards may be considered crucial for compliance with mandatory standards (for example ISO 9000 as a means to satisfy the requirements of food safety regulations). If such standards are so widely applied that they become *de facto* mandatory, there may in practice be little choice but for foreign suppliers to comply.

In addition to the standards associated with technical barriers to trade, the methods applied to assess conformity can also discriminate between domestic suppliers and exporters, often explicitly by applying additional or different methods of conformity assessment to imports. For example, imports are frequently subject to inspection at the border, while domestic products are not subject to an equivalent process of conformity assessment prior to sale.

Some analysts dispute the above definition of TBTs. Rather they consider the term 'barrier' should be not be applied to measures whose principle objective is to correct market inefficiencies, but happen to have an incidental impact on trade (Beghin and Bureau, 2001). For example, Baldwin (1970) considers that national technical measures (NTMs) having an overall positive welfare effect should not be classified as NTBs. Other analysts define NTBs by reference to the difference between an existing measure and the measure that would be applied if all supplies were from domestic sources (for example Maskus *et al*., 2001).

In the case of SPS measures specifically, the use of the term 'barrier' may be guided by the rules of the SPS Agreements. Both Agreements define criteria to assess whether a technical measure is 'justified.' This is assessed according to the specific nature of the measure, its objectives and the potential impact on trade. This is essentially a scientific – does the measure address a real risk to human, animal or plant health of the environment? – and an economic – does the measure distort trade to the minimum extent possible? – issue.

SPS AND OTHER TECHNICAL MEASURES AND TRADE WITHIN NAFTA

The foregoing discussion suggests that agricultural and food products are typically subject to a wide range and diversity of SPS and other technical measures that have the potential to impede trade. This section now explores the incidence of these measures in Canada, Mexico and the United States. In so doing, the aim is to highlight the extent to which agricultural and food products are subject to SPS and other technical measures in intra-NAFTA trade. This analysis is based on data derived from the UNCTAD database, which includes an inventory of non-tariff measures, including technical measures, applied to agricultural and food products at the eight-digit level.

The most widely applied measures by Mexico are labelling requirements (22.7%), testing, inspection and quarantine requirements to protect plant health (16.5%), and product characteristic requirements for plant health protection (12.3%). Collectively, these account for over 50 percent of the measures applied. The products to which technical measures are most widely applied are live animals, fruit, vegetable and nut preparations, oilseeds, dairy products, eggs and honey, and meat and edible meat offal. Relatively few technical measures are applied to other vegetable products, cocoa and cocoa preparations, and gums, resins etc.

In Canada, the most frequently applied technical measures are authorization for plant health, human health and animal health protection, and marking and product characteristic requirements for human health

protection. The products to which measures are most widely applied are edible vegetables, roots and tubers, meat and edible meat offal, edible fruits and nuts, fish, crustaceans, molluscs etc, and dairy products, eggs and honey.

The most frequently applied measures by the United States are testing, inspection or quarantine requirements to protect human, and health and product characteristic requirements for human health protection. Collectively, these account for around 70 percent of the measures applied. The incidence of technical measures is highest in the case of dairy products, eggs and honey, fruit, vegetable and nut preparations, and fish crustaceans, molluscs etc.

Technical measures are more likely to impede trade, everything else being equal, where multiple measures are applied simultaneously to a single commodity. In Canada, multiple technical measures are applied to around 22 percent of tariff lines. This contrasts to Mexico and the United States, where the proportion of tariff lines to which more than one technical measure is applied is 79 percent and 75 percent respectively.

While the data presented above indicates the number and types of technical measures applied in the NAFTA countries, it may be of little use in itself in assessing the importance of such measures to trade. However, two measures can be calculated that provide some indication of the proportion of trade subject to technical measures. The Trade Coverage Ratio (TCR) estimates the percentage of trade subject to NTMs, in total or of a particular type, for an exporting country. An alternative measure that overcomes the problem of endogeneity of the import value weights is the frequency index (FI). The FI does not reflect the relative weight of the affected products and, as a consequence, does not give any indication of the

importance of measures to an exporter overall, or between export items. TCR and FI are defined in a footnote below.[2]

While frequency-based approaches provide some indication of the incidence of SPS and other technical measures, in practice there may be little relationship between frequency of application and the magnitude of any associated trade effects. Rather, the exact nature of the measure applied is probably of greater importance. Thus, the data presented below may indicate where SPS measures are applied and could be a problem, but they do not indicate actual barriers to trade.

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[2] The Trade Coverage Ratio (TCR) (C_{jt}) estimates the percentage of trade subject to NTMs, in total or of a particular type, for an exporting country (j) at a particular level of product aggregation:

$$C_{jt} = \left[\frac{\sum D_{it} \bullet V_{iT}}{\sum V_{iT}} \right] \bullet 100$$

where:

D_i is a dummy variable that takes the value of one if a technical measure is applied and zero otherwise;
V_i is the value of imports of tariff line I;
t is the year of measurement of the technical measure; and
T is the year of the import weights.

An alternative measures that overcome the problem of endogeneity of the import value weights is the frequency index (FI) (F_{jt}):

$$F_{it} = \left[\frac{\sum D_{it} \bullet M_{iT}}{\sum M_{iT}} \right] \bullet 100$$

where:

D_i is a dummy variable that takes the value of 1 if a technical measure is applied and zero otherwise;
M_i is a dummy variable that takes the value of 1 if there are imports from the exporting country j and zero otherwise; and
T is the year of measurement of the technical measure.

Table 3 reports the TCR and FI for bilateral exports of agricultural and food products between Mexico, Canada and the United States. Across all three markets, the majority of commodities have an estimated TCR and FI of 100 percent, indicating that all trade is subject to technical measures. Conversely, there are commodities for which the TCR and FI have values of zero. There are also significant differences in the estimated TCR and FI between bilateral trade flows, reflecting variation in the structure of trade and the incidence of technical measures.

The relative values of the TCR and FI provide information on the distribution of technical measures versus the value of trade flows. For example, in the case of sugar and sugar confectionery exports to the United States the TCR has a value of 70 percent, while the FI has a value of only 18 percent. This indicates that, while the majority of tariff lines where trade occurred were free of technical measures, the majority of trade occurred along tariff lines to which technical measures were applied.

While the TCR and FI provide some indication of the proportion of trade subject to technical measures, they do not provide any indication of the extent to which such measures actually impede trade. To assess the extent to which technical measures are actually TBTs requires further analysis. In many instances this is undertaken on a case-by-case basis, as in the case of U.S. phytosanitary restrictions on Mexican exports of avocados (see Box 1).

However, some information can be gleaned from other published data, for example on U.S. border detentions. The U.S. Food and Drugs Administration (FDA) routinely publish data on consignments of agricultural and food products that are detained at the U.S. border. These data only cover products and controls for which the FDA is responsible (and thus most meat and meat products are excluded) and do not provide information on the eventual fate of detained consignments – whether they are eventually permitted to enter, are re-exported, or destroyed.

Tables 4 and 5 detail the number of detained consignments from Mexico and Canada in 2001. In the case of Mexico, the most frequently

Table 3: Frequency Measures (Percent) of Technical Measures on Bilateral Trade in Food and Food Products.

HSCode	Product	From Mexico to				From Canada to				From US to			
		Canada		US		Mexico		US		Canada		Mexico	
		TCR	FI	TCR	FI	TCR	FI	TCR	FI	TCR	FI	TCR	FI
1	Live animals	100	100	100	100	100	100	100	100	100	100	100	100
2	Meat and edible meat offal	100	100	100	100	100	100	100	100	100	100	100	98
3	Fish, crustaceans, mollusks	100	100	100	100	100	100	100	96	100	100	100	100
4	Dairy products, eggs and honey	100	100	100	100	100	100	100	100	100	100	100	100
5	Other products of animal origin	100	100	100	100	100	100	100	100	100	100	100	91
6	Live plants, flowers etc.	100	100	100	100	100	100	100	100	100	100	100	100
7	Edible vegetables, roots and tubers	100	100	100	100	100	60	100	100	100	100	96	83
8	Edible fruits and nuts	100	100	100	100	100	100	100	100	100	100	100	95
9	Coffee, tea and spices	100	100	-	-	100	100	4	21	100	100	100	100
10	Cereals	100	100	100	100	100	100	100	100	100	100	100	100
11	Products of the milling industries (starch, gluten etc.)	100	100	-	0	100	100	-	-	100	100	100	100
12	Oilseeds	100	100	78	65	100	100	54	54	100	100	100	100
13	Gums, resins etc.	100	100	-	-	100	100	-	-	100	100	41	80
14	Other vegetable products	100	100	-	-	-	-	-	-	100	100	65	75
15	Animal and vegetable oils and fats	-	-	3	5	23	67	2	13	-	-	79	57
16	Preparations of meat and fish	-	-	100	100	100	100	100	100	-	-	100	100
17	Sugar and sugar confectionery	-	-	70	18	74	67	56	18	-	-	82	67
18	Cocoa and cocoa preparations	-	-	-	-	100	100	-	-	-	-	100	100
19	Cereal preparations	-	-	100	100	100	100	100	100	-	-	100	100
20	Fruit, vegetable and nut preparations	-	-	100	100	100	100	100	100	-	-	100	100
21	Other preparations	-	-	100	100	79	88	100	100	-	-	100	94
22	Beverages, spirits and vinegar	-	-	94	80	100	100	67	78	-	-	100	100
23	Residues and waste from food industry	-	-	-	-	99	80	-	-	-	-	80	66
24	Tobacco and manufactured tobacco substitutes	-	-	-	-	-	-	-	-	-	-	100	100

Box 1: Phytosanitary Controls on Mexican Exports of Avocados to the United States.

There has been a longstanding, and high profile dispute over U.S. phytosanitary controls on imports of avocados from Mexico. In 1914, U.S. officials identified avocado seed weevil in Mexican avocados and instituted an import ban. After repeatedly rebuffing Mexican requests for import permission for almost 80 years, in July 1993, Animal and Plant Health Inspection Service (APHIS) permitted Hass avocados grown in Michoacan to be imported into Alaska under certain conditions. Growers and packers in Michoacan adopted improved grove management techniques, packing practices and shipping practices in order to export their avocados (Roberts and Orden, 1997, Bredahl 2001).

In 1994, Mexico requested extended entry for Hass avocados to the North Eastern States. On February 5 1997, APHIS published its final rule allowing Mexican Hass avocados to enter 19 states and the District of Columbia.

Imports are permitted from the state of Michoacan under certain conditions. The approval is based on scientific risk assessments that include a series of interrelated restrictions termed a 'systems approach'. Under the systems approach, commercial shipments of fresh Hass avocados grown in approved orchards in Michoacan may be imported into 19 North Eastern states and the District of Columbia during the period November to February. The systems approach safeguards are designed to progressively reduce risk to an insignificant level. The safeguards make up what is termed a 'fail-safe' system, which means that if one of the mitigating measures should fail, there are others in place to ensure that the risk is managed and reduced. It is a system of safeguards that occur consecutively in stages. The nine mitigating measures consist of: 1) natural host plant resistance to fruit flies; 2) field surveys; 3) pest trap and bait measures in the orchards; 4) field sanitation measures; 5) post-harvest safeguards; 6) winter shipping; 7) packinghouse instructions; 8) port-of-arrival inspections; 9) limited US distribution. All stages are overseen and supervised by APHIS. Should pests in the avocados be detected at any stage in the system, avocado imports may be suspended from affected areas.

Since the lifting of the restrictions, Mexican exports of avocados to the United States have increased significantly. In 1991, Mexican exports of avocadoes to the United States were negligible at 367 tonnes, accounting for only 2 percent of total imports. However, by 2000, exports had increased to 14,479 tonnes, accounting for 17 percent of total imports.

In September 1999, Mexico requested that the United States extend both the seasonal period and geographical region to which avocados can be exported from Mexico. In November 2001, APHIS issued a new rule, extending the number of states to which avocados can be exported to 31 and extending the permitted entry period to six months from October 15 to April 15.

Table 4: United States Border Detentions of Agricultural and Food Products by Product, 2001.

Product	*Mexico*	*Canada*
Fresh vegetables	716	12
Processed vegetables	252	27
Fresh fruit	152	4
Processed fruit	1,188	5
Fish	156	51
Beverages	336	16
Baked goods	180	15
Confectionery	216	30
Spices/seasoning	22	2
Meat products	24	123
Dairy products	0	9
Other	15	24
TOTAL	**3,257**	**318**

Source: Analysis of FDA data

Table 5: United States Border Detentions of Agricultural and Food Products by Reason, 2001.

Product	*Mexico*	*Canada*
Microbiological contamination	1,044	132
Physical Contamination	624	34
Labelling	312	105
Pesticide residues	1,140	0
Non-permitted additives	576	15
Non-registration	165	66
Other	48	4

Source: Analysis of FDA data

detained commodities were processed fruit and fresh vegetables. In the case of Canada, meat products and fish were most frequently detained. The predominant reasons for detention were pesticide residues, microbiological contamination, filth and non-permitted additives in the case of Mexico, and labelling and microbiological contamination in the case of Canada.

RULES GOVERNING APPLICATION OF SPS MEASURES IN NAFTA

As discussed above, SPS measures are laws, regulations or procedures aimed at the protection of human, animal and plant health. More specifically, the SPS Agreement defines SPS measures as any measure applied:

- to protect animal or plant life or health within the territory of the member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;
- to protect human or animal life within the territory of the member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages, or feedstuffs;
- to protect human life or health within the territory of the member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; and
- to prevent or limit other damage within the territory of the member from the entry, establishment of spread of pests.

Chapter 7 of the NAFTA Agreement lays down rules for the application of SPS measures. The aim of the Agreement is to:

> *…establish a framework of rules and disciplines to guide the development, adoption and enforcement of sanitary and phytosanitary measures…and applies to any measure of a Party that may, directly or indirectly, affect trade between Parties. To a large extent the provisions of the Agreement are modelled on the text of the WTO SPS Agreement, although this was still evolving at the time the NAFTA Agreement was signed. It also forms the basis of the text relating to SPS measures in the draft Agreement of the Free Trade Area of the Americas (FTAA).*

NAFTA permits the Parties to adopt, maintain or apply any SPS measures necessary for the protection of human, animal or plant life or

health ion its territory, including measures more stringent that international standards, guidelines or recommendations. Furthermore, in protecting human, animal or plant life of health, Parties are able to establish their own '*appropriate level of protection.*' Notwithstanding the above, the Agreement requires that SPS measures are based on *scientific principles*, are not maintained where there is no longer a scientific basis, and are based on a *risk assessment*, as appropriate under the circumstances. Further, Parties must not adopt measures, or arbitrarily or unjustifiably discriminate between their goods and like goods of any other country where identical or similar conditions prevail.

The NAFTA Agreement promotes the *harmonization* of SPS measures by requiring Parties to base their SPS measures on relevant international standards, guidelines and recommendations with the objective of ensuring such measures are, at the least, equivalent to those of other Parties. Measures that conform to international standards, guidelines and recommendations are considered justified from a scientific perspective. It also promotes the *mutual recognition* of SPS measures by requiring Parties to pursue *equivalence* of their respective measures to the greatest extent practicable. This requires that, through use of risk assessment methodologies, the measures adopted by an exporting country are demonstrated to provide the 'level of maintained by an importing country.

The Agreement also recognises the concept of *regionalization*, whereby, while an exporting country may not be free of a pest or disease, specific territories within that country may be pest- or disease-free, or have a low prevalence. It requires that Parties recognise pest- or disease-free areas and apply SPS measures accordingly.

Provisions are made for the exchange of information on SPS measures between Parties. As a general rule, Parties are required to *notify* other Parties and provide a full text of proposed measures at least 60 days prior to the adoption of modification of the measure. Further, each Party is required to establish an *Enquiry Point*, as a single point of contact for questions and requests for documentation relating to SPS measures proposed, adopted or maintained.

The Agreement establishes a Committee on Sanitary and Phytosanitary Measures, comprising representatives from each party with responsibility for SPS matters. The Committee is responsible for facilitating:

- the enhancement of food safety and SPS conditions in the territories of the parties;
- activities of the parties pursuant to international standard (Article 713) and equivalence (Article 714);
- technical co-operation; and
- consultation on bilateral issues.

An SPS issue can be raised by any party and is then sent to the Committee for consideration. To date, the Committee has had ten meetings.

A series of bilateral or trilateral Technical Working Groups (TWG) has also been established, which consider subject-specific matters and aim to develop proposals relating to, for example, harmonization and equivalence. Currently, TWG operate in the areas of:

- Animal health (bilateral);[3]
- Dairy, fruits, vegetables and processed foods (United States-Canada);
- Fish and fishery product inspection (trilateral);
- Food additives and contaminants (trilateral);
- Labelling, packaging and standards (trilateral);
- Meat, poultry and egg inspection (trilateral);
- Pesticides (trilateral); and
- Plant health, seeds and fertilizer (bilateral).[4]

As well as the NAFTA institutions, arrangements exist bilaterally through which SPS issues are raised and addressed. For example, the Agriculture Working Group of the U.S.-Mexico Binational Commission has provided a forum through which various initiatives have been devel-

[3] North American Animal Health Committee provides a trilateral forum.
[4] North American Plant Protection Organisation provides a trilateral forum.

Table 6: Summary of Issues Raised at NAFTA SPS Committee, 1994-1999.

Product	*Export Market*	*Type of Measure*
	Mexico	
Horticultural products	US/Canada	Phytosanitary
Avocados	US	Phytosanitary
Wheat	US/Canada	Phytosanitary
Pitaya/Carambola	US	Phytosanitary
Papaya	US	Phytosanitary
Candies	US	Food safety
Horticultural products	US	Food Safety
Cattle	US	Food safety
Milk products	US	Food safety
Poultry	US	Food safety
Livestock	US	Animal disease
Meat	US	Animal disease
Pork	US/Canada	Animal disease
Poultry	US/Canada	Animal disease
	United States	
Cherries	Mexico	Phytosanitary
Potato seeds & tubers	Mexico	Phytosanitary
Citrus fruit	Mexico	Phytosanitary
Sawn wood & plywood	Mexico	Phytosanitary
Processed food products	Mexico	Food safety
	Canada	
Potato seed	Mexico	Phytosanitary

Source: Based on published minutes of NAFTA SPS Committee.

oped for co-operation on SPS issues. For example, in 1998 a co-operative agreement was established between Mexico and the United States aimed at enhancing activities of mutual interest relating to the safety of foods for human consumption. More generally, the Agriculture Working Group has provided a forum through which concerns relating to SPS measures are addressed. For example, the group has been instrumental in the acceptance of the Mexican state of Yucatan as an area of low risk for classical swine fever by the United States, and thus providing market access for Yucatan pork and pork products.

Table 6 provides a summary of the major issues raised at the eight meetings of the NAFTA SPS Committee over the period 1994-99. The

majority of issues concern controls relating to plant or animal diseases and acceptance of pest or disease-free status. These issues have been most frequently raised in the context of trade between Mexico and the United States. The main food safety issues raised through the Committee have been associated with the recognition of inspection or approval systems.

OVERCOMING THE TRADE EFFECTS OF SPS MEASURES

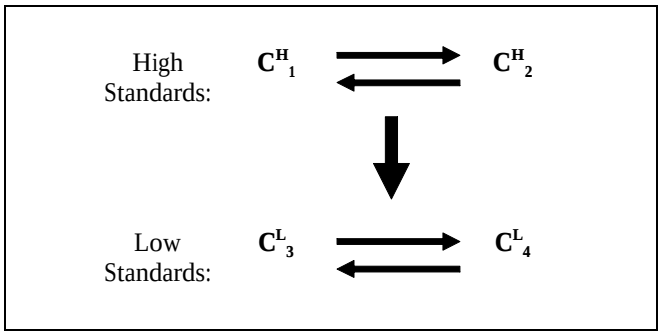
A variety of rapprochement efforts can be made to overcome the trade effects of incompatibilities between standards across global markets. This section explores the main forms of rapprochement mechanisms in general and then assesses the extent to which these have been employed within NAFTA in an attempt to overcome the trade effects of SPS measures.

Figure 2 illustrates a simple scenario in which four trading partners apply a standard that differs quantitatively between 'high' and 'low' levels (Jacobs, 1994; Hooker and Caswell, 1996; 1999). A good example is maximum residue levels (MRLs) for pesticides in agricultural and food products. The width of the arrows in Figure 2 depicts the magnitude of trade flows that will normally take place between countries that apply a 'high' (C^H_1 and C^H_2) and 'low' (C^L_3 and C^L_4) standard.

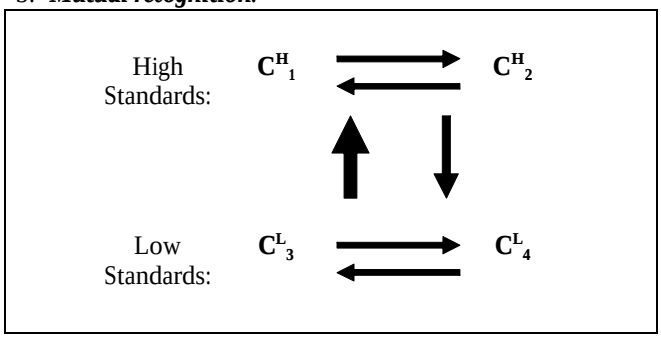
Three forms of rapprochement can be used to address incompatibilities in the standard employed by individual trading partners: 1) co-ordination; 2) mutual recognition; and c) harmonization. Co-ordination is the weakest form of rapprochement, whereby countries aim to narrow differences between standards, for example through the application of voluntary international codes of practice. While such efforts may facilitate trade between countries that co-ordinate their requirements at a similar level, they do not overcome the problems faced by countries adopting relatively low standards (for example developing countries) when exporting to countries with relatively high standards (for example high-income countries). Thus, co-ordination may enable trade to proceed more easily from high to low standard countries, but trade in the opposite direction will remain impeded.

Figure 2: Trade Effects of Rapprochement of Standards.

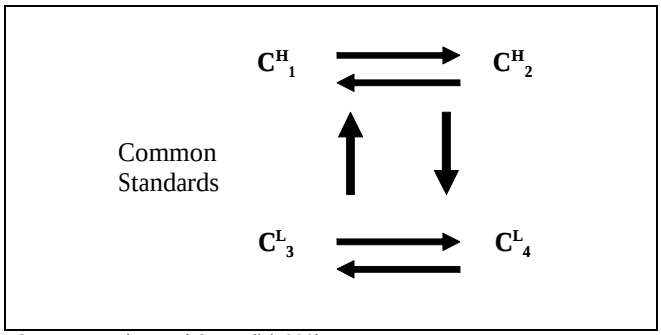
a. ***Co-ordination:***



b. ***Mutual recognition:***



c. ***Harmonisation:***



Source: Hooker and Caswell (1999).

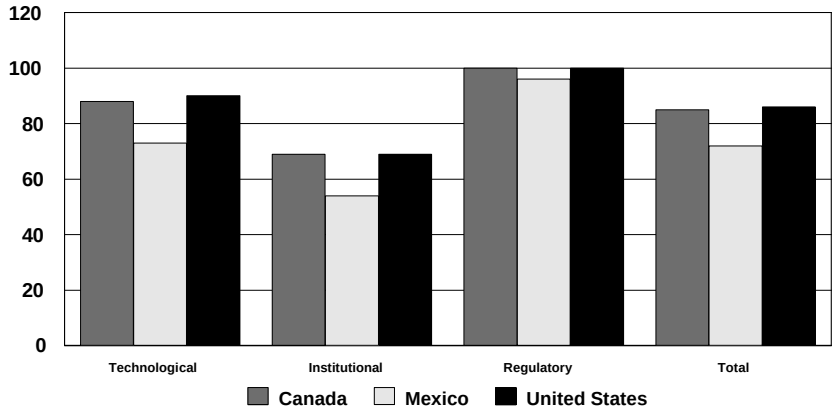
It is important to note that low standard countries may participate in co-ordination efforts, despite the fact that barriers to trade with high standard countries remain unaffected. For example, such an approach can facilitate trade between low standard countries and may be part of efforts to enhance domestic consumer protection. It may also be part of longer-term efforts to enhance regulatory capacity.

Mutual recognition is a stronger form of rapprochement. This approach is based on a recognition that technical requirements and/or conformity assessment procedures that differ can result in the same level of protection. Under mutual recognition, therefore, while countries may apply different technical standards, these measures are regarded as 'equivalent.' In this case, the dominant direction of trade is from low to high standard countries, presuming that lower standards are associated with lower costs of compliance. The SPS Committee within the WTO has recently established guidelines aimed at facilitating dialogue between Members regarding the equivalency of SPS measures (WTO, 2001).

An important factor determining the willingness of trading partners to engage in rapprochement efforts, and the likely success of the alternative mechanisms outlined above, is the state of SPS capacity, both in absolute terms and the relative position of the parties. Bolaños *et al.* (2001) report the results of an analysis of SPS capacity in the countries of the Americas, based on data collected over a three-year period. This analysis employs an analytical framework that defines SPS capacity in terms of three frameworks. These frameworks are identified using cluster analysis of variables corresponding to key elements of the SPS system:

- **Institutional framework:** Mechanisms through which national SPS interests are represented and defended, agreements implemented, and commitments acquired at the international level fulfilled.
- **Technological framework:** Systems of SPS controls through which SPS problems are identified, controls undertaken and performance monitored.

Figure 3: SPS Capacity in the United States, Canada and Mexico.



Source: Perez (2001).

- **Regulatory framework:** Systems of legislation relating to SPS issues and the mechanisms through which these are brought into compliance with international commitments.

Figure 3 presents the results of the assessment of SPS capacity for the United States, Canada and Mexico. All three countries have relatively well-developed capacity with respect to all frameworks, in particular the regulatory framework. However, the level of capacity in Mexico is judged to be less well developed than in Canada and the United States, particularly in the case of the institutional and technological frameworks. This suggests there may be the greatest opportunities, and indeed willingness, to undertake rapprochement efforts bilaterally on the part of Canada and the United States. However, rapprochement efforts are likely to be more problematic between Canada/United States and Mexico It also highlights the need for efforts to enhance SPS capacity in Mexico, in which both Canada and the United States can play a part.

It is noteworthy, that in Canada, Mexico and the United States, institutional capacity is least well developed. This suggests that there may be common weaknesses in institutions responsible for SPS matters at both

Table 7: Examples of Rapprochement Efforts through the NAFTA SPS Committee and Technical Working Groups.

Co-ordination	*Mutual Recognition*	*Harmonisation*
FDA/CFIA Action Plan on Food Safety	US-Canada MRA on seafood inspection	Harmonisation of US-Canada potato grading scheme
Discussion of issues and positions for the Codex Committee on food Additives and Contaminants	US-Canada equivalence agreement regarding molluscan shellfish inspection programme	Harmonisation of US-Canada food additive regulations
Principles for mutual support in animal health emergencies	Equivalency of green-house certification	Harmonisation of policies on BSE and other TSEs
Joint US-Canada reviews of pesticides	Recognition of accredited laboratories for seed certification	Harmonizing nutrition labelling and nutrient content claims
Co-ordination of activities relating to Codex Committee on Residues of Veterinary Drugs in Foods	Recognition by the United States of Mexican poultry slaughter system as equivalent	Harmonisation of data requirements for residue chemistry, seed treatments and terrestrial foods uses.
		Harmonisation of Japanese Beetle regulations

Source: Reports of NAFTA SPS Committee.

the national and international levels. Indeed, the results reported by Bolaños *et al*. (2001) suggest that institutional capacity is relatively weak throughout the Americas.

The incidence data presented in Section 3 suggest that a large number of SPS and other technical measures are applied to agricultural and food products in Canada, Mexico and the United States. Further, many commodities are subject simultaneously to a number of measures. These measures differ widely, both qualitatively and quantitatively, and even subtle differences can produce distinct outcomes in terms of trade. Thus, in order for rapprochement efforts to have a noticeable impact, measures must be identified that have a significant trade effect and which are amenable to negotiation on a bilateral or trilateral basis. In many cases, such efforts require a great deal of time and effort on the part of the negotiating parties,

particularly in the case of harmonisation and mutual recognition, and such inputs need to produce a demonstrable outcome to policy makers.

Table 7 provides examples of rapprochement efforts through the NAFTA SPS Committee and Technical Working Groups. It is evident that rapprochement has been undertaken at all three levels – co-ordination, mutual recognition and harmonisation. Further, these efforts have covered a wide range of issues associated with SPS controls, including inspection and certification systems, testing methods, laboratories and data requirements, labelling requirements, and food additives and pesticide policies. Although the United States and Canada appear to have been most active, all three parties to the NAFTA Agreement have been involved in these efforts.

There is a long history of trading partners negotiating, both bilaterally and multilaterally, but reductions in traditional barriers to trade, for example tariffs and quotas, substantive negotiations relating to SPS and other technical measures are a relatively new phenomenon. This lack of experience clearly influences the manner in which such negotiations have been pursued to date, but the nature of SPS measures and the administrative structures with which they are associated are quite different to those related to traditional barriers to trade (Kerr, 1997):

- In the case of tariffs and other direct forms of trade protection, the magnitude of the measure is normally directly measured and any changes over time can be observed and monitored. SPS and other technical measures differ according to a wide range of qualitative and quantitative factors and, consequently, are not as amenable to such measurements. Thus, the costs and time taken to gather information to enable the consequences of alternative courses of action are likely to be considerable.
- Distinct institutions have developed with direct responsibility for international trade negotiations. In the United States, for example, the Office of the US Trade Representative (USTR) is the single institution responsible for such matters. In the case of SPS measures, however, a multitude of agencies may be involved. In the United States, for example, these include the Food and Drugs Administration (FDA), Food Safety and Inspection Service (FSIS),

Animal and Plant Health Inspection Service (APHIS) etc. The responsibilities of these agencies are not focused on international trade relations. Indeed, this may be a relatively minor element of their day-to-day activities.

- Many agencies responsible for SPS matters lack expertise in national and international trade law. While trade experts may become involved in negotiations relating to SPS measures in an attempt to bridge this gap, these individuals typically lack expertise in SPS matters. Thus, international negotiations are likely to be mirrored by negotiations at the national level between policy makers responsible for trade and SPS-related matters.

Measures such as tariffs and quotas have trade protection as their direct objective, but SPS measures are not explicitly trade-related. Thus, negotiations relating to SPS measures involves trade-offs between, for example, trade-related objectives, consumer protection, protection of the economic interests of agriculture and the food processing sectors, protection of the environment etc. Thus, negotiations are likely to be protracted and involve processes of consultation, negotiation and compromise.

These differences suggest it might be reasonable to expect that negotiations relating to SPS matters to be more complex and protracted than those associated with traditional barriers to trade. In turn, this suggests that the resource costs for the negotiating parties will be greater. Indeed, history to date suggests that negotiations regarding rapprochement efforts, in particular relating to equivalency and harmonisation, take considerable periods of time. Such negotiations involve not only agreement and compromise over scientific issues, but also the development of trust and confidence between the negotiating parties. In view of the resource costs of such negotiations, the parties must have a reasonable expectation that an agreement can be reached before they will be willing to initiate such a process.

We turn now to some examples of SPS issues affecting trade within the NAFTA countries. We also include some examples that have surfaced in the FTAA negotiations. This information was gathered by an informal

telephone survey of trade associations and government officials. As such, it is neither a comprehensive inventory nor a balanced survey, as we know more people in Canada and the United States than we know in Mexico or FTAA countries. Before proceeding with a discussion of our findings, an important factor affecting the application of SPS measures as trade barriers has been the discovery of antidumping actions as an effective and legal way to protect domestic producers. Once the purview of the United States, it is now the instrument of choice in Mexico and, unless constrained by the Doha Round of WTO negotiations, will become a universal tool to protect domestic producers from import competition.

As Table 8 indicates, contentious SPS issues often deal with minute details of administrative rulings and of SPS measures. Seemingly innocuous decisions such as where inspections are implemented can have important impacts on trade flows and the incidence of costs. But, resolution of some of the issues calls for the adoption of broad concepts that have more to do with incidence of costs than they do with safeguarding animal, plant or human health. None receives more attention than the framework to regulate the safety of imported meat and meat products. The two polar cases are the 'system approach' where nations approve the food safety system of the other country and the case-by-case approach that potentially requires every plant in every country to be inspected by representatives of food safety agencies of every trading partner. In the first case the cost is borne by governments, and in the second, they are borne by the owners of slaughterhouses and meat processing plants.

But the seeming logic of negotiating approval of national food safety systems may not withstand public scrutiny. The Washington Post, in its February 25th issue, critically noted: "in protecting nearly 4 billion pounds of meat imported each year, the USDA increasingly relies on foreign governments – including ones that have repeatedly failed to get the job done." (Warrick) The article goes on to reference a report by USDA Inspector General Roger C. Viadero: "He concluded that the USDA was failing to enforce its own rules, extending a welcome to imports and countries that had not been able or willing to meet U.S. standards. Viadero found that 19 out of 36 U.S. trading partners had exported meat to the

Table 8: Selected Examples of SPS Disagreements Between the NAFTA Countries.

Item: Importer/Exporter	Description and Comments
Red Meats: Mexico/US	Mexico recently changed the location of inspection of meat imports from the United States. Under the previous system, Mexican inspectors on the US side of the border inspected meat. Now the loads are inspected in Mexico. The loads will carry an FSIS export inspection certificate. Several loads, either whole or partial, have been rejected in Mexico, creating a complex problem for disposal of the meat. It must be reexported back to the United States or destroyed in Mexico.
Live Feeder Cattle: Canada/US	Canada restricts the import of feeder cattle from the United States to the period October 1 to March 31. The restriction is to prevent the import and spread of antiplasmosis and blue tongue. Blood-sucking insects that are not, obviously, present after a killing frost, spread the diseases. The United States argues that climatic conditions will prevent the import and spread of the disease regardless of the season.
Beef Shelf life restrictions: Mexico/US	As part of the resolution of the antidumping case, Mexico does not allow the import of beef beyond 30 days from slaughter. Part of the rationalization was that US packers were dumping overage beef into the Mexican market.
Live Heifer Imports: US/ Mexico	US does not allow the importation of intact heifers from Mexico and has refused to consider imports on a regional basis. At issue is brucellosis and tuberculosis. Mexicans point out that the tests for these diseases are very expensive, and so the restriction is actually a prohibition.
Apples: Mexico/US	Mexico requires preshipment inspection and approval, by Mexican inspectors, of exports of apples to Mexico. The cost is paid by US packers and exporters. They felt that a preclearance program operated by APHIS should be sufficient, and would be a good deal less costly.
Red Meats: Mexico/US	The United States regulatory agencies have not been able to agree with their Mexican counterparts to a 'systems approval' of the slaughter and meat processing industry in Mexico. Representatives of the US red meat industry insist on that as the only option. If a plant-by-plant inspection system is imposed, the cost shifts from governments to plant owners. This tends to favour large firms with deep pockets and disadvantage small firms. If adopted widely it significantly increases costs as some US firms export to as many as 40 or 50 countries, each of which might require a plant inspection.
Potatoes: US/Canada	See case study in Box 2.
Karnal Bunt: Canada/US	Canada agreed to program to approve US areas as being free of karnal bunt disease (of wheat) in three phases over a three-year period. Carried out the first two phases, but have never completed the third and so four states are (unfairly) under quarantine restrictions.
Avocados: US/Mexico	See case study in Box 1.

Box 2: Resolution of the United States Import Ban on Potatoes from Prince Edward Island.

On October 24, 2000, the CFIA confirm the discovery of potato wart disease in a .4 hectare portion of a 30 hectare field on Price Edward Island (PEI). On October 31, the USDA imposed a temporary emergency measure prohibiting the importation of seed and table stock potatoes from PEI. (Potato wart had previously been found only in Newfoundland and Labrador where a plant quarantine has been in place since 1912.)

In early November, the US and Canada agreed to a 'three tiered approach" to resolve the trade impasse. Stage 1: PIE potatoes may not be exported to the US. Exports of other potatoes must be accompanied by a CFIA certificate of origin. To prevent commingling of PEI potatoes with other Canadian potatoes, movements off the Island must be in consumer bags of 20 pounds of less. Stage 2: Canadian officials must propose a system that "adequate mitigates the risk of the potato wart." This proposal is to be reviewed by APHIS and a panel of experts, including the representatives from the CFIA. Stage 3: Canada "will aim at establishing regulated and non regulated areas, based on survey, inspection and investigation evidence. After completion of this stage, USDA will consider suspension of the requirements of the systems approach and allow shipment of tablestock from non regulated areas. Potatoes from areas regulated for potato wart may not be exported to the U.S." (Sherman)

On April 30, 2001 the US reopened its border to PEI potatoes under the following conditions (Baldacci): "four risk zones have been established within PEI. Potatoes within each zone will be subject to strict review and movement conditions. Zone one consists of the field where potato wart was detected and a half mile buffer area around the field. Zone two includes all fields that have shared farming equipment with the infected area. Zone three consists of the fields surrounding and between zones one and two. Zone four is the remainder of PEI. USDA officials have approved the following restrictions:

- Bulk importation of potatoes will remain suspended, as well as the importation of seed potatoes. In addition, fresh tablestock potatoes from zone one and two cannot be moved off PEI.
- The USDA will accept tablestock potatoes directly from zone four provided they are washed and treated with sprout inhibitor. These potatoes are limited to boxes and bags no larger than 50 pounds, and must be intensively inspected and certified by Canadian agriculture officials. All surface shipments of zone four PEI potatoes coming into the U.S. must enter in Houlton.
- Movement of PEI potatoes within Canada must also meet specific requirements. Tablestock potatoes from zone three and four may move only if the soil has been removed from the potatoes so that they meet Canada's most stringent standards for cleanliness. Additionally, the potatoes must be intensively inspected for potato wart disease and are limited to boxes or bags of 50 pounds or less.
- Seed potatoes may move within Canada from zones three and four if seed certification procedures and phytosanitary inspections at the point of shipment are followed and conducted. Sorting line soil sampling and testing must also be performed before seed potatoes can be shipped.

On August 1, 2002, agreement was reached on necessary conditions for free import of new crop potatoes from PEI. For three years, the CFIA must monitor and survey every field on PEI according to an agreed protocol. After three years, given that conditions favourable for the emergence of the fungus, all fields on PEI should have been inspect satisfactorily.

United States, even though their meat-sanitation programs fell short in key areas, such as testing for chemical residues."[5] The article conceded: "the inspector general found no evidence that the agency's policies had allowed unsanitary meat to enter the country." A representative of a consumer group offers the opinion that the article clearly indicated the need for country of origin labelling. (Jaeger)

Private certification schemes, which are popular and widely used in Europe, may be the logical way out of the dilemma for livestock slaughter and meat processing. Certification to an independent food hygiene standard (like the European Food Safety and Inspection System), that required third-party audits, would combine elements of a systems approach and plant-by-plant approval. An important consideration in this approach would be the nature of product liability laws in importing countries.

Canadian potato imports because of the discovery of potato wart fungus on Prince Edward Island provides a convenient case study to explore the resolution of a SPS disagreement under NAFTA rules and procedures. (See Box 2 for a brief summary of the case.) The case does indicate the transparency of the plant protection system, as Canada reported the discovery of the fungus and so observed its obligations under the North American Plant Protection Agreement. The reaction of the United States to the announcement, the ban on all potato imports from Prince Edward Island, is difficult to rationalize. Clearly, the Canadian Food Inspection Agency took immediate action to prevent the spread of the fungus to nearby fields and to other provinces in Canada. (An anonymous source did indicate that there was some concern on the US side about the competence of provincial authorities, and of role that CFIA would play in isolating the site.) The dispute was ultimately resolved with the US placing stringent requirements on the actions Canada must take to maintain isolation of the fungus.

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[5] US meat packers complain that the import requirements of the European Union are discriminatory because they require testing for the presence of (chemical) compounds that are not used in the United States. The only approved laboratory is located in Canada so the tests are very expensive.

One of the essential elements of the NAFTA and WTO SPS Agreements is that of risk assessment. One of the evolving areas of the interpretation and application of these agreements is what constitutes an acceptable risk assessment. Quite clearly, the risk assessment carried out by the United States must have allowed for a very, very small probability of introduction of the potato wart fungus. While the dispute was eventually resolved, it is not the high point of US implementation of the NAFTA SPS Agreement.

IMPLICATIONS

It is evident from the foregoing discussion that agricultural and food exports within NAFTA are subject to a range of SPS and other technical measures. These measures differ in their form and objectives and many products are simultaneously subject to multiple measures. Consequently, assessing the impact of SPS measures on trade is problematic. While the incidence data presented above provide some indication of where SPS measures are likely to be more, or less, important, further analysis is required to identify the extent to which trade is actually impeded. Such an analysis inevitably has to be taken on a case-by-case basis and consequently the costs, both in terms of time and resources, are typically large.

It is evident from the proceedings of the NAFTA SPS Committee and other evidence, for example US border detention data, that SPS measures remain a major issue for agricultural and food product exporters. Indeed, at least in part because of the success of NAFTA in reducing traditional barriers to trade, for example tariffs, the impact of SPS and other technical measures on trade in agricultural and food products is coming to the forefront of our attention.

NAFTA defines procedures through which disputes between NAFTA members over SPS and other technical measures can be pursued. To date, however, these formal dispute settlement procedures have been mainly applied to conventional trade problems, for example tariffs and anti-dumping. Typically, disputes over SPS measures have been addressed on a bilateral basis. Such negotiations generally involve detailed and

lengthy dialogues of both an economic and scientific nature and can take long periods of time to resolve, as is illustrated by the case of avocado exports from Mexico to the United States, and of potato exports from Canada to the United States.

In many cases, SPS measures are applied for legitimate reasons, as defined by the rules laid down for the application of SPS measures under NAFTA and the Uruguay Round Agreements. Thus, whilst such measures may have a significant impact on trade, they may not be technical barriers to trade, at least according to the strictest definition. In such circumstances trading partners must pursue rapprochement strategies in order to minimise the trade effects of incompatibilities in SPS requirements. Such strategies can be costly and time consuming to pursue, particularly where there are significant differences in SPS capacity and the need to establish trust and confidence in the efficacy of controls between trading partners. This could be a major impediment to such efforts as NAFTA evolves into the FTAA and encompasses countries with much lower levels of SPS capacity.

There are numerous examples of rapprochement efforts between the NAFTA Members, including the entire range of strategies detailed in Table 15. The majority have been pursued on a bilateral basis, particularly between Canada and the United States. However, such negotiations have typically been protracted and involved costly inputs on the part of each party. This experience is observed more widely, for example in negotiations between the European Union and United States over the equivalency of veterinary controls. These negotiations took many years to conclude and, to date, have still to produce observable benefits in terms of trade in animal products.

Two differing views of the WTO and NAFTA SPS Agreements are common. The first, held mostly by government (regulatory) officials and those negotiating trade agreements and disputes, is that the Agreements provide an excellent framework for resolving disputes and finding rapprochement solutions. The second, held by the same type of officials in developing countries, is that the Agreements provide a justification and international defence for national standards (use of international standards,

risk assessment, etc.) that is of little use to developing countries. In much of Africa, proprietary standards of food processors and European retailers determine import requirements and not the internal standards of the EU or the exporting countries. Such market solutions, third party certification to a private or proprietary standard, may be the way forward as the FTAA is negotiated.

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Section 3

Domestic Trade Remedy Law: Required Safeguard or Dispute Generator

The objective of this section is to analyze trade remedy laws in the three NAFTA countries.

TRADING REMEDIES TO REMEDY TRADE: THE NAFTA EXPERIENCE

Beatriz Leycegui and Mario Ruiz Cornejo

INTRODUCTION

After World War II, many countries shared the perception that as part of the effort of attaining a more politically stable and economically integrated international environment; accomplishing trade discipline and liberalization was fundamental. Thus, a new set of multilateral institutions and rules were adopted with the purpose of reducing and eventually eliminating all tariff and non-tariff trade barriers. In addition, this new legal framework also provided for trade remedy measures so that the governments could remedy the situation of their domestic industry, when materially or seriously injured as a consequence of unfair trade practices antidumping (AD) or countervailing duty (CV) measures, or simply by the trade liberalization itself (safeguard measures).

This paper focuses on the use of unfair trade laws in North America. Therefore it looks at how much have NAFTA parties (Canada, Mexico and the United States) have resorted to or traded AD and CV remedies to influence their trade with other countries, and particularly between themselves, prior to and after the entry into force of the North American Free Trade Agreement (NAFTA). Three methods are used to determine which of these three countries has more intensively applied unfair trade

practices measures affecting intra-NAFTA trade. Particularly interesting is the analysis of whether the initiations by each NAFTA party, affecting intra-NAFTA imports, diminished with the implementation of the AD and CV commitments contemplated under Chapter 19 of the NAFTA.

In addition, complementing Chapter 19 objectives, an assessment is offered relative to the functioning of Chapter 19's binational review panel system, based on the experience of 75 cases filed during the first eight years of NAFTA's implementation (January 1994 - January 2002). Specific suggestions are included pertaining to the possibility of observing a reduction or elimination of the application of AD and CV laws, or to the negotiation of less trade-restrictive AD and CV rules to be applied between the NAFTA partners. As an introduction to these issues, general reference is first made to the nature, objective, evolution and international legal framework of AD and CV measures.

OVERVIEW OF AD AND CD MEASURES

Antidumping And Countervailing Measures

The practice of exporting dumped or subsidized goods[1] has been considered unfair at a national and a multilateral level, since these products compete with identical or similar goods in the export market, placing domestic producers in a situation of disadvantage. Consequently, through the application of AD or CV duties, governments intend to level the playing field so that all producers are able to compete in equal terms.

Canada was the first country to pass an antidumping law in 1904, as a consequence of the pressure exerted by Canadian steelmakers who demanded higher tariffs on U.S. steel rails. They alleged that as railroad

[1] A "dumped good" is a good exported at a price lower than the price it is sold in its country of origin, or if the home market price cannot be determined, when the export price is lower than the price of the same or a comparable product in a third market, or alternatively, lower than the exporter's cost of production. A "subsidized good" is a good in which its producer has received a financial contribution by its government or any public body or a private body acting on its behalf, that confers a benefit to the recipient.

building began to surge once Canada's transcontinental railroad was completed in 1885, the U.S. Steel Corporation was unfairly aggressive and was dumping rails into the Canadian market. Since Canada could not limit the tariff increase to steel rails, its government was aware that once it revised the tariff for such good, other producers to which it owed political debt would also demand tariff increases on imported competing products.[2] By 1921, the United States, France, Great Britain and most of the British Commonwealth countries had adopted antidumping laws. Although dumping was not a new issue,[3] the passage of such AD laws at that time responded to particular circumstances which happened to concur:

- the perception that as World War I neared its end "the German government was accumulating vast stocks of goods in order to dump them on the markets of the world and regain in the field of economic warfare what she was losing on the military battlefield."[4]
- the concern at the end of the 19th century and the beginning of the 20th, of the need to regulate the evils of predatory trusts, especially when practiced by foreigners.
- the need to lower high tariffs which "provided national firms the opportunity to price monopolistically at home and at the same time protected them from re-import of goods they sold competitively in world markets."[5]

Despite the adoption of AD legislation, countries for many more decades continued to protect their industries, basically through tariffs and quotas. With the progressive elimination of the latter, as well as other non-tariff barriers, since the 1970's countries began to rely more frequently on

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[2] Michael Finger, "The Origins and Evolution of Antidumping Regulation," *Antidumping- How it Works and Who Gets Hurt*, J. Michael Finger (ed.), Ann Arbor, The University of Michigan Press, 1993, pp. 13-14.

[3] "Jacob Viner (1923), the first scholar to pull together previous writing on the subject, notes a sixteenth century English writer who charged foreigners with selling paper at a loss to smother the infant paper industry in England. Viner also notes an instance in the seventeenth century in which the Dutch were accused of selling in the Baltic regions at ruinously low prices to drive out French merchants." *Ibid.*, p. 13 -14.

[4] *Ibid*, Jacob Viner, cited in p. 16.

[5] *Ibid.*, p. 17.

their unfair trade practice laws, especially to those which regulate the AD procedure.[6] Since 1948, multilaterally through the General Agreement of Tariffs and Trade (GATT), contracting parties have recognized and regulated the right of parties to impose AD and CV duties if domestic production has been injured or is threaten to be injured.[7] Ad duties are imposed despite concern that the abuse in the application of AD laws might hamper the trade liberalization commitments of the Agreement.

In 1955, new principles and disciplines were agreed with respect to subsidies under the GATT, yet important aspects remained undefined. Antidumping did not become a significant GATT issue until the Kennedy Round (1964-1967) of multilateral trade negotiations (MTN) where an Antidumping Code was drafted. However, since the U.S. Congress did not approve it, the Code never came into effect. In the years that followed the use of AD laws expanded, where the dominant question became "How can antidumping be applied to this problem?" instead of asking "Was the problem caused by dumping?"

Specific agreements on dumping and subsidies were achieved in 1979, with the conclusion of the MTN of the Tokyo Round (1973-1979). The Antidumping Code and the Subsidies and Countervailing Duties Codes contributed to strengthening the protection regime against unfair trade practices. In the view of Michael Finger the "agreement helped transform antidumping from a minor instrument for restricting imports to a major

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[6] The outnumbering of AD investigations compared to CV investigations basically responds to:

i) The difference in nature of dumped and subsidized goods: while the former are linked to enterprises behavior, the latter to government actions. Consequently, the determination of CV measures has a greater impact in diplomatic relations, since the government of the importing country determines whether the government policy or policies of another sovereign state are legitimate or not and shall therefore be actionable or not.

ii) The fact that governments tend to subsidize in a lesser degree than private industries to price discriminate.

iii) The preparation, gathering of proofs, and procedures of antidumping cases are less complicated than subsidies investigations.

[7] GATT, Articles VI and XVI.

one." He adds that "as antidumping became more and more detailed, its motive became more and more to find a way to fit antidumping to each immediate problem. (If your favorite tool is a hammer, your problems will all look like nails)."[8] In this respect Lowenfeld notes that the substance of trade disputes is the effect on the importer, not the behavior of the exporter and therefore the Tokyo Round's mistake consisted in focusing on the differences between fair and unfair trade, when the real focus is on acceptable vs. unacceptable level of trade or market share or import penetration.[9]

Some years later, as a consequence of the MTN of the Uruguay Round (1986-1994), where a new GATT was negotiated (GATT 1994) and the World Trade Organization (WTO) established, also new agreements on antidumping and subsidies were adopted by all Members of the newly founded WTO. The new Agreement on the Implementation of Article VI of GATT 1994 (the Antidumping Agreement) and the Agreement on Subsidies and Countervailing Measures (SCM Agreement) were built on the 1979 Antidumping Code and Subsidies and Countervailing Duties Code negotiated under the Tokyo Round. Departing from the former, these two new Agreements apply to all WTO Members.

The Antidumping Agreement requires greater transparency and establishes new methodological rules regarding the determination of dumping (e.g. as to the calculation of cost of production to include reasonable administrative and selling costs, and profit; the margin of dumping shall normally be calculated either from a comparison of the weighted average normal value in the home market with the weighted average of prices of all comparable exports, or on a transaction-to-transaction basis; and sales below cost). It further disciplines the application of AD measures by establishing new rules related to injury determinations, procedures to conduct investigations, imposing duties, reviewing determinations and terminating antidumping duties. Furthermore, the Antidumping Agreement introduces a special standard of review rule: *If the WTO Member's*

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[8] Michael Finger, op. cit., pp. 59, 63 and 65.
[9] *Ibid.*, pp. 59 and 63.

authority's have established the facts of a case properly, and made and unbiased and objective evaluation of these facts, the evaluation shall not be overturned, even though the panel might have reached a different conclusion. In addition, as to panel's interpretation rules, the Agreement establishes that if a panel finds that one of its provisions admits of more than one permissible interpretation, it shall find the authorities measure to be in conformity with the Agreement if it rests upon one of those permissible interpretations of the Agreement.

It is also worth highlighting the main accomplishments of the Uruguay Round SCM Agreement:

- it identifies the three necessary elements for a subsidy to exist
  i) financial contribution,
  ii) made by a government or public body within a territory of a WTO member, and
  iii) the contribution confers a benefit;
- aside from disciplining the use of export subsidies, it also does so for production subsidies;
- it adopts a "traffic light approach" for identifying three different type of subsidies, in which each category is subject to different consequences due to their diverse nature:
  - *"Green subsidies" or non actionable subsidies,* considered to unlikely cause harm to trade (non-specific subsidies, or those which provide assistance: for basic research, to disadvantaged regions; to adapt existing facilities to new environmental standards.
  - *"Red subsidies" or "prohibited subsidies"*, considered clearly harmful to trade (those contingent to export performance or to the use of domestic inputs).
  - *"Amber subsidies"or actionable subsidies*, only challengeable if they cause adverse effects (serious prejudice, injury, or nullification and impairment of benefits). The Agreement establishes rebuttal presumptions of when subsidies give rise to adverse effects.
- it provides for a more expeditious dispute settlement procedure for actionable subsidies.

- it introduced special provisions in favor of developing countries, perhaps of greater impact than all those introduced in other Agreements of the WTO.

However, despite the progress made multilaterally in the field of trade remedies, achieving full transparency and discipline in the application of AD and CV measures remains to be among the most important challenges facing the international community. The former since countries continue to abuse in the application of such laws, mainly the AD ones, constituting today one of the most important barriers to legitimate international competition.

TRADE REMEDY LAWS IN NORTH AMERICA

Mexico[10]

From 1987 to 1999,[11] Mexico initiated a total of 228 AD/CV investigations.[12] Most of these investigations have been AD cases with a share of 92 percent (210 proceedings), leaving CV cases with the remaining 8 percent (18 proceedings). This number of AD cases places the Mexican system as one of the most active worldwide. From 1987 to 1997, Mexico ranked fourth in initiations of AD cases, along with Canada.[13] Table 1

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[10] The statistical information included in this section was prepared by the authors from the following sources: the 2000 Annual Report of the UPCI, the UPCI's database. In some instances it was necessary to consult the final determinations published in the Federal Official Bulletin (*Diario Oficial de la Federación).*

[11] The data used do not go beyond 1999, even though at the time this paper was written there was information on initiations available until 2001. The reason being that through the exclusion of the unconcluded cases initiated in 2000 and 2001, it was possible to determine the rate of cases in which final measures were imposed to the total number of cases. It is also important to note that the final measures reported in this document reflect those imposed and not the measures currently in effect.

[12] The cases are measured by product, country and type of procedure (AD or CV). For example, the Mexican AD and CV investigations regarding cold-rolled sheet and hot-rolled sheet from Venezuela and Brazil are considered as eight different proceedings, since an AD and CV investigation for each product was initiated against each country.

[13] See Jorge Miranda, Raúl Torres, and Mario Ruiz, "The International Use of Antidumping: 1987-1997", *Journal of World Trade*, Vol. 32, No. 5, October , 1998, pp. 6 – 7.

Table 1: Mexican AD/CVD Cases and Measures by Type of Procedure, 1987-1999.

Type of Investigation	*Number of Initiations*	*Share in the total of initiations (%)*	*Number of final measures*	*Share in the total of measures (%)*	*Success Ratio*
Antidumping	210	92	111	93	0.53
Countervailing	18	8	8	7	0.44
Total	228	100	119	100	0.52

Source: Made by the authors with information from UPCI's *Annual Report 2000* and case database, and complemented with research by the authors.

shows the number of cases and measures[14] by type of procedure. The last column, "success ratio," is the result of dividing the number of final AD and CV measures imposed by the number of initiations; and thus represents the probability that an initiation concludes with a final measure. The data below indicate that AD measures were imposed in 53 percent of the initiated cases; whereas CV measures were imposed in 44 percent of them. Consequently, a petitioner has roughly 50 percent of probability of obtaining a favorable outcome.

During the period of study, Mexico initiated cases against 43 countries. The three most affected were the United States followed by China and Brazil. These countries account for 56 percent of the total number of cases. Table 2 shows the 11 countries most affected by initiations, the final measures imposed and the success ratio. Whether each subject country is over/under-represented in the total number of investigations or measures goes beyond the scope of this paper.[15] In any event, it is interesting to see countries like China, Brazil or Venezuela in the first places of countries under investigation by Mexico, when they are far from representing such an important role in terms of the total value of Mexico's imports.[16]

[14] Final measures include duties as well as price undertakings.

[15] Miranda makes a deeper analysis of this matter in "An Economic Analysis of Mexico's Use of Trade Remedy Laws from 1987 to 1995" in Beatriz Leycegui et al, *Trading Punches: Trade Remedy Law and Disputes Under NAFTA*. North American Committee, pp. 137-160.

[16] One possible and partial answer to this is that, as we will point out later, the base metal sector is the most active in AD/CV initiations, and countries like Brazil and Venezuela are important exporters of products of such sector.

Table 2: Mexican AD/CVD cases and measures by subject country.

Rank	*Subject country*	*Number of Initiations*	*Share in the total of initiations (%)*	*Final Measures*	*Share in the total of measures (%)*	*Success Ratio*
1	United States	65	28.51	28	23.53	0.43
2	China	39	17.11	34	28.57	0.87
3	Brazil	23	10.09	16	13.45	0.70
4	Venezuela	10	4.39	7	5.88	0.70
5	Korea	8	3.51	2	1.68	0.25
6	Germany	7	3.07	4	3.36	0.57
7	Russia	6	2.63	3	2.52	0.50
8	Spain	5	2.19	4	3.36	0.80
8	Chinese Taipei	5	2.19	4	3.36	0.80
8	Ukraine	5	2.19	3	2.52	0.60
8	Canada	5	2.19	2	1.68	0.40
	Others	50	21.93	12	10.08	0.24
	Total	228	100	119	100	0.52

Source: Made by the authors with information from UPCI's Annual Report 2000 and case database, and complemented with research by the authors.

Differences between the success ratio of certain countries is significant. The probability of "succeeding in" a case involving a Chinese product is the double than a case against a U.S. product. The low success ratio involving investigations against "other countries," is explained by the fact that nearly 40 percent of these proceedings involve ex-Soviet Union states (19 cases), where only one measure was adopted (0.05 success ratio).[17] Remarkably, the United States and Canada, as well as Korea's success ratios are below the average ratio.

Table 3 shows the AD/CV initiations and measures by HS Section.[18] Three HS Sections account for over 66 percent of the initiations: base metals (36 percent), chemicals (20 percent), and textiles (10 percent). Other important players are plastics (7 percent) and electrical equipment (6 percent). Except for chemicals, the other four Sections mentioned have success ratios over the average, with ratios from 54 percent in the case of base metals and electrical equipment to 65 percent in the case of plastics.

United States

From 1987 to 1997 the United States was the country with most AD cases initiated and measures[19] imposed worldwide.[20] During this period the United States initiated 598 AD/CV investigations. Eighty-one percent of the initiations involved dumping allegations (484 cases) and 19 percent subsidies (114 cases).

Table 4 shows the initiations, measures and success ratio by type of procedure. The overall success ratio of the U.S. investigations is 0.47, which means that the probability for a petitioner to win a case is almost 50 percent.

Table 5 shows the top 12 subject countries of U.S. investigations. Japan appears in the first place with 60 initiations or 10 percent, followed

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[17] It seems that there have been problems identifying the origin of the dumped products when they are imported from the ex-Soviet Union states.

[18] Sectors are defined in accordance with the Harmonized System Sections (HS Section).

[19] Measures include only duty orders.

[20] See Miranda, Torres and Ruiz, op. cit., pp. 6-7.

Table 3: Mexican AD/CVD cases and measures by HS Section.

HS Section		*Number of Initiations*	*Share in the total of initiations (%)*	*Number of final measures*	*Share in the total of measures (%)*	*Success ratio*
XV	Base metals	81	35.53	44	36.97	0.54
VI	Chemicals	46	20.18	23	19.33	0.50
XI	Textiles	23	10.09	13	10.92	0.57
VII	Plastics	17	7.46	11	9.24	0.65
XVI	Electrical equipment	13	5.70	7	5.88	0.54
XX	Other manufactures	9	3.95	6	5.04	0.67
I	Animal products	7	3.07	3	2.52	0.43
X	Pulp and paper	6	2.63	1	0.84	0.17
XII	Footwear	5	2.19	5	4.20	1.00
V	Minerals	5	2.19	2	1.68	0.40
IV	Prepared foodstuffs	4	1.75	0	0.00	0.00
XVIII	Instruments	3	1.32	1	0.84	0.33
II	Vegetables	3	1.32	0	0.00	0.00
XIII	Glass and ceramics	2	0.88	2	1.68	1.00
XVII	Vehicles	2	0.88	1	0.84	0.50
VIII	Leather	1	0.44	0	0.00	0.00
IX	Wood	1	0.44	0	0.00	0.00
Total	228	100.00	119	100.00	0.52	

Source: Made by the authors with information from UPCI's Annual Report 2000 and case database, and complemented with research by the authors.

Table 4: US AD/CVD cases and measures by type of procedure.

Type of Investigation	*Number of Initiations*	*Share in the total of initiations (%)*	*Number of final measures*	*Share in the total of measures (%)*	*Success Ratio*
Antidumping	484	81	227	80	0.47
Countervailing	114	19	56	20	0.49
Total	598	100	283	100	0.47

Source: Made by the authors with information from the AD and CVD Case History Tables 1980-1999, ITA, and the Semi Annual reports under Article 16.4 of the United States to the WTO.

closely by China with 55 initiations or 9 percent. As to their participation in the total number of adopted measures, Japan's and China's share grow to 14 and 11 percent respectively. Other countries with shares over 5 percent of initiations are Korea (7 percent), Taiwan and Canada (6 percent each), and Brazil and Italy (5 percent each). Mexico ranks eighth with 20 procedures and a share of 3 percent. Under the period of review, the US initiated cases involving a total of 63 countries.

Something interesting from Table 5 is that the two lowest success ratios correspond to the United States' NAFTA partners: Canada (0.27) and Mexico (0.40). Brazil's measure equals that of Mexico. The countries with the highest ratios are Italy, Japan, China, Korea and Germany, with ratios of 0.66, 0.65, 0.58, 0.55 and 0.54, respectively. Also worth of noticing is the fact that three of these countries are also the top three in number of initiations and measures.

As regard to U.S. investigations with respect to the HS Section[21] (Table 6), one is by far the most active: 52 percent of the initiations are against base metals. This figure grows to 58 percent, when considering final measures. The three next HS Sections in initiations are electrical equipment (11 percent), chemicals (10 percent) and plastics (8 percent), leaving the rest with shares under 5 percent. Excluding the leathers HS Section with only one initiation and measure, the highest success ratios are

[21] Since the United States sources do not include the tariff position of the products under investigation, the authors classified the cases within the HS sections in accordance to the nature of the products.

Table 5: US AD/CVD cases and measures by subject country.

Rank	*Subject country*	*Number of Initiations*	*Share in the total of initiations (%)*	*Final Measures*	*Share in the total of measures (%)*	*Success Ratio*
1	Japan	60	10.03	39	13.78	0.65
2	China	55	9.20	32	11.31	0.58
3	Korea	40	6.69	22	7.77	0.55
4	Taiwan	35	5.85	17	6.01	0.49
5	Canada	33	5.52	9	3.18	0.27
6	Brazil	30	5.02	12	4.24	0.40
7	Italy	29	4.85	19	6.71	0.66
8	Mexico	20	3.34	8	2.83	0.40
9	Germany	26	4.35	14	4.95	0.54
10	India	18	3.01	8	2.83	0.44
10	United Kingdom	18	3.01	8	2.83	0.44
10	Venezuela	18	3.01	8	2.83	0.44
	Others	216	36.12	87	30.74	0.40
	Total	598	100.00	283	100.00	0.47

Source: Made by the authors with information from the AD and CVD Case History Tables 1980-1999, ITA, and the Semi Annual reports under Article 16.4 of the United States to the WTO.

Table 6: US AD/CVD cases and measures by HS Section.

HS Section		*Number of Initiations*	*Share in the total of initiations (%)*	*Number of final measures*	*Share in the total of measures (%)*	*Success ratio*
XV	Base metals	308	51.51	165	58.30	0.54
XVI	Electrical equipment	66	11.04	30	10.60	0.45
VI	Chemicals	59	9.87	21	7.42	0.36
VII	Plastics	48	8.03	25	8.83	0.52
V	Minerals	26	4.35	10	3.53	0.38
IV	Prepared foodstuffs	16	2.68	10	3.53	0.63
XVIII	Instruments	14	2.34	3	1.06	0.21
XI	Textiles	13	2.17	8	2.83	0.62
I	Animal products	10	1.67	5	1.77	0.50
X	Pulp and paper	9	1.51	0	0.00	0.00
XVII	Vehicles	9	1.51	1	0.35	0.11
XX	Other manufactures	7	1.17	1	0.35	0.14
II	Vegetables	5	0.84	2	0.71	0.40
XIII	Glass and ceramics	4	0.67	0	0.00	0.00
IX	Wood	2	0.33	1	0.35	0.50
XII	Footwear	1	0.17	0	0.00	0.00
VIII	Leather	1	0.17	1	0.35	1.00
Total	598	100.00	283	100.00	0.47	

Source: Made by the authors with information from the AD and CVD Case History Tables 1980-1999, ITA, and the Semi Annual reports under Article 16.4 of the United States to the WTO.

Table 7: Canadian AD/CVD cases and measures by type of procedure.

Type of Investigation	*Number of Initiations*	*Share in the total of initiations (%)*	*Number of final measures*	*Share in the total of measures (%)*	*Success Ratio*
Antidumping	213	95	150	95	0.70
Countervailing	12	5	8	5	0.67
Total	225	100	158	100	0.70

Source: Made by the authors with information from the historical listing of SIMA cases, Canada Customs and Revenue Agency.

for prepared foodstuffs, textiles, base metals and plastics, with 0.63, 0.62, 0.54 and 0.52 respectively.

Canada[22]

As mentioned, from 1987 to 1997 Canada along with Mexico occupied the fourth place worldwide in the use of antidumping procedures.[23] From 1997 to 1999 Canada initiated a total of 225 AD/CV investigations: 213 AD cases (95 percent) and 12 CV cases (5 percent). The success ratio of AD/CV cases was 70 percent, which means that a petitioner filing a case had 70 percent of probability of obtaining a favorable result if the authority decided to initiate its case. Table 7 shows initiations, measures and success ratios by type of procedure.

In terms of subject countries, the United Sates is by far the first target in the Canadian AD/CV system, accounting for 46 initiations and 29 final measures, with shares of 20 and 18 percent respectively.[24] The rest of

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[22] The statistical information included in this section was prepared by the authors with information from the historical listing of the Special Import Measures Act (SIMA) cases of the Canada Customs and Revenue Agency.

[23] See Miranda, Torres and Ruiz, *op. cit*., pp. 6-7

[24] Daniel Schwanen makes a value-oriented analysis for cases from 1989 to 1995 and finds that the share of the investigations involving US exports is much higher in terms of import values than in terms of absolute numbers: 61.5 percent vs. 19.5, according to his data. Daniel Schwanen, "When Push Comes to Shove: Quantifying the Continuing Use of Trade "Remedy" Laws Between Canada and the United States" in Beatriz Leycegui, William Robson, S. Dahlia Stein (eds.), *Trading Punches: Trade Remedy Law and Disputes under NAFTA,* Washington D.C.: National Planning Association, 1995, pp. 161-181.

the subject countries have shares under 6 percent, being Germany (13 cases), Brazil (12 cases) and the United Kingdom (11 cases) at the top. Mexico appears in place 21 with only three cases and one established measure. Forty-five countries have been involved in AD/CV proceedings in Canada.

In Table 8, the highest success ratio is for India (0.86), followed by the so-called "Others" category (0.80) and Brazil in third place. The United States and Mexico have success ratios below the average. Finally, Table 9 shows the Canadian AD/CV cases and measures broken down by the HS Section. Once again base metals is in first place in initiations and measures accounting for 50 percent of the initiations (113 cases) and 62 percent of the measures (98 cases). Other important HS Sections in terms of initiations are electrical equipment (23 cases), pulp and paper (22 cases), prepared foodstuff (14 cases) and footwear (12 cases). In terms of measures, the distribution differs since electrical equipment goes from the second place in number of initiations to the seventh place in measures. This difference is clear if we see the success ratios. The lowest ratio, excluding minerals and plastics that have only one initiation with no measure, is for electrical equipment: 0.17; this is only 4 measures for 23 initiations. The highest ratios excluding "other manufactures" that have only 2 initiations, are glass and ceramics (1.00) and base metals (0.87). Other HS Sections with ratios over the average are pulp and paper (0.82) and vegetables (0.71).

Intra-NAFTA Use of Antidumping and Countervailing Measures

Determination of most intensive user. Table 10 shows investigations initiated by NAFTA partners against exports originating within the region. The information contained in the columns corresponds to subject countries and the information contained in the rows, to the investigating country. From 1987 to 1999, 172 initiations occurred between NAFTA partners. Mexico stands in first place in terms of initiations with 70 (41 percent), the United States appears in second with 53 (31 percent), and finally Canada with 49 (28 percent) ranks third and last. On the other hand, the United States was the most affected country with 111 initiations (65 percent) against its products, followed by Canada with 38 (22 percent) and

Table 8: Canadian AD/CVD cases and measures by subject country.

Rank	*Subject country*	*Number of Initiations*	*Share in the total of initiations (%)*	*Final Measures*	*Share in the total of measures (%)*	*Success Ratio*
1	United States	46	20.44	29	18.35	0.63
2	Germany	13	5.78	8	5.06	0.62
3	Brazil	12	5.33	9	5.70	0.75
4	United Kingdom	11	4.89	7	4.43	0.64
5	France	10	4.44	7	4.43	0.70
5	Taiwan	10	4.44	7	4.43	0.70
7	Korea	9	4.00	5	3.16	0.56
8	Japan	8	3.56	5	3.16	0.63
9	India	7	3.11	6	3.80	0.86
9	China	7	3.11	5	3.16	0.71
9	Spain	7	3.11	5	3.16	0.71
9	Italy	7	3.11	4	2.53	0.57
21	Mexico	3	1.33	1	0.63	0.33
	Others	75	33.33	60	37.97	0.80
	Total	225	100.00	158	100.00	0.70

Source: Made by the authors with information from the historical listing of SIMA cases, Canada Customs and Revenue Agency.

Table 9: Canadian AD/CVD cases and measures by HS Section.

HS Section		*Number of Initiations*	*Share in the total of initiations (%)*	*Number of final measures*	*Share in the total of measures (%)*	*Success ratio*
XV	Base metals	113	50.22	98	62.03	0.87
XVI	Electrical equipment	23	10.22	4	2.53	0.17
X	Pulp and paper	22	9.78	18	11.39	0.82
IV	Prepared foodstuffs	14	6.22	8	5.06	0.57
XII	Footwear	12	5.33	7	4.43	0.58
II	Vegetables	7	3.11	5	3.16	0.71
VI	Chemicals	7	3.11	3	1.90	0.43
XIII	Glass and ceramics	6	2.67	6	3.80	1.00
XVII	Vehicles	6	2.67	3	1.90	0.50
XI	Textiles	5	2.22	2	1.27	0.40
IX	Wood	3	1.33	1	0.63	0.33
XIX	Arms	3	1.33	1	0.63	0.33
XX	Other manufactures	2	0.89	2	1.27	1.00
V	Minerals	1	0.44	0	0.00	0.00
VII	Plastics	1	0.44	0	0.00	0.00
Total	225	100.00	158	100.00	0.70	

Source: Made by the authors with information from the historical listing of SIMA cases, Canada Customs and Revenue Agency.

Mexico with 23 (13 percent). Almost all the initiations (95 percent) involved the United States as a party, either as an investigating or subject country; which implies that between Mexico and Canada there were very few initiations, only 8. The absolute number of initiations within each investigating country is more or less the reflect of the volume of imports from each subject country. Nevertheless, the former methodology, *per se* does not provide a valid indicator of the country which uses AD/CV procedures more intensively.

Another method to measure the intensity with which each country uses its AD/CV tools is simply by dividing the number of cases by the total intra-NAFTA import value. The result would be the number of cases for each, for example, billion dollars.[25] This alternative is shown in Table 10 in the seventh column. Roughly, we would say that Canada is almost twice as much an intensive user, as compared to the US; while Mexico's intensity is more than two times that of Canada. The problem of this method is that it does not consider the size of the economy at stake: Mexico is the country with less imports, which makes it the "most intensive user;" but it is also the country with the smallest economy, so we can expect that the imports are relatively high for the size of the market.

Finally, a proposed alternative, is that which measures intensity in terms of the "penetration grade" that the imports have in the investigating market. In other words, the amount of competition that those imports generate in the exporting market, or how much they affect producers of this latter market. Under this methodology, the "penetration grade" is calculated by at first obtaining the imports/GDP ratio. Then dividing the number of initiations by the imports/GDP ratio, to obtain a ratio of intensity in the use of AD/CV procedures. The ratio of intensity which results provides

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[25] This method is equivalent to comparing the share of initiations of each country in the Intra-NAFTA total to their share in the imports value also in the intra-NAFTA total. See Miranda, Torres and Ruiz; and Thomas Prusa "An Overview of the Impact of U.S. Unfair Trade Laws" in Beatriz Leycegui, William B.P. Robson, S. Dahlia Stein (eds.), *Trading Punches: Trade Remedy Law and Disputes under NAFTA*, Washington D.C., National Planning Association, 1995, pp.183-204. The result of each method would be the same measuring which country is more intensive in the use of AD/CV procedures since the ratio between countries of each method is identical.

Table 10: Intra-NAFTA AD/CVD cases matrix by investigating and subject country.

Investigating Country	*Subject country*				*Share in Total*	*Cases/ Imports value ratio*	*Imports/ GDP ratio*	*Intensive Ratio NAFTA*	*Intensive Ratio Other countries*
	Canada	*Mexico*	*United States*	*Total*					
Canada	NA	3	46	49	28	0.32	23.05	2.13	17.80
Mexico	5	NA	65	70	41	0.63	23.17	3.02	22.09
United States	33	20	NA	53	31	0.17	3.37	15.72	67.65
Total	38	23	111	172	100	0.30			
Share in total	22%	13%	65%	100%					

Source: Made by the authors with information from: cases see tables above, imports from the WTO's International Trade Statistics 2000, and GDP from the FMI's International Financial Statistics.

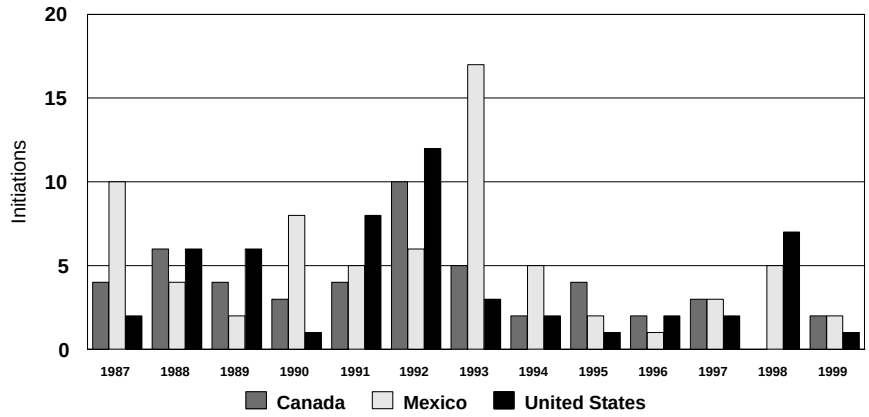
the number of initiations for each percentage point of the "imports penetration."

Column nine of Table 10 includes the calculation of the ratio of intensity for NAFTA's imports: the number of cases initiated between NAFTA partners divided by the imports/GDP ratio, calculated only with imports from NAFTA's partners. The last column includes the intensive ratio calculated with the same methodology for imports from other non-NAFTA countries (total number of cases initiated against other countries, by the imports/GDP ratio calculated with imports from all other countries). A first conclusion is that the three countries use less intensively AD/CV cases against NAFTA's partners than against the rest of the world. Particularly, Canada uses AD/CV procedures seven times more intensively against third countries than its NAFTA partners; Mexico six times; and the United States three times. A possible explanation to this phenomena could be the existence of NAFTA's Chapter XIX review system. Under this methodology, the United States happens to be the most heavily intensive user of AD/CV procedures, either against NAFTA's partners (exceeding Canada by six times and Mexico four times) or third countries (exceeding Canada by three times and Mexico by two times).

Impact of NAFTA on the number of initiations. Figure 1 shows initiations affecting intra-NAFTA trade by partner by year. This figure reveals that since 1994 the initiations in the three countries fell. In fact, the average of intra-NAFTA initiations for the period 1994 to 1999 dropped almost 60 percent (from 18 cases to 8 by year), when compared to those investigations initiated between 1987 to 1993. This occurred despite the fact that intra-NAFTA trade grew 142 percent from 1990 to 1999.

The relevant question at this point is what explains the decrease in the number of cases? To try to answer this question it is relevant to also look at what occurred with the initiations against the rest of the countries, to observe if this phenomenon is limited to intra-NAFTA trade. From the period 1987 to 1993 to the period 1994 to 1999, the average of initiations against non-NAFTA partners fell from 82 to 51 per year, a reduction of 39 percent. Therefore, the decrease in AD/CV activity took place in intra-

Figure 1: AD/CVD initiations affecting intra-NAFTA trade by partner.



Source: Made by the authors with the information from cases of each country. See text.

NAFTA trade, as well in trade with other countries, but the reduction in the former exceeded the latter.

The reasons for the reduction in the number of initiations are not clear. Some hypothesis which explain such decrease are: the presence of low prices of certain cyclical commodities in 1992 and 1993 "pushed" to the initiation of more cases; trend which was overturned as prices recovered in subsequent years,[26] and the Mexican crisis after 1994 which gave producers certain exchange rate protection against imports. Two additional reasons which might explain the decrease in intra-NAFTA cases are: as mentioned, the implementation of the Chapter XIX review system (see section below); and the fact that before NAFTA was implemented, AD and CV measures had been adopted in most of the traditionally affected sectors, and therefore continued to be in effect for several years after NAFTA's entry into force.

Intra-NAFTA Initiations by HS Section. Figure 2 shows the distribution of the intra-NAFTA initiations by HS Section. Five sections cover the 70 percent of the cases (base metals, chemicals, electrical

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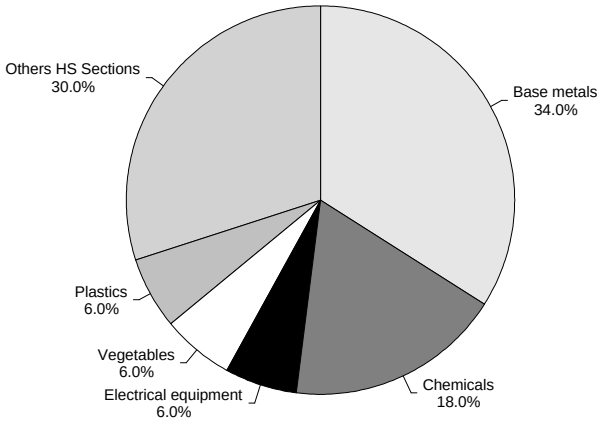
[26] See Miranda Torres and Ruiz , op. cit, pp. 99. 16.

Figure 2: Share of the AD/CVD initiations affecting intra-NAFTA trade by HS Section.



Source: Made by the authors with the information from cases of each country. See text.

equipment, vegetables and plastics), leaving the other 30 percent spread across 10 HS Sections. The two Sections with more cases are base metals and chemicals, in conjunction accounting for more than 50 percent of the cases. These markets are highly cyclical, which supports the idea that: first, part of the general decrease of cases can be explained by the increase in prices of certain commodities, like steel and fertilizers; and second, that such markets are not easily subject again to initiations to the extent that there are still measures in force imposed when the prices where low.

TRADE REMEDIES UNDER NAFTA

Antidumping and Countervailing Duty Measures

AD and CV measures under NAFTA are addressed through a look at the negotiation history, the description and objectives of the most relevant commitments, as well as the cases filed up to January 2002. An assessment of the functioning of the AD and CV binational panel review procedures during NAFTA's first 8 years of implementation is also offered.

Negotiation. The unfair trade practices discussions, covering antidumping and countervailing duty matters were among the most difficult

and intense during the NAFTA negotiations. What was at stake was basically Mexico's and Canada's interest of not only increasing their access to their most important market, the United States, but of securing such access that had been seriously hampered in the past by the application of such remedies as described in the former section. To this end, the following proposals were forwarded by Mexico to the United States, with Canada's acquiescence with respect to the first two, at that time. One was replacement of antidumping laws by antitrust laws ("high ground proposal"). Once trade between NAFTA Parties became fully liberalized, they would not be able to initiate antidumping cases against each other.[27] Departing from what Canada had proposed under The Canada-U.S. Free Trade Agreement (Canada-US FTA) negotiations, Mexico designed a transitory mechanism in which the implementation would occur piecemeal. Antidumping investigations would cease to be initiated against those products included in a list of "fully liberalized goods."[28] Once the North American market became totally integrated, antidumping laws would be replaced by antitrust laws.

For political and economic reasons this proposal was shortly eliminated from the table of negotiations. However, the Parties did agree under NAFTA to establish a Working Group on Trade and Competition[29] "to report, and to make recommendations within five years of the date of entry into force of this Agreement (January 1, 1994) on relevant issues concerning the relationship between competition laws and policies and

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[27] In 1988, New Zealand and Australia agreed to eliminate the application of antidumping measures against each other under the Protocol to the Australia-New Zealand Closer Economic Relations Trade Agreement and amended their competition laws so they could apply to anti-competitive practices affecting Australia-New Zealand trade. The Treaty of Rome of 1957 provided from the outset for the abolition of antidumping laws among member countries. However, it established a transitional period which ended in 1969, in recognition that tariff and non-tariff barriers were still in existence. In addition, Canada and Chile in their free trade agreement have negotiated the dumping of antidumping laws without establishing a substitute system.

[28] To be considered a "fully liberalized" product, two conditions would have to be fulfilled: the elimination of all applicable tariff and non-tariff barriers to trade within the free trade area, and the non-existence of anti-competitive practices (predatory pricing).

[29] Article 1504 of NAFTA.

trade in the free trade area." In addition, on December 3, 1993, the three NAFTA parties issued a joint statement agreeing to "seek solutions that reduce the possibility of disputes concerning the issues of subsidies, dumping and the operation of the trade remedy laws regarding such practices" and to set up a working group on trade law to complete this work by December 31, 1995. The deadlines of both groups have been met, and the work is far from being completed. However the Parties have extended the groups work beyond the established time frames.

The U.S. position in this respect was also inflexible. They made it clear that they would await until the conclusion of the Uruguay Round to amend their legal framework in correspondence to the agreements reached under the WTO. Consequently, each Party reserved the right to apply its AD and CV law. Nevertheless, the Parties did agree that amendments to such laws are subject to certain rules under NAFTA: the amending statute must specify that it applies to goods from the other Parties to the Agreement; written notification to the other Parties of the amendments to be adopted must be made in advance to their enactment; and such amendments must be consistent with the GATT, the Agreement on Antidumping, the Agreement on SCM, and the object and purpose of NAFTA and Chapter 19 (Review and Dispute Settlement in Antidumping and Countervailing Duty Matters).[30]

A panel procedure to review statutory amendments was introduced in Chapter 19, to be used when a Party considers that an amendment of another Party does not comply with the aforementioned rules or have the function and effect of overturning a decision of a binational panel of review of final AD/CV determinations. In case the panel confirms the above, and the Parties do not reach agreement on a mutually satisfactory solution, the affected Party may take comparable legislative or equivalent executive action, or terminate the Agreement with regard to the amending Party.[31] As of January 2002, no case had been filed under this mechanism.

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[30] NAFTA, Article 1902.
[31] NAFTA, Article 1903.

Establishment of binational panel review procedures such as those contemplated under Chapter 19 of the Canada-US FTA,[32] under which international trade experts replace domestic administrative and judicial review of AD and CV determinations issued by the national agencies of NAFTA Parties, regarding goods of North American origin. This proposal was incorporated to NAFTA also under Chapter 19.[33] However, Mexico faced opposition from its trading partners due to their perception that jurists from Canada or the United States able to apply Mexico's civil law correctly, nor would Mexican jurists be able to adapt to Canadian or American common law practices.

Mexico was obliged to accept certain commitments in order to be granted access to binational review panels. First, to appease U.S. concerns that constitutional constraints in Mexico might interfere with the panel process, a new mechanism was incorporated under Chapter 19 of NAFTA to "safeguard the panel review system."[34] Specifically, the U.S. wanted to avoid that by means of the *juicio de amparo (habeas corpus)*,[35] that binational panel resolutions would be revoked, and therefore not enforced.

Under such mechanism, if a Party alleges interference in the panel process, and a special committee established to analyze this specific issue makes a finding that such is the case, the complaining Party can suspend the operation of the AD/CV panel system with respect to the non compliant Party or suspend to the latter any other benefit under NAFTA. Until January of 2002, this review system has not been invoked. The *amparo* proceeding certainly constitutes a permanent threat to the panel system. If a panel decision is revoked affecting the United States or Canada interests by means of an

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[32] Under this Agreement, panels were meant to be a temporary mechanism (to be in place for a maximum time limit of seven years). This mechanism was to disappear once the Parties agreed on an alternate system.

[33] Binational panels are also ruled according to the Rules of Procedure of Article 1904 of the NAFTA, and the Code of Conduct for Dispute Settlement Procedures of Chapters XIX and XX of the NAFTA.

[34] Article 1905 of NAFTA.

[35] Among the most important functions of the *amparo* proceedings are to protect individual guarantees, to test allegedly unconstitutional laws, to contest judicial decisions, and to review official administrative acts and resolutions.

amparo, Mexico could loose one of the most important benefits negotiated under NAFTA.[36] However, it could not commit itself under NAFTA to deny to its nationals this ultimate, extraordinary constitutional review procedure, centerpiece of Mexicans bill of rights, since all international agreements must be consistent with Mexico's Constitution.[37] Second, Mexico had to implement several procedural changes in its trade law, to increase the level of transparency of antidumping and countervailing proceedings.[38]

Description and Objectives of Binational Review Panel Procedures. Under NAFTA (Article 1904.1), a Party on its own initiative or if requested by an interested person[39] "may request that a

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[36] NAFTA negotiators recognize that "Chapter 19 was the key compromise between the United States and Canada- and then between the United States and Mexico- that enabled the parties to conclude a free trade agreement", Guillermo Aguilar Alvarez, Jonathan T. Fried, Charles E. Roh, Jr, Christianne M. Laizner, and David W. Oliver, "Nafta Chapter 19: Binational Panel Review of Antidumping and Countervailing Duty Determinations", in Beatriz Leycegui, William B.P. Robson, and S. Dahlia Stein (eds.). *Trading Punches: Trade Remedy Law and Disputes under NAFTA*, Washington D.C.: National Planning Association, 1995, pp. 24-42.

[37] Up to January 2002, only one panel decision had been challenged through the *juicio de amparo* (three *amparo* procedures were filed). In fact, the decision rendered in the first case, reviewed a final determination of Mexico's competent authorities (flat coated steel from the United States, MEX-94-1904-01). One of the *amparos* was finally attracted by Mexico's Supreme Court which did not issue a decision on the merits but dismissed it alleging that the amparo would only proceed against the measure adopted by the investigating authority implementing the panel's decision. The other two amparos filed at an early stage against the panel's decision were finished under the same grounds. The subsequent act which implemented the panel's decision was never challenged.

[38] Mexico's specific commitments of amendment were incorporated in NAFTA, Annex 1905.15, Schedule of Mexico. A listing of the specific provisions that were amended or introduced in Mexican law in order to conform to the aforementioned Schedule is provided in: Beatriz Leycegui, "A Legal Analysis of Mexico's Antidumping and Countervailing Regulatory Framework" in Beatriz Leycegui, William B.P. Robson, and S. Dahlia Stein (eds.). *Trading Punches: Trade Remedy Law and Disputes under NAFTA*, Washington D.C.: National Planning Association, 1995, pp. 64-66.

[39] Interested person is that who is entitled under the law of the importing Party to commence domestic procedures for judicial review of final determinations. This is usually an: importer, exporter, or domestic producer.

panel review... a final antidumping or countervailing duty determination of a competent investigating authority of an importing Party,[40] to determine whether such determination was in accordance with the antidumping and countervailing duty law[41] of the importing Party." The panel shall apply the standard of review[42] and the general legal principles that a court of the importing Party would apply to review final determinations.[43] This makes them unique, since although the panels are international, the law and the standard of review that they apply are national.

The panel's decision "may uphold a final determination, or remand it for action no inconsistent with the panel's decision... if review of the action taken by the competent investigating authority on remand is needed, such review shall be before the same panel, which shall normally issue a final decision within 90 days of the date on which such remand action is submitted to it."[44]

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[40] Annex 1911 defines such authorities from Canada, Mexico and the United States.

[41] According to Article 1904.2 of NAFTA: "...the AD/CV law consists of the relevant statutes, legislative history, regulations, administrative practice and judicial precedents to the extent that a court of the importing Party would rely on such materials in reviewing a final determination of the competent investigating authority".

[42] Defined in Annex 1911.

[43] NAFTA, article 1904.3. In the first three decisions adopted by panels reviewing Mexican agency determinations, controversy surged among the panelists to this cases regarding the powers of the panels and the standard of review to observe. Under these cases panelists found difficulty in reaching consensus. In addition, the three cases are interesting to look at since they all raised very complex questions of constitutional law: they all involved antidumping investigations conducted under an old antidumping law which was no longer in effect when the panels reviewed the determinations; it was alleged that the Mexican investigating authority was incompetent since the applicable laws and regulation did not contemplate it's existence; and there was no guidance in Mexican jurisprudence. For further detail on this subject see Beatriz Leycegui and Gustavo Vega-Cánovas, "Eliminating 'Unfairness' within the North American Region: A Look at Antidumping", in Michael Hart (ed.), *Finding Middle Ground-Reforming the Antidumping Laws in North America*, pp. 261-268. Ottawa, Carleton University-Centre for Trade Policy and Law, 1997, pp. 251-322.

[44] Article 1904.8 of NAFTA.

Panel decisions "shall be binding"[45] ... and no Party may provide in its legislation for an appeal from a panel decision to its domestic courts."[46] Panels shall issue their final decision within 315 days of the date on which a request for a panel is made.[47] Panels are integrated by five members. Each Party involved names two panelists and the fifth one is named by the Parties in dispute by mutual agreement. If agreement is not reached, they shall decide by lot which of them shall select the fifth panelist.[48] The Parties normally shall appoint panelists from a roster. The roster shall include at least 75 candidates (each Party shall select at least 25 candidates).[49]

Only under exceptional circumstances, may their decisions be reviewed under an extraordinary challenge procedure, by an extraordinary challenge committee (comprising three members): when panelists have violated the Code of Conduct (e.g. existence of a conflict of interest); have departed from a fundamental rule of procedure (e.g. the involved Parties are denied from participating in the public hearing; or have exceeded their power, authority or jurisdiction (has failed to apply the proper standard of review).[50] However, it must be additionally proven that either of the former actions affected the panel's decision and threatens the integrity of the binational review process. The committee may vacate the original panel decision or remand it to the original panel for action not inconsistent with its decision; as well as deny the challenge if the grounds are not established.[51] It must be noted that this procedure before the committee does not constitute and additional review procedure. This is confirmed by the fact that under

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[45] Article 1904.9 of NAFTA.

[46] NAFTA, Article 1904.11. Some legal experts have argued that this provision infringes Mexico's Constitution by inhibiting the *juicio de amparo* from operating. Others diverge from the former opinion since in their view, the *amparo* is not an appeal procedure but an extraordinary constitutional review procedure. By the same token, neither the United States nor Canada is in a position to limit its judicial courts' authority over constitutional challenges to NAFTA.

[47] NAFTA, Article 1904.14

[48] NAFTA, Annex 1901.2, paragraphs 2 and 3.

[49] NAFTA, Annex 1901.2, paragraph 1 sets out the rules for the establishment of the roster.

[50] NAFTA, Article 1904.13.

[51] NAFTA, Annex 1904.13, paragraph 3.

the Canada-U.S FTA, of the 49 cases submitted to binational panel review, only three were subject to an extraordinary challenge, and neither one of them did the challenge succeed.[52] Under NAFTA, of the 75 cases filed in the 8 years of application of the Agreement, in only one has an extraordinary challenge committee been requested.[53]

Finally through the binational review panel procedure Mexico and Canada seek to accomplish the following objectives:

- reduction in the amount of time involved in pursuing domestic judicial review of AD/CV final determinations through the various appelate levels in the United States.
- as a consequence of the above, savings in money to the parties involved (fewer fees paid to attorneys). This also due to the fact that decisions would be made within a fixed period of time, and that they could not be appealed.
- extra savings would be achieved by private individuals through the transfer of costs from them to the governments, since it is the latter that carries out the process and assumes the bulk of the costs of the procedure.
- as a consequence of the above, access to judicial review by small and medium-sized companies would be enhanced.
- as the numbers of reviews increase, decisions of the administrative authority are under international scrutiny, this would discourage unfair claims and unjustified and frivolous administrative petitions in trade remedy cases; as well as the lax and flexible application of the trade remedy laws by administrative authorities, whose decisions were not oftenly appealed, and when appealed, usually confirmed by the judicial review authorities.
- if panel decisions proved to be fair and objective, the discouragement of frivolous claims and lax resolutions influenced

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[52] The case of fresh swine, chilled and frozen, from Canada (ECC-91-1904-01 USA); the case of alive swine from Canada (ECC-93-1904-01); and the case of certain softwood lumber products from Canada (ECC-94-1904-01).

[53] The case of cement gray portland and clinker from Mexico (ECC-2000-1904-01 USA). Although filed since March 23, 2000, the parties have not agreed on the integration of the committee, and therefore a decision on the matter is still pending.

by political considerations, would also come from the realization by private individuals and administrative authorities that their claims and resolutions, respectively, would be either rejected or remanded or amended if they were not in accordance with the law.

CASES

In this section, statistical information, covering January 1994 to January 2002, is provided regarding the activity of binational review panels. From such data, some conclusions can be drawn on the accomplishment of the objectives outlined earlier.

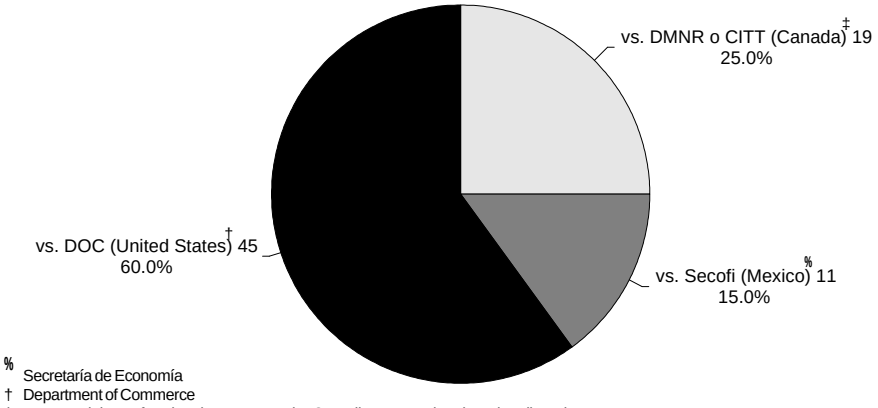
Investigated Authority. During the period of study, 75 cases had been filed under the binational panels of review: 45 (60 percent) involving final determinations of the U.S. investigating authority, 19 (25 percent) of Canada's, and 11 (15 percent) of Mexico's (see figure 3).

Type of investigation. As of January 2002, of the 75 cases filed under Chapter XIX of NAFTA, 72 had to do with dumping practices and only three with subsidies. All the subsidies cases involve revision of decisions of the United States administrative authority.

Affected sectors. Consistent to what occurs at the national level, a reduced number of sectors have been subject to review under binational panels: the metallurgic sector leads the list with 42 cases; followed by animal products (HS Section I), vegetables (HS Section II) and prepared foodstuffs (HS Section IV) with 11 cases; mineral products, 9; chemicals, 6; and other goods, 7 (electrical equipment, ceramic and textiles) (see figure 4).

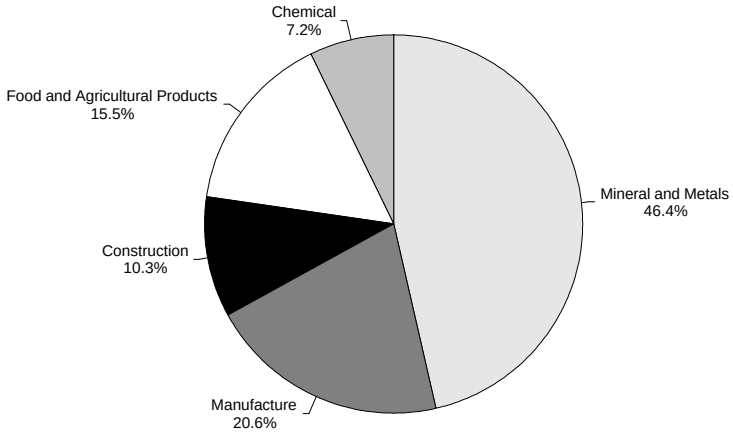
Status. Of the 75 cases filed: 26 were concluded; in 24 the panels' decision has not (see table 11). been issued; in 3 the panels' decision is pending of implementation; and 22 were withdrawn. (see table 11).

Figure 3: Chapter 19 -- Binational Panels Investigated Authority (January 1994-2002).



% Secretaría de Economía
† Department of Commerce
‡ Deputy Minister of National Revenue or the Canadian International Trade Tribunal.
Source: Elaborated with data from the Ministry of the Economy and the Mexican Section of the Secretariat of Free Trade Agreements.

Figure 4: Chapter 19 -- Binational Panels Affected Sectors (January 1994-2002).



Source: Elaborated with data from the Ministry of the Economy and the Mexican Section of the Secretariat of Free Trade Agreements.

Table 11: Status of Chapter 19 cases (January 2002).

Cases	*Mexico*	*U.S.*	*Canada*	*Total*
Concluded	5	11	10	26
Withdrawn	3	14	5	22
Pending Implementation of Panel Decision	2	18	4	24
Total	11	45	19	75

Source: Elaborated with data from the Ministry of the Economy and the Mexican Section of the Secretariat of Free Trade Agreements.

Panels' decisions. Regarding the 29 cases in which the panels issued a decision (table 12),[54] in 14 (48 percent) they confirmed the determinations of the investigating authority, and in 15 they remanded the cases for new determinations (52 percent).[55] Note that panels reviewing U.S. and Canada investigating authorities have in 38 and 80 percent respectively of the cases deferred to their decision. This has not occurred when reviewing decisions from Mexican authorities, were 83 percent of their determinations have been overturned.

Panels' vote. Of the 29 decisions rendered by binational panels, 25 of them were adopted unanimously (86 percent); and 4 with a majority vote. In these latter cases, in neither of them did the vote split according to nationality (table 13) It is interesting to note that in all cases reviewing Canadian investigating authorities, the panels decisions were all unanimous.

Time. In only six of the 29 cases with a decision, the binational panel issued its final decision within the 315 days deadline provided for in the Agreement (starting from the date of request for a panel). An important

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[54] Note that 29 cases are reported, when it has been indicated that only 26 have concluded. This is explained by the fact that an extraordinary challenge review has been requested in one case, which is still pending of resolution. Two others were remanded to the administrative authority and are pending of implementation.

[55] Although in the majority of the cases, the panels decisions are reported as partially confirming or partially remanding the final determinations rendered by the Parties investigating authorities; when reviewing the panels decisions, depending on the nature of the remand (the specific instructions submitted to the investigating authority) these have been classified in the Appendix under only two categories, as either confirming or remanding the decision under review.

Table 12: Panel's Decisions (January 2002).

Cases	*Mexico*	*U.S.*	*Canada*	*Total*
Concluded	1	5	8	14
Remanded	5	8	2	15
Total	6	13	10	29

Source: Elaborated with data from the Ministry of the Economy and the Mexican Section of the Secretariat of Free Trade Agreements.

Table 13: Panel's Vote (January 2002).

Cases	*Mexico*	*U.S.*	*Canada*	*Total*
Unanimous	4	11	10	25
Majority Vote	2	2	0	4
Total	6	13	10	29

Source: Elaborated with data from the Ministry of the Economy and the Mexican Section of the Secretariat of Free Trade Agreements.

Table 14: Average Total Time of Chapter 19 Cases (January 2002).

Cases	*Panel decisions (29 cases)*	*Panel integration (42 cases)*	*Implementation of the (26 cases)*	*Total Panel procedure (26 cases)*
Canada (days)	446	169	80	526
U.S. (days)	523	315	138	566
Mexico (days)	703	224	258	849
Average total time (days)	533	256	139	605

Source: Elaborated with data from the Ministry of the Economy and the Mexican Section of the Secretariat of Free Trade Agreements.

number of cases have significantly surpassed those 315 days (by an average of 276 days). The average time of the binational panel procedures has been of 533 days (See table 14). Once the pending cases are resolved, this average will substantially be increased, since three were initiated in 1998, two in 1999 and fourteen in the year 2000.

The delay is closely linked to the time it has taken to integrate the panels: average time, 256 days, exceeding by 196 the maximum 60 days time limit from the date of request of a panel.[56] There are eight cases in which panels are pending of integration since 2000 and five since 2001.

[56] NAFTA, Annex 1901.2, paragraphs 2 and 3.

Of the 18 pending cases reviewing U.S. authorities decisions, 13 have not been integrated. Of those four pending cases reviewing Canadian decisions, in two of them from the mid 2000, the panel has not been integrated yet. In all of Mexico's three pending cases, a panel has already been appointed.

Although the implementation of the decisions account for an important number of days of the total days of the panel procedure (Canada 15% of the total days, U.S. 24%, and Mexico 30%), they have occurred in the case of the U.S. and Canada within a considerable shorter amount of time than that provided for under NAFTA.[57]

Assessment

Based on Chapter 19 objectives, among the criteria to assess whether Chapter 19 binational review panels are functioning appropriately are those relative to: the time length of the proceedings; their cost; and the expertise, fairness and objectivity of panelists. Closely linked to the last criteria is the manner in which panels voted, panels degree of deference to the investigating authorities decisions; and the governments acceptance and compliance of the panels decisions.

Time. From the data on the time so far taken to resolve the proceedings (average time, 533 days), it is not at all clear that Chapter 19 binational panels are serving their purpose of providing decisions which, in comparative terms, are more expeditious than national judicial reviews.[58] Considering the time within the proceedings linked to the panels' integration process, the delays in great part are associated to serious problems facing

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[57] NAFTA, Article. 1904.8: ... "In no event shall the time permitted for compliance with a remand exceed an amount of time equal to the maximum amount of time (counted from the date of filing of a petition, complaint or application) permitted by statute for the competent investigating authority in question to make a final determination in an investigation..." This is 240 days in the case of Canada, 260 days in the case of Mexico and 287 days in the case of the United States.

[58] It is estimated that in Mexico the administrative and judicial review procedures take approximately 540 days to be resolved (18 months). In the other hand, the U.S. Court of International Trade may take between 540 and 900 days (from 18 to 30 months). If the matter is taken to the U.S. Court of Appeals for the Federal Circuit, the review before the two mentioned stages may take from two to five years.

the appointment of panelists (average time, 256 days). There is a growing difficulty in finding qualified, available, and non-conflicted panelists.

Due to the expertise and other qualifications required under NAFTA, it is not difficult for panelists to encounter conflicts of interest. In fact, it is common that individuals that act as panelists in binational reviews are simultaneously acting as attorneys in investigations before investigating authorities whose actions they themselves are reviewing as panelists.

Panelists fees are another disincentive to the participation of a panelist in several binational reviews.[59] The contemplated fees under NAFTA are equivalent to $400.00 Canadian dollars, for an 8 hour day of work. An attorney hourly fee, with the credentials similar to those who sit in panels, is nearly equivalent to that amount, and in U.S. dollars. Taking one case has been sufficient to many panelists with regard to fulfilling their interest in terms of curriculum and experience.

Finally, associated with the delay of the proceedings, might be the defendant party's unwillingness to cooperate in the appointment of panelists, in occasions in retaliation to the application of a trade remedy measure in another case or to what occurred in other areas of the trade relationship; or because the case involves a politically sensitive product. The delay and in a growing number of occasions, stalemate in the appointment of panels, specially observed since 1999; if not addressed, may not only threaten Chapter 19 dispute settlement procedures, but the NAFTA itself.

Cost. Even under the scenario were panel proceedings are more expeditious than U.S. and Canada's national review procedures, the costs of the first tend to be equivalent or higher than the latter. With respect to Mexico, filing a case before its review authorities can be almost six times less expensive than recurring to binational panels. This is explained by the fact that binational panels follow rules and procedures applicable in common law legal systems. The oral nature of the procedure and the diverse

[59] The Parties are currently exploring the possibility of increasing the originally negotiated fees.

hearings and documents to be presented contribute to increase the costs *vis a vis* those incurred in Mexico's written based appeal system.

Expertise, fairness and objectivity of panelists. The panel system comprising five experts in international trade law, in general constitute a more specialized body than those in charge of reviewing AD/CVD determinations in the judicial review proceedings in Canada, Mexico and the United States. The fact that in 86 percent of the cases the panel's vote was unanimous, is a proof of the panels fairness and objectivity. This is additionally confirmed by the governments acceptance of their rulings, since in only one of the 29 decisions rendered, did they requested an extraordinary challenge investigation. Moreover, the investigating authority has also complied in all cases with their decisions within in general a reasonable period of time.

Finally, perhaps Chapter 19's most important contribution has to do with the disciplining of the use of AD/CV measures within the North American region, specially under a scenario where the Parties have not agreed on different alternatives for the handling of unfair trade practices. The decrease in recent years, of initiation of cases between NAFTA Parties (as mentioned in the previous section) in part may respond to the fact that the administrative authorities may be more careful when initiating and imposing duties against their trading partners.

SUMMARY AND PERSPECTIVE THOUGHTS

From 1987 to 1999, the United States was the most important user worldwide of AD and CV remedies. (Figure 5.) Mexico and Canada ranked fourth. The probability for a petitioner or domestic producer to succeed in an AD or CV investigation, "success ratio" (number of AD and CV cases initiated divided by the number of final measures imposed, see table 15) is more likely in Canada than in the United States and Mexico (70 percent vs. 47 and 52 percent, respectively). Cases involving NAFTA partners had lower success ratios than against other third countries.

Figure 5: AD/CV Cases (1987-1999): Total Number of Initiations.

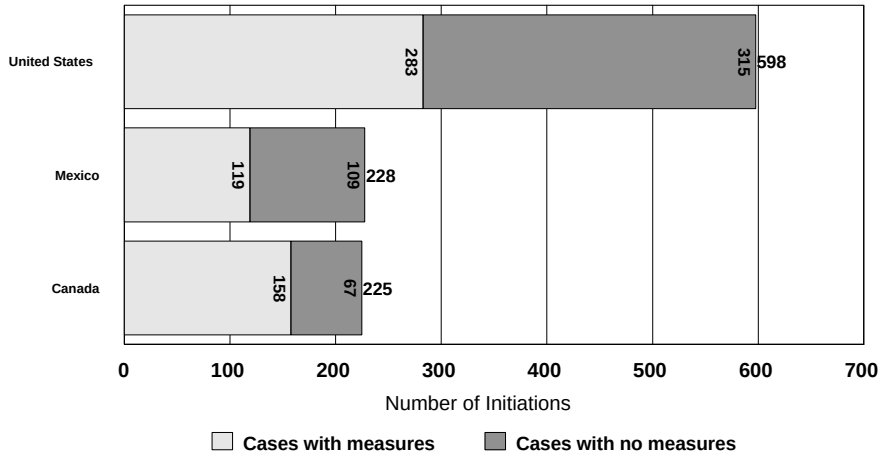

Table 15: AD/CV Cases (1987-1999) -- "Success Ratio."

Country	*NAFTA partners*	*Other Countries*
Canada	0.61	0.73
Mexico	0.43	0.56
United States*	0.32	0.49

* This ratio does not consider the cases concluded because of price undertakings.

Table 16: AD/CV Cases (1987-1999) -- Initiations by Type of Investigation.

Country	*Antidumping*	*Subsidies*
Canada	95%	5%
Mexico	92%	8%
United States	81%	19%

In the three North American countries, AD cases superseded the subsidies cases (table 16). The United States is the country most affected by Mexico and Canada AD and CV procedures. Canada is the fifth country most affected by the United States procedures, and Mexico ranks eighth. Same place, this last, that Canada has regarding Mexico's investigations. Mexico appears in place 21 of Canada's investigations. The far most affected

section of the HS Code by AD and CV investigations is the base metal section.

AD and CV initiations affecting intra-NAFTA trade dropped in average 60 percent from 1994 to1999, when compared with investigations initiated between 1987 to 1993. This took place under a scenario where intra-NAFTA trade increased 142 percent from 1990 to 1999. From 1987 to 1999, 172 initiations took place between NAFTA partners. Mexico stands first in terms of investigations: 70, compared to 53 of the United States and 49 of Canada. However, these numbers do not serve to indicate which country uses the AD and CV system more intensively.

An alternative methodology that has been used in the past to measure intensity is that of dividing the number of cases by the total intra-NAFTA import value, to determine the number of cases for each billion dollars of trade. Mexico happens to be twice as intensive user when compared with Canada, and the latter twice as intensive user when compared with the United States.

However, the problem with the former methodology is that the country with less imports and with the smallest economy will necessarily turn out to be the most intensive user. Consequently, the proposed methodology to measure intensity is that which has to do with determining the degree of penetration, the amount of competition that imports generate in the export market. Calculation is made of the number of cases for each percentage point in the imports/GDP ratio. In contrast with the results of the former two methodologies, United States is the most intensive user against NAFTA partners, followed by Mexico and finally Canada. It is interesting to note that for the three NAFTA Parties, the intensity ratio with respect to third countries is higher, suggesting they use of AD/CV measures less against themselves.

As of January 2002, of the 75 cases filed under Chapter XIX of NAFTA, 72 had to do with dumping practices and only 3 with subsidies. Consistent to what has occurred at the domestic level, a reduced number

of the HS sections have been subject to review, being the base metal section the most represented.

Regarding the 29 cases of the 75, in which the panels have issued a decision, in 14 (48 percent) they confirmed the determinations. Canadian administrative decisions have been the most confirmed when subject to review by NAFTA's binational panels, 80 percent of those subject to revision, followed by the U.S. with 38 percent and Mexico with only 17 percent.

Of the 29 decisions rendered by binational panels, 25 of them were adopted unanimously (86 percent), and 4 with a majority vote. In these latter cases, in neither of them was the vote split according to nationality. During the first eight years of NAFTA enforcement, the average total time taken by panels to issue their decisions was of 533, when the Agreement provides for 315 days, following the request for the establishment of a panel. The delays in the panel procedures are closely linked to delay in integrating the panels: 256 days average time when the Agreement establishes a 60 day time limit for this to occur.

In terms of time and cost, it is not clear that NAFTA's binational panel procedures have proven to be better than domestic review procedures. However, binational panels performance has been positive regarding their degree of expertise, fairness and objectiveness.

NAFTA's Chapter 19 panels have contributed to discipline the use of AD/CV measures within the North American region, being to an important extent responsible for the decrease in initiation of cases between NAFTA Parties (despite significant increases in trade flows). Administrative investigating authorities of the three countries have been more careful when initiating and imposing duties against their trading partners. Under a scenario in which NAFTA partners will continue to use "trade remedies to remedy their trade" because of market imperfections, they shall observe the principles and obligations of the WTO Agreements and NAFTA.

NAFTA Parties shall continue negotiating multilaterally on pending issues in order to further discipline the application of trade remedies, reducing the discretion that is still present in trade remedy investigations.

Considering the serious problems associated with the integration of NAFTA´s Chapter 19 binational panels, it is urgent that parties agree: on a roster of panelists; on improving the benefits and payments offered to them; in strengthening the role of the Secretariat (exerting functions similar to those of the WTO Secretariat) and if necessary on substituting the present *ad hoc* panels by a permanent tribunal. Since the elimination of AD laws within NAFTA seems unfeasible in the short and middle term, Parties should work towards negotiating less trade-restrictive AD rules to be applied between them, and in applying safeguards with greater frequency when required.

Finally, diminishing trading of remedies to remedy trade among NAFTA partners will occur when:

- a higher degree of specialization in the production processes is reached within the North American region; thus reaching a higher degree of integration.
- consumers and domestic producers (users of intermediate goods usually investigated), become better organized to counter the political pressure exerted by very specific domestic industries.
- the domestic industry of Canada, Mexico and the U.S. have better adapted to competition and thus the reallocation of the production factors has taken place to improve the regions´ competitiveness.
- in sum, once the losers of the liberalization are substantially reduced or have disappeared.

Perhaps, only when the former conditions have occurred, shall we observe willingness from NAFTA's trading partners to eliminate between them the application of AD laws and procedures that have proven to be in part science, in part art and even in part religion.

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Discussion

TRADING REMEDIES TO REMEDY TRADE: THE NAFTA EXPERIENCE

Kathleen Macmillan

INTRODUCTION

The Leycegui and Cornejo paper is a very useful compendium of trade actions and should be required reading for anyone seeking to understand the arcane world of anti-dumping, countervailing duty and safeguards. The authors have done a first class job of simplifying many complex cases involving multiple countries and obscure products into useful summary tables. Their analysis allows us to discern patterns and reach meaningful conclusions on the operation of NAFTA's trade remedy regime.

Before turning to the important issues raised in the paper, I should declare my biases. I will play the predictable role that is expected of trade policy analysts from Canada and look for ways to reform the NAFTA trade remedy regime. I truly believe that unless we disarm our trade remedy arsenal, we cannot claim to have an open trading regime within North America. If there is any doubt of this, we only have to recall Pieter Kleinschmidt's comments at the workshop on the terrible chill that even the remotest threat of trade action can have on the business activity. The trade remedy arsenal is the largest impediment to free trade within North America and, as such, deserves serious attention.

The problem is quickly becoming bigger than merely a continental one. Antidumping used to be the purview of only a small handful of developed nations. There are now 64 countries with dumping regimes in place and the list continues to grow. India instituted 55 antidumping measures in the year 2000 alone. There is nothing that should better focus a government's mind on anti-dumping reform than the prospect of its exporters being hit with trade actions in every country in which they do business.

The Leycegui and Cornejo analysis provides plenty of material for those contemplating reform of the system. Their statistics on the number of cases initiated and case outcomes raise interesting questions on the importance of institutions and legal standards in the three NAFTA countries. I will consider some of these.

OBSERVATIONS ON THE ANALYSIS AND RESULTS

I was surprised to learn that Canadian initiations were far more likely to end up with a positive ruling and result in the imposition of anti-dumping duties than were the U.S. or Mexican regimes. One explanation could be that Canadian agencies apply a lower dumping and injury threshold. However, the authors note that Canadian determinations were also more likely to be upheld by NAFTA panel review than were those of Mexican or the United States. There are a number of possible reasons for this outcome. It is conceivable that the Canadian Customs and Revenue Agency is more adept at discouraging weak cases than the Department of Commerce. A different standard of review, since NAFTA panels are meant to apply domestic legal standards, could explain Canada's better record with panel reviews. These are important issues when considering the reform of NAFTA's trade institutions.

The paper allows us to consider whether the NAFTA has lessened the use of trade remedy actions within North America. Leycegui and Cornejo conclude that all three countries are far less likely to institute anti-dumping, countervailing duty and safeguard actions against their NAFTA partners than would be suggested by the import statistics. For example, the United States accounts for 65 per cent of Canada's imports but only 21 per cent of its anti-dumping and countervailing duty initiations. Imports from Mexico account for less than 2 per cent of anti-dumping and countervailing duty actions in Canada but 3.5 per cent of Canada's overall imports. Whether this is due to the NAFTA *per se* or for other reasons is difficult to say. Trade actions against NAFTA partners, and particularly against U.S. exporters, tend to be hotly contested and very expensive. This, combined with a possible desire to minimize acrimony in the North American trading

relationship, might explain the proportionately small share of actions against NAFTA partners.

The paper also shows that trade remedy actions initiated by Mexico, Canada and the United States against other NAFTA members are less likely to result in the imposition of duties. The binational review process is one explanation for this. I daresay that a lot more attention to detail probably goes into a determination affecting imports from another NAFTA partner than if the imports originate in India, China or another offshore source. One reason is that exporters from the developing world are less likely to pursue avenues for legal review of injury and dumping determinations. Another explanation is that geographic distances and a lack of knowledge of North American trade institutions make it more difficult for non-NAFTA exporters to present a strong case in the first place.

In the end, whether it is attributable to the NAFTA rules and institutions or whether other factors are at play, the paper suggests that intra-North American trade is more secure from trade remedy actions than trade with other parts of the world. This trend is likely to be reinforced in the future as many other countries implement domestic trade remedy regimes. Imperfect as the Mexican, U.S., and Canadian systems are, they probably provide more balance and procedural fairness than regimes in some other parts of the world.

The paper compiles some valuable time series data as well as information on industries that are the most frequent users of antidumping. While the steel sector is the biggest client overall, agriculture is terribly important in the NAFTA context. There is huge scope for reform here, if the political will exists. Rick Barichello's paper for this workshop outlines the many problems that exist in dumping cases involving agriculture. The first is the use of constructed cost methods for normal value determinations. The constructed cost approach, which makes no sense in economic terms, virtually guarantees astronomical dumping margins. It is inconceivable to think that a commodity product like tomatoes, where a cent or two can make the difference in purchase decisions, would attract dumping margins as high as 76 percent.

CONCLUSIONS

The following conclusions add my own cynical views to Beatriz's much more optimistic and constructive thoughts on what it would take to diminish trade remedy actions among NAFTA partners. In my opinion, a diminishment will occur when:

- There is genuine reform to the regime.

This could happen by changing the way dumping margins are calculated, by introducing a stronger causality test in the assessment of material injury, by providing a clearer definition of material injury by requiring the investigative authority to explicitly take public interest issues such as effects on domestic competition into account, and by establishing a higher standard for reviewing authorities. I am not optimistic that this kind of serious reform will occur in the near future.

- The second way diminishment could occur is by solving the serious over-capacity situation in the steel industry.

It is no secret that biggest customers of the trade remedy system are capital intensive, high fixed cost industries. You don't see the biotech industry looking for antidumping findings. Fix steel through some combination of government action and industry leadership and we will fix a lot of the problem. It follows that if the steel industry is less dependent on antidumping protection, the steel lobby would be less resistant to reforming the system. Only then might it be possible to begin implementing the kinds of changes I listed above.

- Third, trade actions would diminish if we could evolve to a situation of more managed trade.

I don't necessarily mean managed by governments. It could be spearheaded by industry participants on their own. The steel industry has shown signs of uniting against a common foe — Eastern European, Asian and EU exporters— and have tended to leave other NAFTA countries out of recent

trade actions. The recognition that we can find common ground with producers in neighbouring countries, even if it is to unite against other producers, at least constitutes some progress.

- Finally, we must remove subsidies and other distortions that interfere with the natural arbitrage which would otherwise work to equalize prices across borders.

The sugar industry is a case in point. Massive production subsidies, price supports and import barriers in the United States and Europe encourage over-production. The resulting surpluses are sold on world markets, contributing to low and volatile global prices for both sugar and high fructose corn syrup. Dumping actions are one of the only defenses available to producers in unprotected markets. Remove the market distortions and there would be less need for antidumping measures.

Again, my compliments to the authors on a most interesting paper. It is a very useful resource to both practitioners and trade policy analysts looking to improve the NAFTA antidumping regime.

Discussion

TRADING REMEDIES TO REMEDY TRADE: THE NAFTA EXPERIENCE

Carol Goodloe[1]

The Leycegui and Cornejo paper presents interesting information which may not be generally known in the agricultural community. My comments aim to summarize some of the findings and raise some questions in light of my experience and biases. The paper covers all sectors in its analysis of trade remedy laws but my remarks are limited to the agricultural sector.

ANTI-DUMPING AND COUNTERVAILING DUTIES

In their description of anti-dumping (AD), countervailing duties (CVD) and safeguard provisions, the authors note the original *intent* of each. The *intent* of AD and CVD laws was to respond to the economic impact of unfair trade practices. Interestingly, according to one of our workshop participants, the first AD law was instituted in 1904 in Canada to offset under-invoicing of imports and had nothing to do with price discrimination and other alleged unfair pricing practices (Kerr, 2001). Similarly, the *intent* of safeguards was to respond to the impact of trade concessions, that is, import surges following the reduction in import duties.

With the possible exception of CVD laws, which intend to respond to the impact of government subsidies, the gap between original intent and current practice for the use of AD and safeguards is now often large. For the most part, the identification of specific unfair trade practices is rarely associated with the use of AD laws. Recent uses of U.S. safeguards—wheat gluten, lamb, steel—have not been associated with specific tariff concessions. Rather, the investigations have been in reaction to import surges, regardless of the cause. I note that one of my favorite cases—a U.S. safe-

[1] Comments in this paper represent the personal views of the author and do not reflect official views of the U.S. Government.

guards investigation into Mexican brooms made from broomcorn—was filed in reaction to tariff concessions granted under NAFTA, but other recent agricultural cases were not.

In the review of the use of trade remedy laws in North America, one is struck with the overwhelming dominance of AD over CVD laws. Why? Are AD laws easier to use? Is the fact that a petitioner does not have to allege or to prove any unfair trade practice, unlike a CVD petition where actionable subsidies must be found, a factor in the higher rate of use? One also notes that the success rate for AD use in NAFTA countries is generally higher than for CVD (although slightly lower in the United States).

The authors note that the NAFTA success rate for all three countries against their NAFTA partners is lower—and in some instances, considerably lower—than the average success rate against all countries. This result raises interesting questions. Are industries or sectors bringing frivolous cases as a means to foster protection when they feel the pinch of competitive imports? Or have the appeal provisions in NAFTA had an effect on national authorities' investigations and findings, as suggested in the paper. If the latter is true, the appeal process may have been effective in reducing the use of trade remedy laws for protectionist purposes.

One suspects the national officials involved in investigations would not agree that they treat a NAFTA investigation differently from a non-NAFTA investigation. In addition, they would get in trouble if they did because the statutes governing the investigation do not provide for different procedures for NAFTA countries. (Different AD procedures are available in the United States for non-market economies, and perhaps in Mexico and Canada as well.)

One can sum up for the three countries all the investigations that involved food and agricultural products—prepared foodstuffs, animal products, vegetables—to get a broad agricultural share of total cases. For the United States, the share is five percent, for Mexico six percent and for Canada nine percent. It would be interesting to explore some measures about whether this share represents "a little or a lot" of cases for agricul-

ture. Should one use agriculture's share of the GDP as a benchmark or agriculture's share of total exports or imports? One question people ask, of course, is whether agricultural products are resorting to the use of trade remedy laws more often now than in the past. Given the recent history of some prominent cases—Mexican tomatoes, U.S. apples, U.S. high fructose corn syrup, Canadian live cattle, U.S. corn, Canadian greenhouse tomatoes, U.S. tomatoes—the intuitive response is yes but one needs an acceptable measure to answer the question.

USE OF TRADE REMEDY LAWS

The authors present a benchmark method to try to answer the question about the intensity with which NAFTA countries use trade remedy laws. However, I question one aspect of the method that "we can expect that the [Mexico's] imports are relatively high for the size of the market." The size of market is not necessarily related to imports. It would also be interesting to see a separate "intensity of use" index or measure for agricultural products.

The data presented in their Figure 1 show that initiations in NAFTA countries fell in the 1994–99 period compared to the 1987–93 period. If one believed in an exchange rate theory of AD/CVD laws—that is, the number of initiations should increase as a country's currency strengthens and imports are encouraged—the United States should have initiated more cases after 1995 than before. That does not seem to be the case. The opposite would hold for Canada and Mexico, so an exchange rate theory works better for them, as the authors mention. Even though the number of initiations fell, what about the total value of the affected trade? Is it relevant to examine the value of trade relative to the number of initiations? A good measure to assess the use of trade remedy laws, before and after the establishment of a free trade area, would help answer many questions.

The discussion about eliminating AD laws in a free trade area and replacing them with competition policy ("the high ground proposal") has much merit, especially since the application of AD laws seems to have less and less to do with the idea of countering unfair trade practices (and cer-

tainly nothing to do with under-invoicing). At least the current U.S. administration, as it has gone forward with a self-initiated safeguards investigation on steel, has linked the trade remedy action with an attempt to address underlying excess capacity problems and potential unfair practices. One does not expect the United States to support such a "high ground" approach any time soon. But agricultural interests in NAFTA countries need to take a hard look at the potential costs and benefits of such an approach if the intensity of use of AD cases is indeed increasing.

As an aside, the United States would, of course, have to retain its right to use AD laws in at least one agricultural sector as long as the Canadian Wheat Board exists because of its alleged unfair trade practices. It is most curious that GATT Article XVII, Annex I, Paragraph 1 allows a state trading enterprise to price discriminate "for commercial reasons," but the dumping provisions subject a private, presumably fully commercial enterprise to a stricter test, that being no selling in third country market below the price in the home market. But we can discuss these issues in the session on the U.S. 301 case.

In the discussion on appeals, one notes that agriculture accounts for a disproportionate share of the appeals relative to the number of initiations, and that there are more reviews of AD than of CVD cases. One wonders how many of the reviews were agricultural AD cases. As many have argued, agriculture and dumping are an especially bad fit because of the nature of agricultural products and trade. Does this NAFTA review process offer any evidence in that regard?

The discussion about the NAFTA negotiations on safeguards highlights one key difference between the WTO and NAFTA; NAFTA requires compensation and the WTO does not (for the first three years of use). The authors state the intent in NAFTA was to minimize the use of safeguards. The compensation language was indeed a major U.S. objective. The U.S. negotiators assumed that Mexico was more likely to resort to safeguards because Mexico was facing greater structural adjustment as a result of higher average tariffs, more non-tariff barriers, and generally less competitive industries relative to the United States. How ironic that the first

country to bring a NAFTA safeguards case was the United States, and of course it was a good one—broomcorn brooms. The compensation provisions allowed Mexico to retaliate on a product that is more familiar to agricultural audiences than brooms—U.S. high fructose corn syrup. But that is a subject for another conference.

CONCLUSION

My experience and analysis confirm that neither safeguards nor AD are useful tools for restoring competitiveness. Neither tool is being used in a manner consistent with the original intent. The economic logic and application of data in AD cases are flawed, as outlined by Dr. Loyns (2003). Certainly recent U.S. experience with our own safeguards is problematic, having lost one NAFTA case and two WTO cases, even after an appeal. Perhaps a better argument can be made for CVD laws, but the authors show that CVD law is used much less often than AD laws.

The authors are to be commended for an informative paper that raises good issues and stimulates many questions, but definitive answers to questions about the use and effects of trade remedy laws require further exploration.

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TRADE DISPUTE SETTLEMENT PROCEDURES IN THE NAFTA

Françoy Raynauld

INTRODUCTION

The organization that is discussed here- - the NAFTA Secretariat- - has some unusual characteristics. It comprises three national sections, one each for Canada, the United States and Mexico, with each section headed by a Secretary. I am Secretary of the Canadian section. In organizational terms, the sections are "mirror images" of one another. The three Secretaries report to the Free Trade Commission, which itself consists of the three Ministers responsible for international trade in their respective countries. The three Secretaries must always reach a consensus on any problem requiring resolution, since none of the Secretaries has authority over the others. We have to work together to implement the terms and conditions of the Agreement on the matters with which we are concerned.

One important aspect of our organization is that the Secretariat's three national sections operate independently of their respective governments, i.e., we have an arm's-length relationship, and this independence ensures the integrity and impartiality of the process. In a few words, our mandate consists in administering the trade dispute settlement procedures that were negotiated by the three member countries. In short our role is to:

- register complaints;
- receive and redistribute all relevant documents;
- organize the hearing(s); and
- issue decisions.

DISPUTE CASES

The Secretariat does not initiate cases on its own. It is important to understand this point because some of you may wish we would do that. I will explain later exactly how cases are initiated. This will be useful because speakers appearing in a previous workshop have sent a somewhat inaccurate message about how exactly the process begins and unfolds. The paper in question was presented by Burfisher, Norman and Schwartz (2001) which said some flattering things about the role of the Secretariat, but they were not entirely correct.

Let's be clear about a second thing: the dispute settlement mechanisms of the NAFTA *are not informal processes*. Everything is codified in Rules of procedure that deal with the most minute details. It is not my intention today to criticize the system when I say that Rules are strict, but simply to drive home the point that this system is precisely codified. Rules do not bend. There are rules for disputes between private industries (NAFTA, Chapter 19) and there are other rules for disputes between governments (NAFTA, Chapter 20). In the latter case, rules allow for "consultations," as Burfisher, Norman and Schwartz have written (2001, p.133). In fact, this is the norm, but consultations occur in very formal settings, as a country must first officially request them, and there are no guarantees, other than goodwill, that they will occur anytime soon after the request is made. For Chapter 19, Burfisher, Norman and Schwartz use the expression "parties can inform interested parties" to describe the hard reality of the initiation of an antidumping *complaint* by a competitor[1] ("complaint" by a competitor is highlighted to distinguish it from "parties can inform"). The two situations are quite different from one another. In Canada, the complaint will be made before the Canada Customs and Revenue Agency.

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[1] A competitor must control 25 percent of the regional or national market.

The authors continue their argument with the expression "and provide them (ie., the parties) with the opportunity to furnish information," when in fact, the importer *receives* a lengthy questionnaire about its business practices to be filled before a set date, or else … What is called a "normal value" (which in fact is the maximum value) will be assessed against that importer, as a duty. That is not really a benign "opportunity to furnish information," as they wrote.

Also, parties may request "panel reviews". This means in real life, that if the Agency did not come up with the required trade remedy, the dissatisfied company or industry group *must* (not "may") request a panel, to review the decision. It is the economic and social responsibility of that company to use all means at its reach to protect its interests and that of its labour force. Let us not forget that real people bear the brunt of any unpleasant trade dispute. That is the rationale for these dispute resolution mechanisms.

HOW THE APPEAL PROCESS WORKS

The terms and conditions negotiated between Canada, the United States and Mexico to resolve trade disputes within the Secretariat are very strict, as in any appeal process. They provide an opportunity for the continent's business firms to appeal a decision by a national tribunal to a supranational authority (in other words, the Secretariat), strictly with regard to dumping and subsidies.

For Canada, the decisions that can be reviewed on appeal are those by the Canada Customs and Revenue Agency or the Canadian International Trade Tribunal. In Secretariat jargon, these two entities (and only these two) are "the investigating authorities whose decisions can be subject to review by a special binational panel". The procedure is as follows: the Customs Agency will have decided to impose a customs duty (technically called an "anti-dumping duty"), whose effect, as you well know, is to increase the prices of the goods in question on the Canadian market (or on the U.S. or Mexican market, depending on where the decision was made) and consequently, protecting the national producer from competition. In

Canada, it will have determined that the American or Mexican producer is selling its products, by itself or to an importer, for less than it costs to produce them domestically, and is therefore guilty of dumping, or alternatively that it is receiving a subsidy enabling it to sell its products at a lower price in Canada, that is the "countervailing duty." When an alleged subsidy is involved, governments will be participants to a Chapter 19 case. As we saw this fall in the case of softwood lumber, these two tariffs can be applied cumulatively.

A third cause of complaint has also appeared in the books of the Customs Agency or its equivalent in the United States or Mexico, i.e, "price discrimination." As a matter of fact, an offence will be suspected if the advertised price of a product in Canada is less than its advertised price in the United States or Mexico.

The essence of a trade dispute rests on the calculation of the subsidy proportion affecting the price of a good for the purposes of calculating the customs duty. The same applies to the factors included in the production cost calculation of a firm accused of dumping. What in fact are the costs, down to the last red cent? That is what the Customs Agency decides and *the way, or how, it arrived at its determination*, is what can be appealed before the Secretariat. For a case to go forward, a competing business in another country must also have been harmed -- the injury test, as it was very briefly mentioned by Burfisher, Norman and Schwartz (2001, p. 137). If no harm has been caused, there is no case. The Canadian International Trade Tribunal is responsible, in Canada, for finding whether one or more firms representing a significant proportion of national production have been affected by dumping. These two institutions therefore work on the same cases at different stages of the procedure.

Decisions concerning dumping, subsidies and injury, by the Canada Customs and Revenue Agency and the Canadian International Trade Tribunal, as well as those issued by the equivalent agencies in the United States and Mexico, can also be appealed to the Federal Court of Canada, to the United States Court of International Trade and, in Mexico, to the Tribunal Fiscal de la Federación. The point is that the dispute settlement proce-

dures allow one or more firms, through our Secretariat, to challenge an administrative decision in a forum other than one of the national courts I have just named. There is not much room for informality in this.

To summarize, I would say that as a general rule foreign firms are interested in challenging, before the Secretariat's Canadian Section, the *imposition* of a customs duty, and Canadian firms are interested in challenging the *roll back* of a customs duty. Reading Burfisher' Norman and Schwartz, one could have thought that only foreign firms could appeal a decision made in Canada. This is not the case. In fact, when a customs duty is rolled back as a result of a periodic administrative review (normally every five years), all players are once again subject to the rules of the market and this may not suit a group of firms previously protected in Canada by a customs duty.

Finally, under the NAFTA rules, the panel's mandate is to consider *only* whether the laws of the country being challenged, have been strictly observed in the first place. It is not open to a panel to determine whether, in light of the case participants' explanations before it the law has, as it were, some far-sighted provision that permits a novel interpretation. The panel cannot judge the case again. Of course, if an issue is remanded to the responsible authority by the panel, the decision will probably be amended; however, this will be because of an error in construing the law and for no other reason.

CHAPTER 19 CASES

We now to elaborate further on the efficient and timely role that the NAFTA Secretariat plays in the administration of the dispute resolution process, and demonstrate that the provisions offered in Chapter 19 of the NAFTA, are an attractive alternative to judicial courts because they are far less expensive and not as lengthy. The Agreement was written in a way that allows companies or industries to have the option between a national tribunal and the NAFTA Secretariat, giving precedence to the NAFTA process.

For instance, a company that intends to initiate an appeal of a final determination before a judicial court, must file within 20 days of the publication of the official note announcing this final determination. This is called a "Notice of Intent to Commence Judicial Review." It advises the Secretariat, as well as the importers and exporters of the product in question, of the company's desire to have a federal tribunal review the matter. Another company who would prefer to go before a NAFTA panel has 30 days to file a Request for Panel Review. These extra 10 days are the proof that the three governments have clearly intended to give precedence to the panel system.

It has happened on a few occasions after a company's Request for Judicial Review, that another company satisfied with the decision of the Agency, filed a Request for Panel Review with the Secretariat simply to prevent a judicial review. We can assume that the reasons for this were to have a panel of *experts* review the matter and also to avoid lengthy delays. I say, "we can assume" because there is only anecdotal evidence of the motivations of those companies that prefer our process to that of judicial courts.

The NAFTA Secretariat's work is to ensure that the Rules are adhered to and that, to the extent possible, the prescribed time periods are respected, by both the participants and the panelists.

Now consider the time line these Rules prescribe. The provisions with respect to panel reviews conducted pursuant to Article 1904 are designed to result in decisions of the panels within 315 days after the commencement of the panel review. The Secretariat, on receipt of a Request for Panel Review and without any undue delays, assigns a case number to the file, notifies both involved Ministers, the investigating authority and the service list, which is comprised of importers and exporters of the goods that have been subjected to the investigation. The Secretary also publishes the Notice in question in the official gazette of her or his country. And the computation of time begins.

Persons on the service list are then allowed 30 days from the Request date to file Complaints, and 15 more days to file Notices of Appearance. These Notices can be filed either in support or against the complaint. The process becomes really animated, when you find out that a company fights both the complaint and the investigating authority, the first for asking too much, and the second, for not going far enough. On the 55th day following commencement, panelists are named. Upon receiving the names of the panel members, the Secretariat ensures that a conference call is held in the following days with the intent of scheduling the hearing as closely as possible to the time period prescribed in the Rules.

It is not often that the list of panel members is completed in time but that does not, in any way, prevent the process from continuing and participants from filing their respective briefs within the prescribed time period. Further, once appointed, the Panel shall take into account the intent of the Rules to secure just, speedy and inexpensive reviews of final determinations when considering any delays or extensions of time.

Panelists or not, 15 days after the filing of Notices of Appearance (we are then at day 60), the investigating authority files the administrative record comprised of all documents or other information presented to or obtained by the competent agency in the course of the administrative proceeding. The Secretariat receives anywhere between two and twenty boxes of documents which are copied and distributed to the five panelists. This leads to the filing of briefs by complainants and respondents at intervals of 60 days. Complainants' reply briefs are due 15 days after that (we are then at day 195). Oral arguments are normally heard 30 days after the filing of reply briefs depending on the availability of the five members. No later than 90 days after the oral arguments, the panel renders its decision and the Secretariat is responsible for the issuance and translation of it.

The panel decision coincides with the 315 days prescribed by the Rules. Of course, the panel may remand, i.e. send back the issue(s) to the investigating authority. But then, the complainant has won its case in terms of getting the responsible agency to modify its decision and perhaps, the company will obtain everything it pleaded for.

Then, there is a possibility that a "new," if I may say, unsatisfied customer, will object to the new decision of the Agency, and the process will be prolonged. This "customer" is never a government, it can only be one of the original participant to the case who files what is called "a Written Submission with respect to the Determination on Remand," commonly known as a "Challenge to the Determination on Remand." The panel will only consider the Agency's remand if such a document is filed. There is *no* situation where a panel will revise its decision only after informal comments by participants.

Throughout that process, the Secretariat is responsible for administrative support, protection of confidential and proprietary information, timely service and distribution of documents, arrangements for the hearing (including pre and post-hearing meetings). Its effectiveness in performing all of these tasks is essential to making this dispute resolution mechanism a less costly one for interested parties. One can only imagine the impacts and delays associated to a breach of confidentiality or oversight in service of documents. A worthy anecdote on that subject was reported by William P. Alford (now a U.S. panelist) in 1987, when he mentioned a case that was remanded by the Court of Appeals for the Federal District to the Court of International Trade "to dismiss … for lack of jurisdiction" because [the complainant] complaint initially lacked adequate postage and reached the CIT approximately two weeks later than is permitted by the CIT's Rules."[2] Alford, with humour, concluded the episode in old English, writing "Woe unto ye who think deadlines are mere formalities!"

In Canada, 47 experts can be called upon to reach a decision in a dispute. To be included on this roster, a person must of course be familiar with international trade law, either as a lawyer, or as a professor of law or political science. The professional and personal reputations of these individuals are already established and respected in business circles. To be

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[2] Alford, William P., "When is China Paraguay? An examination of the application of the antidumping and countervailing duty laws of the United States to China and other 'nonmarket economy' nations." *Southern California Law Review*. 61: 79-135, 1987, p. 82.

selected as a panelist, the jurist must then agree to comply with the Code of Conduct developed in the Rules of Procedure; this Code is essential if the procedure is to have any credibility. Any financial interest, business relationship or personal situation likely to influence the jurist's independence or impartiality, or that could be so perceived, must be declared in writing as soon as it occurs during a proceeding.

In addition, the arbitrators are selected to hear a dispute on a case-by-case basis and they are not accountable for their decisions to the governments that selected them but, human nature being what it is, to their profession and ultimately, to their colleagues. If I were one of them, I would always bear in mind that my decision may be cited later and this would be a definite source of pride for me. Arbitrators also are mindful of the Extraordinary Challenge Committees, a special procedure provided in the rules for the purpose of setting aside a panel decision because of gross misconduct on the part of one or several members of the panel. The mere fact that this procedure could be invoked ensures that rules are closely followed.

It is important to note in this context that in just 12 years, the 90 decisions heard under the rules of Chapter 19, which relates to dumping and subsidies, have resulted only once in a decision where the panelists lined up on the side of the industry of their respective nations. Accordingly, our panelists have made a great contribution to more harmonious trade relations between the North American Free Trade Agreement member countries, by confirming the power of the rule of law in these relations.

OTHER DISPUTE RESOLUTION PROCEDURES

I would like to end this presentation by describing the other major aspect of the dispute settlement procedures provided in NAFTA. The three countries have given themselves, through a procedure separate from the one relating to industry groups or companies, the possibility of using arbitrators to resolve a dispute concerning the *interpretation of the NAFTA* by the signatory governments. For example, is a specific country entitled to

make a new research assistance program available to local firms without infringing the spirit, and above all the letter, of the Agreement?

This separate procedure is found in Chapter 20. When a dispute arises, the governments can decide to use this procedure, or take the issue to the World Trade Organization, either, but not both fora. The Chapter 20 process is of a nature to promote informality in the ways of settling a dispute, much like Burfisher, Norman and Schwartz described. The involved countries begin by undertaking a consultation process among officials. If this fails, one of the countries will request a special meeting of the Free Trade Commission, which (again), consists of the three ministers responsible for international trade. They may decide to ask technical experts to review the facts, or recommend mediation by a specialized organization or special envoys. A five-member panel will be established only as a last resort.

If a panel is established, the selection process is not the same as the one under Chapter 19. Each country selects two members from the other country. The panel chair is selected by the Parties involved and can be a citizen of any country in the world, whereas under Chapter 19 the chair is identified by consensus among the panelists (it is my job to promote this consensus during an initial conference call).

The governments then file submissions and rebuttals and at least one hearing will be called by the responsible Secretariat in the country whose program or legislative measure is being challenged. The panel's initial report, which is expected 90 days (three months) after the last panelist is selected, will contain *recommendations* (as opposed to a binding decision under Chapter 19's Rules) for a possible solution of the dispute. Each country then makes a submission regarding the suggestions made to them and the panel prepares a final report within the next 30 days.

The only delays allowed in this time schedule (and don't forget the NAFTA's basic goal, which is to reduce the length and cost of any dispute) are to enable a panel to grant a request by a country for the establishment of a scientific review board to hear experts on environmental, health, safety

or other scientific matters; it is up to the panel to decide whether this is relevant in the case before them.

Certain restrictions on release of information are also strictly specified in the Rules. Their only purpose is to maintain the integrity of the dispute settlement procedure, so that the Parties can resolve their dispute informally at any time without a panel intervening. It is not generally known that since Mexico joined the Agreement, of the 23 instances brought to the attention of the Secretariat by governments concerning another government, only four have resulted in formal requests for review by a panel. In other words, 19 cases have been resolved before their conclusion through consultations between the Parties.

In my work and in that of all three National Sections' staff, we act as if the credibility of the Agreement itself is at stake on a daily basis because beyond the individual disputes, trade agreements are under close scrutiny in public opinion of recent years. Ours should be nurtured closely. For instance, we always keep in mind that today, when a business is forced to pay customs duties it did not pay before, the first victims are very often the workers employed by the firm and its suppliers, if the importing business is not in a position to pass on the customs duties to its customers through an equivalent increase in its prices. A significant proportion of the employees are then hit by technical unemployment, as an economist would say, which is the same, in the street, as real unemployment.

Therefore, the well being of their families or, as the United States Constitution promises, their "Pursuit of happiness," depend on the rapid resolution of trade disputes. In fact, there is a real world behind each case and we are all aware at the Secretariat, that the sooner a dispute is resolved, the more the NAFTA will meet public expectations.

CONCLUSION

My last word will be very short. The major trend emerging from the last twelve years of dispute resolution practice in NAFTA is that this part of the Agreement is a success that is used as a model globally when

countries liberalize their mutual trade. Negotiators have come to realize that resolving disputes is critical to the success of free trade agreements, both in general and in particular. And dispute avoidance is an even better approach. As I have described above, the NAFTA dispute settlement mechanisms incorporate both provisions, but in separate chapters.

And if your company has a complaint against a competitor, do not forget to mail it to the appropriate agency with enough postage on the envelope!

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TRADE REMEDY ACTIONS IN NAFTA AGRICULTURE AND AGRI-FOOD INDUSTRIES

Linda M. Young, John Wainio, and Karl Meilke

INTRODUCTION

One of the most obvious and important trends of the past decade has been the increasing importance of regional economic integration, achieved primarily through the formation of free trade areas. While the debate over the welfare effects of regional integration agreements (RIAs) and their dynamic effects on the world trading system remain unresolved, empirical analyses of NAFTA suggest they have been welfare increasing (Burfisher and Jones, eds. 1998; Krueger 1999; Panagariya 2000). However increased trade, especially in import sensitive raw agricultural products, often results in protectionist pressure that politicians have trouble resisting, free trade area or not. Largely for this reason most RIAs, including the Canada/United States Free Trade Agreement (CUSTA) and the North American Free Trade Agreement (NAFTA) include agriculture specific safeguard provisions that allow members to legally restrict import surges under specified conditions.[1] These agriculture specific safeguards do not require evidence of injury in the importing country, even though the more

[1] The agricultural safeguard (emergency) provisions in CUSTA applied only to fruits and vegetables. In NAFTA, the agricultural emergency provisions apply to a short list of commodities specified in NAFTA's Annex 703.3.

general safeguard provisions of the CUSTA and NAFTA do require an injury determination. However, the safeguard (emergency) provisions of the CUSTA and NAFTA apply only during the implementation periods of the agreements.

At the multilateral level, the World Trade Organization (WTO) also allows members to legally curtail imports. WTO members have a number of legal ways to respond to unwanted imports:

- renegotiate bound tariffs;
- raise tariffs from applied to bound rates;
- use restrictive import measures for balance of payments reasons;
- apply the WTO safeguard mechanism under the Special Safeguards provision of the Agreement on Agriculture;
- apply the WTO safeguard mechanism under the Agreement on Safeguards;
- apply countervailing duties; and
- apply anti-dumping duties.

The first three ways are rarely used. In the fourth, the special agricultural safeguard applies only to those commodities "tariffied" during the Uruguay Round of trade negotiations. In the fifth, the WTO safeguard mechanism requires proof that the imports are causing or are threatening to cause serious injury to the domestic industry. None of the first five approaches to curtail imports suggests that the imports are "unfair." The last two remedies, which are often called administered protection, allow countries to respond to "unfair" imports.

In this paper we focus on administered protection since it is widely believed to be the instrument of choice for protectionist domestic industries, when tariffs are lowered or eliminated. The use of administered protection was for a long time the exclusive purview of the developed world, but this is no longer the case. Lindsey and Ikenson (2001) report that in 1995, among the top ten countries using anti-dumping (AD) measures, 72 percent of the 874 AD measures in place were in the United States (35 percent), the European Union (16 percent), Canada (11 percent) and Australia (10 percent). By 2000, these four countries accounted for only 55

percent of antidumping measures. India accounted for less than 2 percent of the AD measures in 1995, however in 2000 it accounted for 9 percent, more than either Australia or Canada. Clearly, developing countries have learned from the developed world how to use administered protection to inhibit imports.[2]

The objective of this paper is to examine four questions regarding administered protection, especially as it applies to members of NAFTA:

1. What is the economic rationale for administered protection and does it continue to hold true in the context of the NAFTA?
2. What is the evidence on the use of administered protection
   - by the NAFTA countries against each other,
   - by NAFTA countries against third countries, and
   - by third countries against NAFTA members?
3. How can administered protection laws be changed to improve the ability of NAFTA members to actually resolve disputes?
4. Are there reasonable alternatives to administered protection within NAFTA?

Before proceeding it is important to understand two key dimensions of administered protection law. The WTO rules governing administered protection are not self-executing. The procedures must be incorporated into domestic legislation and applied by national administered protection agencies. Hence, while the rules governing administered protection in different countries are similar, they are not necessarily identical (Leycegui, Robson and Stein 1995). Second, administered protection rules cover all products. The rules must be sufficiently robust to cover cases involving commodities as distinct in their production practices and marketing arrangements as steel, cut flowers, collated roofing nails and hogs. The chances of developing administered protection rules specific to agriculture seem so remote as not to deserve attention. Both of these facts put constraints on the type of reforms agriculturalists can hope for.

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[2] Interestingly, Mexico had ten percent of AD measures in 1995 but only seven percent in 2000.

ECONOMIC RATIONALE FOR ADMINISTERED PROTECTION

Administered protection is a generic term that covers antidumping duties, countervailing duties and a variety of trade actions that can be brought under domestic laws for import relief (Congressional Budget Office, 2001; U.S. International Trade Commission, 1998). Our concern is solely with AD and countervailing duty (CV) actions.

AD actions are brought against firms in foreign countries that are selling in the domestic market at prices below those charged in the home country, or more often, below their full cost of production including a margin for profit. The stated goal of AD law is to combat predatory pricing, but complainants have to prove only that the firm is dumping, and not that it is engaged in predatory pricing. Predatory pricing involves a firm selling below its cost of production to drive out rival firms, thereby creating a monopoly position. The firm's monopoly position then allows it to subsequently raise prices above those that prevailed during the "predatory" period and above competitive levels. This type of firm behavior stifles competition and is welfare decreasing. However, it is widely believed that successful predatory pricing is extremely rare. Shin (1994), in her study of 282 antidumping cases, could find only 10 percent that were consistent with predatory pricing. Successful predatory pricing of agricultural products, especially raw agricultural products seems even more remote because there are few commodity specific resources involved in the production of most agricultural commodities, and entry is easy and relatively inexpensive. While predatory pricing might be easier for firms that process agricultural products, it is hard to believe it is common given the ability of consumers to substitute products in consumption and given the number of alternative foreign suppliers.

The economic essence of predatory pricing is the ability to price discriminate among markets. For a firm to successfully price discriminate among domestic and foreign markets, it needs to be able to protect the "high" price in the domestic market either through tariff or non-tariff barriers. NAFTA eliminated nearly all tariffs following the implementation period and most non-tariff barriers have also been removed. As a conse-

quence, most of the protection of the domestic market that a firm needs to engage successfully in predatory pricing has been eliminated. As a consequence, a NAFTA member imposing an AD duty is simply depriving its consumers of a product available to other members of NAFTA at a lower price. This welfare decreasing action discourages, rather than encourages, competition.

As shown later in the paper, an industry bringing a complaint in a NAFTA country has more than a 50 percent chance of obtaining formal import relief. In addition, AD duties tend to be large once put into place.[3] This situation is especially true for cyclical agricultural products where selling below the full cost of production is not an uneconomic or unusual activity. As Lindsey (1999, p. 19) argues, "Yet in actual practice, the methods of determining dumping under the law fail, repeatedly and at multiple levels, to distinguish between normal commercial pricing practices and those that reflect government-caused market distortions." It is difficult to make the general case for antidumping measures and perhaps impossible to make the case within a free trade area. In essence, firms are punished for taking actions in foreign markets that are considered normal practice in the domestic market.

The economic basis for a CV action is different than for an AD action. An AD case is brought by domestic producers against foreign firms who are alleged to be engaging in unfair pricing practices. A CV action is brought by domestic producers against foreign producers who are alleged to benefit from unfairly provided government subsidies. Horlick (1991, p.137) notes that there is "a grain of truth, which is the distortion caused by subsidies lying behind the rationale for a CV, while AD actions are 90 percent pure protectionist."

In a free trade area where the member governments have differing domestic policies, countervailing duties are weapons that can be used to offset the trade-distorting effects of one member's policies on other mem-

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[3] Even in situations where the complainant losses the case, the uncertainty resulting from the investigation and temporary import duties can severely restrict trade.

bers. However, CD actions, or their threat, are often used to harass foreign producers when there is little evidence of injury. Meilke and Sarker (1997) argue that national administered protection agencies need to be reformed to act more as "transparency agents" and "investigatory agents" acting in the public good, and less as "advocacy" agents for domestic protectionist interests.

A countervailing duty is a tariff. The welfare effects of a tariff and hence a CV are well known to economists. However, van Duren (1991) and Moschini and Meilke (1992) raise a number of important issues in the context of administered protection. Is the objective of the CV to restore trade flows and prices of the subsidized product to free trade levels? Is it to restore welfare to the free trade level in the importing country? Or is it to convince the offending country to remove its offending policies? A trade lawyer will argue that eliminating the offending policies is the goal of administered protection. This goal is accomplished by punishing foreign producers, and at the same time domestic consumers. If the objective is only to remove the injury caused by the unfair imports, then the CV should almost always be less than the measured subsidy (van Duren 1991; Meilke and Sarker 1997), and it may need to be applied to both raw and processed products (Moschini and Meilke 1992).[4]

The economic cost of administered protection to both the importing and exporting countries can be substantial, despite the small number of products affected at any one time. The producers in exporting nations face the out-of-pocket cost of defending themselves in the trade action. Lawyers and economic consultants are not cheap, and trade actions tend not to go away.[5] Producers in the importing country face the same litigation costs but if the rent seeking results in a CV they are usually hand-

[4] If the goal is to restore the price and trade flows of the subsidized product to free trade levels, then a CV on that product is sufficient. However, if the subsidized product is a significant input (swine and pork) into the production of another product, duties are required on both the raw and the processed product to restore welfare in the importing country.

[5] Canadian hog producers spent 15 years defending themselves in the U.S. CV action against Canadian swine.

somely repaid. On top of these costs are the economic efficiency losses associated with the AD and countervailing duties. The ITC (USITC, 1995), in a comprehensive analysis of the economic effects of AD and CV actions in the United States, calculated a net welfare loss of $1.59 billion and job losses of 4,075 in the affected sectors. These numbers amount to about $39,000/worker transferred from employment in the affected sector to alternative employment elsewhere in the economy.[6]

In the next section we turn to the question of just how important are administered protection actions in NAFTA countries, with an emphasis on agricultural products. Following that section, we turn to the question of how to modify current administered protection rules and institutions.

PREVALENCE OF TRADE REMEDY INVESTIGATIONS BY NAFTA COUNTRIES

The use of AD duties and CVs to prevent or to remedy unfair trade practices was an important issue during both the CUSTA and NAFTA negotiations. During the CUSTA talks, the United States was urged to consider alternatives to its national trade remedy laws. In particular, Canada sought agreement that each country would exempt the other from existing national AD and CV laws and replace them with a new set of disciplines modeled on competition law principles with a binational tribunal to enforce them. For a number of reasons, CUSTA produced no substantive changes in the trade remedy laws of either country. During the NAFTA negotiations, Mexico pursued having the United States suspend or make changes to its trade remedy laws and practices, again with no success.

The concern shared by Canada and Mexico countries was that as traditional trade barriers such as tariffs and quotas were eliminated, producers in the United States would turn their attention toward trade remedy actions as a way to relieve pressure from import competition. This concern was not unwarranted, since at the time that these agreements were being negotiated, the United States was the heaviest user of trade remedy actions

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[6] The general equilibrium model used by the ITC assumed full employment.

by virtually every indicator. It ranked first in the average number of cases initiated per year, average number of measures imposed per year, and number of active measures in place. In this section we quantify and analyze the pre- and post-agreements incidence of AD and CV actions by NAFTA countries, focusing on actions taken against products in the food and agricultural sector.

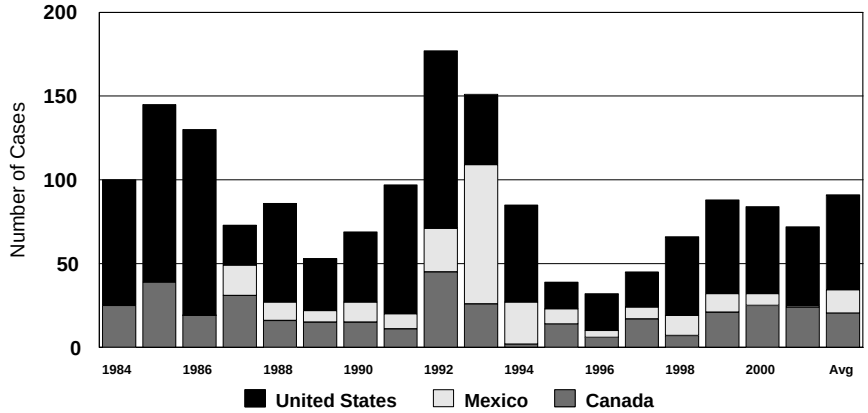
GLOBAL USE OF TRADE REMEDY LAWS BY NAFTA COUNTRIES

Between 1984, five years before the beginning of CUSTA, and mid-2001, the United States, Canada, and Mexico initiated a total of 1,592 unfair trade practice investigations (Figure 1). About 83 percent (1,314) involved alleged dumping while 18 percent (278) involved subsidies. In global terms, NAFTA partners accounted for 35 percent of all AD investigations and 66 percent of all CV investigations notified to the WTO.[7] The United States alone accounted for 20 percent (749) of all AD investigations and 55 percent (243) of all CV investigations during this period, making it the heaviest user of trade remedy laws in the world. Canada and Mexico, however, are also frequent users. Canada was the fourth most active initiator with a total of 358 AD and CV cases opened, accounting for about 8 percent of the global total. Mexico quickly joined the ranks of main users and was fifth with 242 cases initiated, 6 percent of the global total during this period, even though it did not initiate its first trade remedy action until 1987.

For the United States and Canada, 1992 was the year of greatest activity for initiations. The number of cases opened in each country was over twice the yearly average for the period. It was also a year of heavy protectionist tendencies in a number of other countries due to a cyclical downturn in commodity markets. The following year, 1993 was the most active for initiations of investigations by Mexico—82 cases, or 35 percent of Mexico's total. This spike in activity was largely attributed to a combi-

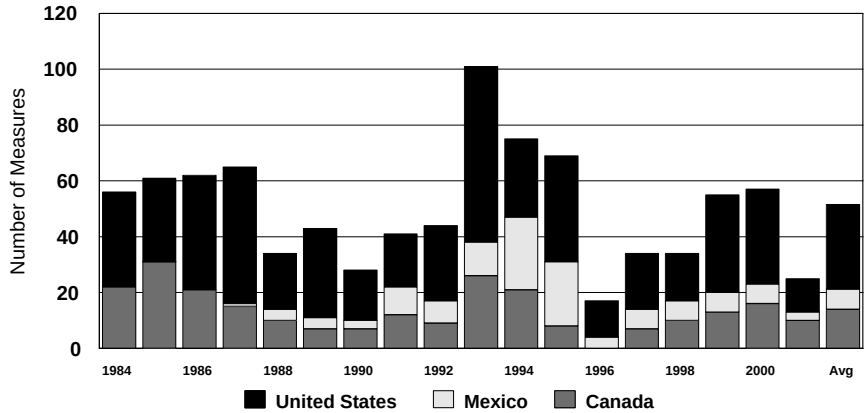
[7] Because of numerous errors, omissions, and inconsistencies in the way countries notify their trade remedy actions to the GATT/WTO, these numbers and proportions are not exact. They are, however, broadly illustrative of the level of administered protection found in each country.

Figure 1: AD and CVD cases initiated by NAFTA countries, January 1984 to June 2001.



Source: Canada Customs and Revenue Agency (2002); Congressional Budget Office (2001); Miranda, Torres and Ruiz (1998); Miranda (1995); U.S. International Trade Commission (1983–1989); U.S. International Trade Administration (1984–2001); World Trade Organization (2002).

Figure 2: AD and CVD measures imposed by NAFTA Countries, January 1, 1984 to June 30, 2001.



Source: Canada Customs and Revenue Agency (2002); Congressional Budget Office (2001); Miranda, Torres and Ruiz (1998); Miranda (1995); U.S. International Trade Commission (1983–1989); U.S. International Trade Administration (1984–2001); World Trade Organization (2002).

nation of an overvalued exchange rate and continued low commodity prices (Miranda 1995). The popularity of AD and CV actions in all three countries waned in the mid-1990s. In 1996, when commodity prices were high,

the number of cases opened was less than a fifth the number in 1992. Since then the level of activity has begun to pick up.

The proportion of the global total attributed to NAFTA countries increases slightly when administered protection activity is quantified on the basis of final measures imposed (Figure 2).[8] On a global basis, final measures, in the form of either duties or price undertakings, were imposed in 2,155 of the 4,170 cases opened between 1984 and 2001, 52 percent of the time.[9] The United States imposed more new measures than any other country, an average of almost 31 per year, representing a quarter of the reported total world average. Canada accounted for 11 percent and Mexico 6 percent. In all three countries, the chances that an investigation resulted in the imposition of a duty or price undertaking exceeded the world average. In Mexico final measures were imposed in 52 percent of cases, in the United States 54 percent, and in Canada 68 percent. These data mean that every time the investigating authorities in Canada pursued a case against alleged dumping or subsidization, the accused party had only a 32 percent chance of obtaining a favorable ruling. It bears pointing out that even when a case results in a final determination of no dumping or subsidization or a finding of no injury, the investigating country may have imposed a preliminary duty. These preliminary duties and, in some cases, the initiation of an investigation, can have a chilling effect on trade, causing imports to drop. In addition, firms or countries subject to AD or CV investigations incur considerable expense in defending themselves.

On June 30, 2001, there were 1,126 AD and 87 CV orders in place around the world (Table 1). These orders are only a fraction of the over 2,000 cases that resulted in the imposition of a duty or price undertaking

[8] The calculations presented here compare measures initiated with measures imposed during the period, regardless of the date of initiation of the cases from which the measures derive. Some measures in the early years stem from cases initiated before 1984, while some cases initiated late in the period had not yet been completed, so no measure is reported.

[9] Price undertakings are provided for under the GATT/WTO rules. Put simply, they refer to the situation where an individual exporter reaches an agreement with the investigating authorities of the importing country to raise their export price to a level sufficiently high to eliminate injury.

Table 1: Active Anti-dumping and Countervailing Duty Measures in the World as of June 30, 2001.

Reporting Party	*Antidumping*	*Countervailing*	*Total*	*Percent of Total*
Argentina	46	3	49	4
Australia	56	6	62	5
Brazil	52		52	4
Canada	89	9	98	8
Czech Republic	1		1	0
Egypt	10		10	1
European Communities	219	19	238	20
India	121		121	10
Israel	4		4	0
Jamaica	1		1	0
Korea	29		29	2
Malaysia	8		8	1
Mexico	66	1	67	6
New Zealand	11	2	13	1
Peru	15		15	1
Singapore	2		2	0
South Africa	110	1	111	9
Thailand	6		6	0
Trinidad and Tobago	5		5	0
Turkey	15		15	1
United States	241	43	284	23
Venezuela	19	3	22	2
Total	1126	87	1213	100

Source: WTO (2002).

since 1984. Many of these orders have since been revoked or suspended. Canada ranked fifth in the world in active measures, accounting for 8 percent of the reported world total. This percent share is well below the 11 percent share of all measures imposed by Canada, indicating a greater propensity to revoke measures over time. Mexico, which accounted for 6 percent of all measures imposed during the period also accounted for 6 percent of active measures at the end of the period.

The United States, which is the most frequent user of trade remedy laws by the active measure indicator, has seen its share of the total stock drop from 33 percent (390 measures in place) in 1999 to 23 percent (284

TTable 2: The Number and Duration of Active Measures by NAFTA Countries, June 30, 2001.

	Active Measures	***Duration in Years***		
		Mean	***Median***	***Maximum***
Antidumping Measures				
United States	241	8.3	7.8	27.5
Canada	89	5.1	3.7	19.2
Mexico	66	2.8	2.6	5.9
Countervailing Duty Measures				
United States	43	7.0	7.8	22.9
Canada	9	5.6	1.0	16.8
Mexico	1	2.0	2.0	2.0

Source: WTO (2002).

measures) as of June 30, 2001. Before the Uruguay Round, a large proportion of U.S. AD orders were considered by exporters to be effectively permanent. According to a U.S. government study, exporters found it almost impossible to get an order removed once applied, and the United States had no provision for regular "sunset" reviews and terminations of AD and CV measures (Congressional Budget Office, 2001). The Uruguay Round required the United States to complete sunset reviews of active measures and terminate those measures no longer applicable by January 1, 2000.[10] As a result, on January 1, 2000, the U.S. stock of active measures dropped over one quarter, from 390 to 285.

The Uruguay Round sunset provisions also resulted in a large drop in the average duration of U.S. orders. Nevertheless, this average is still quite high as U.S. orders tend to remain in place much longer than those imposed by other countries. The average duration of the 241 active U.S. AD orders in place on June 30, 2001 was 8.3 years, with nine orders having been in effect for over 20 years (Table 2). The average duration for the

[10] The Uruguay Round established rules for the duration of AD and CV measures and requirements for periodic review of the continuing need, if any, for the imposition of duties or price undertakings. The "sunset" requirement established that duties shall normally terminate no later than five years after first being applied, unless a review investigation prior to that date establishes that expiry of the duty would be likely to lead to continuation or recurrence of dumping or subsidization and injury. This five-year "sunset" provision also applies to price undertakings.

43 active U.S. CV orders was a bit lower at seven years, with one order having been in place over 20 years. In the case of both AD and CV orders, the median duration was 7.8 years.

Canada also has some long-lived orders, with an average duration of 5.1 years for the 89 AD orders in place, including one in effect over 19 years. Canada had two CV orders that have survived almost 17 years.[11] The average duration for Canada's nine active CVD orders was 5.6 years. Of the three NAFTA partners, Mexico's active orders have the shortest duration, not surprising since Mexico did not conduct its first AD investigation until 1987 or its first CVD investigation until 1990. Mexico's 66 active AD measures had an average duration of only 2.8 years, with only 12 having been in place five years or more. In the case of the United States, 18 percent of its active measures on June 30, 2001 had been put into effect during the last two years, versus 38 percent for Canada and 43 percent for Mexico.[12]

Impact of CUSTA and NAFTA

Before CUSTA and NAFTA were implemented, some believed that pressure to adjust to increased competition brought on by free trade would result in producers, particularly U.S. producers, pressuring their governments to regulate this trade. The argument was that if no efforts were made to address the problems that originally compelled governments to impose trade barriers, removal of these barriers would result in increased efforts to seek relief available under trade remedy laws. Comparing the number of cases initiated before and after each agreement should provide some indication of whether the lowering of trade barriers had an effect on how aggressively each country investigated alleged unfair trading practices.

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[11] The United States and Canada are the only countries in the world having active measures that have been in place over 15 years.

[12] One would expect that a country that has enacted most of its measures only recently would have a shorter mean and median duration even though its recent measures could end up lasting a long time. A better measure of the expected duration of a measure would be to calculate the mean duration of measures that have been terminated.

The United States and Canada were both more frequent users of trade remedy law against each other during the five years prior to the formation of CUSTA (1989–1993), than during the first five years of the agreement. Between 1984 and 1988, the United States opened 24 investigations of Canadian imports while Canada opened 29 investigations of imports from the United States (Table 3). These numbers declined to 18 and 25 during the 1989 to 1993 period. Canada showed a slightly greater propensity to investigate the United States than the reverse before the agreement. This difference widened slightly after the agreement.

How do these numbers compare with investigations against non-CUSTA countries on a trade basis? In the five years prior to CUSTA, investigations of Canadian imports by the United States accounted for 6.4 percent of the U.S. total. In comparison, Canada accounted for 18.9 percent of U.S. merchandise imports during this period. In the five years after, Canada accounted for a slightly smaller proportion (6.0 percent) of all U.S. cases, while its share of the U.S. import market dropped slightly to 18.7 percent. Contrary to Canada's concerns, the number of investigations decreased both in absolute and percentage terms. During the same time, the proportion of all Canadian AD and CD investigations that were directed at U.S. imports remained steady at 22.3 percent, while the share of Canadian merchandise imports held by the United States increased from a five-year average of 68.6 percent before the agreement to 71.7 percent after the agreement.

The picture is similar when bilateral investigations between the United States and Mexico are considered before and after NAFTA (Table 4). During the five years before NAFTA (1989–1993), the United States initiated 13 AD and CV cases against Mexican imports while Mexico initiated twice that number against U.S. imports. During the first five years of the Agreement, the number of cases each country launched against the other declined 50 percent. This decline was taking place even though the value of bilateral trade was growing rapidly. Between the two periods, the average share of Mexican imports in the U.S. market increased from 6.4 percent to 9.2 percent, while the share of U.S. imports in the Mexican market increased from 71.1 percent to 73.8 percent.

Table 3: Bilateral AD and CVD Initiations Before and After CUSFTA.

	Cases Filed By U.S. Against Canada			*Cases Filed by Canada Against U.S.*		
	Total No. of Cases	*Percent of All Cases*	*Percent of U.S. Imports from Canada*	*Total No. of Cases*	*Percent of All Cases*	*Percent of Canadian Imports from the U.S.*
Pre-CUSFTA						
1984	4	5.3	20.1	6	24.0	71.5
1985	7	6.6	20.5	7	17.9	69.0
1986	5	4.5	18.6	7	36.8	68.0
1987	2	8.3	17.4	3	9.7	68.9
1988	6	10.2	18.3	6	37.5	68.4
Total	24	6.4	18.9	29	22.3	68.6
Post-CUSFTA						
1989	4	12.9	18.6	3	20.0	68.9
1990	0	0.0	18.4	3	20.0	71.4
1991	6	7.8	18.6	4	36.4	69.1
1992	7	6.6	18.5	10	22.2	70.9
1993	1	2.4	19.2	5	19.2	73.2
Total	18	6.0	18.7	25	22.3	71.1

Source: Cases - U.S.: International Trade Administration (1984–2001); Canada: Canada Customs and Revenue Agency (2002); Also World Trade Organization (2002). Trade: U.S. Census Bureau (2002); Statistics Canada (various years); United Nations (1984–2001).

Table 4: Bilateral AD and CVD Initiations before and after NAFTA*

	Cases Filed By U.S. Against Mexico			*Cases Filed by Mexico Against U.S.*		
	Total No. of Cases	*Percent of All Cases*	*Percent of U.S. Imports from Mexico*	*Total No. of Cases*	*Percent of All Cases*	*Percent of Mexican Imports from the U.S.*
Pre-NAFTA						
1989	1	3.2	5.7	2	17.2	65.0
1990	1	2.4	6.1	8	18.9	67.1
1991	2	2.6	6.4	6	25.0	68.6
1992	7	6.6	6.6	6	9.4	73.8
1993	2	4.8	6.9	4	37.5	74.0
Total	13	4.4	6.4	26	19.7	71.1
Post-NAFTA						
1994	2	3.4	7.5	3	20.0	69.1
1995	1	6.3	8.4	2	20.0	74.5
1996	1	4.5	9.3	2	45.5	75.7
1997	0	0.0	9.9	2	21.7	74.3
1998	3	6.4	10.4	4	18.5	74.5
Total	7	4.3	9.2	13	22.8	73.8

*In the five years prior to NAFTA, Mexico initiated 4 cases against Canada, while Canada initiated one against Mexico.
In the five years after NAFTA, Mexico initiated 0 cases against Canada, Canada Iinitiated one against Mexico.
Source: Cases - U.S.: U.S. International Trade Administration (1984–2001). Mexico: U.S. International Trade Administration (1984–2001); Also World Trade Organization (2002). Trade: U.S. Census Bureau (2002); United Nations (1984–2001).

Table 5: Bilateral AD and CVD Investigations within NAFTA, January 1, 1984 to June 30, 2001.

	Initiating Country			*NAFTA*
	United States	***Canada***	***Mexico***	***Total***
Affected Country				
United States	0	65	57	122
Canada	36	0	4	40
Mexico	24	4	0	28
NAFTA Totals	60	69	61	190
Global Totals	761	334	219	1314
NAFTA/Global	8%	21%	28%	14%
Percent of NAFTA Total				
United States	0	34	30	64
Canada	19	0	2	21
Mexico	13	2	0	15
NAFTA Totals	32	36	32	1

Source: Cases - U.S.: U.S. International Trade Administration (1984–2001); Canada: Canada Customs and Revenue Agency (2002); Mexico: U.S. International Trade Administration (1990–1996); Also World Trade Organization (2002).

During most of the 1984 to 2001 period, NAFTA countries were the subject of far fewer investigations by their bloc partners than their import shares might predict. Table 5 shows the number of bilateral cases initiated and defended by each country during this period. Only 14 percent of the total investigations initiated by NAFTA countries were directed at a bloc partner. Eight percent of total U.S. investigations were directed against NAFTA partners, compared with 21 percent by Canada and 28 percent by Mexico. Of the 190 trade remedy cases initiated by one NAFTA country against another during the period under review, the United States opened the least amount—60 or 32 percent of the total—but was the largest defender. The United States was the target of 122 investigations by its NAFTA partners during the period, or 64 percent of the total.

Clearly, neither agreement has resulted in an explosion of AD and CV cases by the United States against its bloc partners, nor by them against the United States. Rather, the agreements seem to have moderated the number of trade remedy actions between the countries. Nevertheless, in some sectors, including agriculture, trade disputes between these countries appear to have grown in frequency and intensity since the two agreements

Table 6: Bilateral AD and CVD Investigations on Agricultural Imports within NAFTA, January 1, 1984 and June 30, 2001.

	Initiating Country			*NAFTA*
Affected Country	*United States*	*Canada*	*Mexico*	*Total*
United States	0	18	10	28
Canada	9	0	0	9
Mexico	4	0	0	4
NAFTA Totals	13	18	10	41
Global Totals	71	32	16	119
NAFTA/Global	18%	56%	63%	34%
Percent of NAFTA Total				
United States	0	44	24	68
Canada	22	0	0	22
Mexico	10	0	0	10
NAFTA Totals	32	44	24	1

Source: Cases - U.S.: U.S. International Trade Administration (1984–2001). Canada: Canada Customs and Revenue Agency (2002). Mexico: U.S. International Trade Administration (1984–2001); Also World Trade Organization (2002).

were implemented. We focus next on AD and CV actions within the agricultural sector, to determine if they provide any indication of how the level of trade tension has changed during this time.

TRADE REMEDY ACTIONS IN THE AGRICULTURAL SECTOR

While most agricultural trade within NAFTA flows smoothly and is taken for granted, a small portion continues to generate disputes, many of which have involved allegations of dumping or subsidization. In fact, the agricultural sectors in NAFTA countries have been much more frequent users of AD and CV laws to contest imports from bloc partners than from non-bloc partners. A comparison of Tables 5 and 6 reveals that of the 190 trade remedy cases initiated by one NAFTA country against another during the period under review, 41 (22 percent) were directed at agricultural imports (Table 6). By comparison, of the 1,402 cases initiated by the three against non-NAFTA countries, only 78, or about 5.6 percent, were agricultural.

All of the agricultural actions have involved the United States as either the investigator or the target of the action. The United States has been the target in 68 percent of the cases and the initiator in 32 percent. Canada has been the heaviest user of trade remedy actions against its NAFTA partners in the agricultural sector, accounting for 44 percent of all cases investigated. Canada was the only country that opened more agricultural cases against NAFTA partners (all against the United States) than against non-NAFTA partners. Of the 71 agricultural cases investigated by the United States, only 13 involved NAFTA partners. Ten of Mexico's 23 agricultural cases were directed at U.S. imports.

Appendix Table 1 provides an inventory of every agricultural case initiated by one NAFTA partner against another between 1984 and 2001, as well as a few cases that were initiated before 1984 but active during this time period. Of the 32 bilateral cases between the United States and Canada, 15 were initiated before CUSTA was in place, seven by the United States and eight by Canada. Definitive duties or undertakings were imposed in all but two of these cases. Since CUSTA began, Canada has initiated 13 AD and CV cases against U.S. agricultural imports while the United States has initiated four cases against Canada.[13] Of the 14 cases completed, only six resulted in duties.

For bilateral cases between the United States and Mexico, only three of the 15 were opened before NAFTA, two by the United States and one by Mexico. Only one of these resulted in a duty. Since NAFTA, the United States has investigated Mexican agricultural imports three times while Mexico has initiated nine investigations against the United States. Of the ten cases that have been completed, six have resulted in duties or undertakings.

In general, it appears that the United States has decreased the frequency with which it has used its trade remedy laws in the agricultural

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[13] On October 23, 2000, the U.S. Trade Representative initiated a Section 301 investigation of Canadian wheat marketing practices; on October 15, 2002 he announced that he would be examining the possibilities of filing AD and CV petitions with the U.S. DOC.

sector since CUSTA and NAFTA have been in place. CUSTA does not seem to have had any perceptible impact on the frequency of Canadian initiations, although the chances of an investigation resulting in a duty or undertaking have decreased. Mexico, on the other hand, has seen a large increase in cases within the agricultural sector. Prior to NAFTA, only one of Mexico's 26 cases opened against the United States was against agricultural imports. Since NAFTA, seven of the 13 cases by Mexico against the United States have been against agricultural imports.

As of June 30, 2001, the three countries had a total of 39 active measures against agricultural imports (out of a total 449 active measures). As shown in Table 7, the United States had 20 active measures against agricultural imports (15 AD and 5 CV measures), followed by Canada with 14 (11 AD, 3 CV), and Mexico with 5 (4 AD, 1 CV). Five of Canada's measures and 4 of Mexico's were against U.S. imports, while the United States had only one active measure against its NAFTA partners agricultural imports, a price undertaking against Mexican tomatoes.

Comparing active measures on agricultural imports with those on non-agricultural imports, the sole U.S. measure against Mexican tomatoes was one of nine total active measures against Mexican imports (Table 8). Of the eight measures against Canada, none were on agricultural imports. An investigation against greenhouse tomatoes from Canada was recently concluded with a finding of no injury. Canada had (as of June 30, 2001) 15 orders in place against the United States, five of which were on agricultural products. In addition, an ongoing Canadian investigation against field tomato imports from the United States has resulted in a preliminary finding of dumping. Mexico had (again, as of June 30, 2001) 11 active orders against the United States, four targeting agricultural exports. Mexico also has two active investigations against U.S. agricultural imports, one on rice and a circumvention investigation on beef.

As already mentioned, U.S. orders tend to be longer-lived than those of Canada and Mexico and this is also the case when considering all active orders against NAFTA partners. When only agricultural cases are considered, however, Canada's measures tend to have the longest dura-

Table 7: Agricultural Products with AD or CVD Orders in Place in NAFTA Countries, as of June 30, 2001.

Type of Order	*Commodity*	*Order Date*	*Exporter*
Canada			
AD Duty	Garlic (Jul-Dec)	1997	China
AD Duty	Garlic (Jan-Jun)	2001	China
AD Duty	Refined sugar	1995	Denmark
CVD Duty	Canned ham	1984	Denmark
CVD Duty	Refined sugar	1995	EU
AD Duty	Refined sugar	1995	Netherlands
CVD Duty	Canned ham	1984	Netherlands
AD Duty	Refined sugar	1995	United Kingdom
AD Duty	Refined sugar	1995	US
AD Duty	Whole potatoes (non-size A russets)	1984	US
AD Duty	Whole potatoes (excl. non-size A russets)	1986	US
AD Duty	Iceberg lettuce	1992	US
AD Duty	Prepared baby foods	1998	US
AD Duty	Garlic	2001	Vietnam
Mexico			
CVD Duty	Beef	1994	EU
AD Duty	High fructose corn syrup	1998	US
AD Duty	Swine for slaughter	1999	US
AD Duty	Live bovine animals, beef and edible offals	2000	US
AD Price Undertaking	Apples	1998	US
United States			
AD Duty	Sugar	1979	Belgium
AD Duty	Frozen concentrated orange juice	1987	Brazil
AD Duty	Preserved mushrooms	1998	Chile
AD Duty	Preserved mushrooms	1999	China
AD Duty	Apple juice	2000	China
AD Duty	Garlic	1994	China
CVD Duty	Sugar	1978	EU
AD Duty	Sugar	1979	France
AD Duty	Sugar	1979	Germany
AD Duty	Preserved mushrooms	1999	India
AD Duty	Preserved mushrooms	1999	Indonesia
AD/CVD Duty	Raw pistachios, in shell	1986	Iran
CVD Duty	Roasted pistachios, in shell	1986	Iran
AD/CVD Duty	Certain pasta	1996	Italy
AD Price Undertaking	Tomatoes	1996	Mexico
AD Duty	Canned pineapple	1995	Thailand
AD/CVD Duty	Certain pasta	1996	Turkey

Source: World Trade Organization (2000).

tion, with an average of almost 10 years, including an active order on potatoes from the United States that has been in place for 17 years.

Even though the proportion of imports within the NAFTA region that are subject to AD/CV investigations and definitive duties or undertakings is small, this does not mean that these actions have not imposed significant costs on the industries targeted. Table 9 contains trade value data for most of the agricultural cases investigated within the NAFTA region over the last 25 years.[14] In general, the value of imports increased in the 12-month period immediately preceding the start of an investigation. For all three NAFTA countries, imports under investigation by another NAFTA partner totaled about $5.0 billion during the 12 months prior to the initiation of a case. In comparison, imports two years prior to initiation totaled about $4.6 billion, or about 9 percent less. The largest jump was in two-way trade between the United States and Mexico. Mexican agricultural imports subject to investigation by the United States increased by an average of 19 percent during the 12-month period preceding the investigation. U.S. exports to Mexico increased by an average of 15 percent prior to investigation. As expected, in the case of both countries, imports during the 12 months after the initiation of an investigation declined.

Both AD and CV investigations and ensuing measures tend to be disproportionately concentrated in a few industries, with agricultural imports on the receiving end in a large number of cases. CUSTA contained a mechanism for reviewing AD/CV verdicts and, if necessary, remanding them to the investigating authority if they were found not to have been in accordance with the imposing country's laws.[15] This mechanism was incorporated into NAFTA as well. Prior to the implementation of CUSTA and NAFTA, final AD, CV and injury determinations could be appealed, in the United States to the Court of International Trade, in Mexico to the Tribunal Fiscal de la Federación or, in Canada for certain final determina-

[14] Trade data were not available for Canadian imports of U.S. dry dog food, Christmas trees, or frozen pot pies and dinners. The trade data in Table 9 is at the HS6 digit level, which does not always comply exactly with the HS trade lines subject to investigation.

[15] In a remand, the panel sends a determination back to the investigating authority asking it to explain decisions, provide more information or make corrections.

Table 8: Number and Duration of Active Measures within NAFTA, June 30, 2001.

	Active Measures		***Average Duration***		***Maximum***	
	Total	***Agricultural***	***Total***	***Agricultural***	***Total***	***Agricultural***
United States						
AD Measures						
Canada	6	0	10.0	—	15.3	—
Mexico	8	1	6.9	4.8	14.5	4.8
CVD Measures						
Canada	2	0	10.3	—	11.8	—
Mexico	1	0	7.8	—	7.8	—
Canada						
AD Measures						
US	15	5	7.1	9.9	17.0	17.0
Mexico	1	0	3.7	—	3.7	—
Mexico						
AD Measures						
US	11	4	3.5	2.3	5.9	3.4
Canada	0	0	—	—	—	—

Source: Cases - U.S.: U.S. International Trade Administration (1984–2001).
Canada: Canada Customs and Revenue Agency (2002).
Mexico: U.S. International Trade Administration (1984–2001);
Also World Trade Organization (2002).

tions to the Federal Court of Appeal or for some Revenue Canada decisions, to the Canadian International Trade Tribunal (CITT). Chapter 19 of CUSTA /NAFTA provides for the binational panel review of AD, CV and injury final determinations as an alternative to judicial review or appeal to these bodies. Chapter 19 also provides for an "extraordinary challenge procedure" for appealing panel decisions under certain defined circumstances.

Since the creation of these dispute resolution mechanisms, there have been a total of 25 Chapter 19 cases reviewing final AD/CV determinations on agricultural imports, including two extraordinary challenges. The United States has been on the defensive side of 15 of these cases, 11 within CUSTA (including the two extraordinary challenges) and four within NAFTA. Canada has been on the receiving end eight times, four each with CUSTA and NAFTA, and Mexico twice. There have been cases where a

decision to remand the case to the investigating authorities has resulted in duties being rescinded. Assuming that the duties would have persisted without the panel's decision, this has resulted in an increase in bilateral trade.

In summary, the evidence suggests that imposing more restrictive rules on trade remedy actions within NAFTA would have varied effects on all three countries, since each is both an extensive initiator and defendant in these actions. While protection for import-competing industries would be less available, consumers in the importing country would benefit from access to relatively cheaper imports as would producers in the exporting country. The economies, as a whole, of each country would benefit.

In the agricultural sector, the pressure to adjust to increased competition has in some cases resulted in efforts by industry to pursue protection under trade remedy laws. But, this was the case before the agreements were in place and there is little evidence to suggest that these actions have significantly increased in recent years. Nevertheless, even though most of the trade disputes represent minor irritants that have been addressed through consultations and negotiations, some have proven to be intractable, occupying a significant portion of the political and bureaucratic agenda in each country. Some have even persisted in spite of panel decisions rendered under the dispute resolution mechanisms provided for CUSTA and NAFTA. It is important to realize, however, that these trade disputes have not necessarily been the result of CUSTA or NAFTA and they may have been worse without the agreements. The next section explores a number of promising approaches that could be taken to limit the adverse effects of AD and CV laws on trade within the NAFTA region.

ALTERNATIVES TO ADMINISTERED PROTECTION

There are a number of alternatives to administered protection in NAFTA, although any change will face political resistance. The first set of alternatives involves "tweaking" the current system of administered protection. The second set involves major changes to the system. Consideration of these potential changes may be enhanced by first defining criteria

Table 9: Bilateral AD and CVD Actions within NAFTA against Food and Agricultural Exports, 1984-2001.

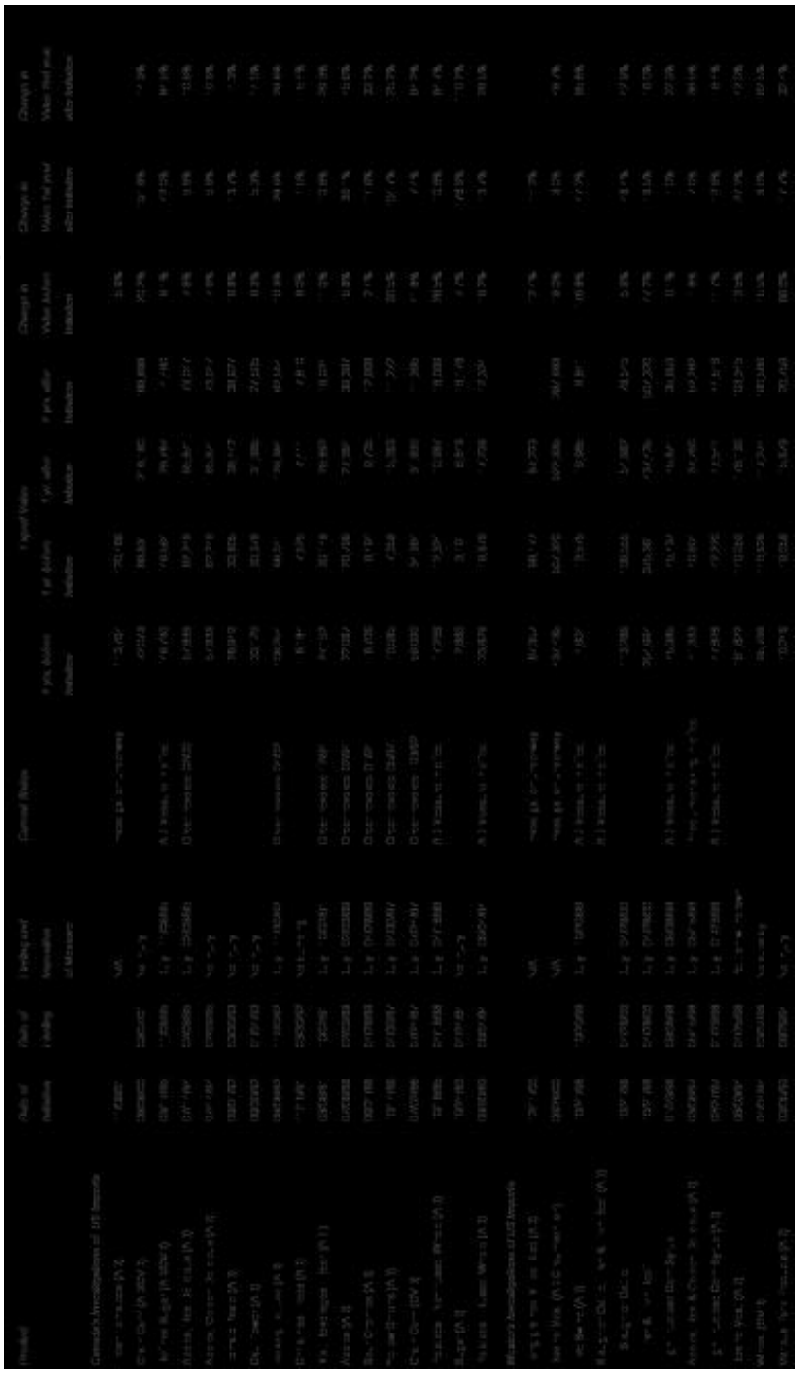
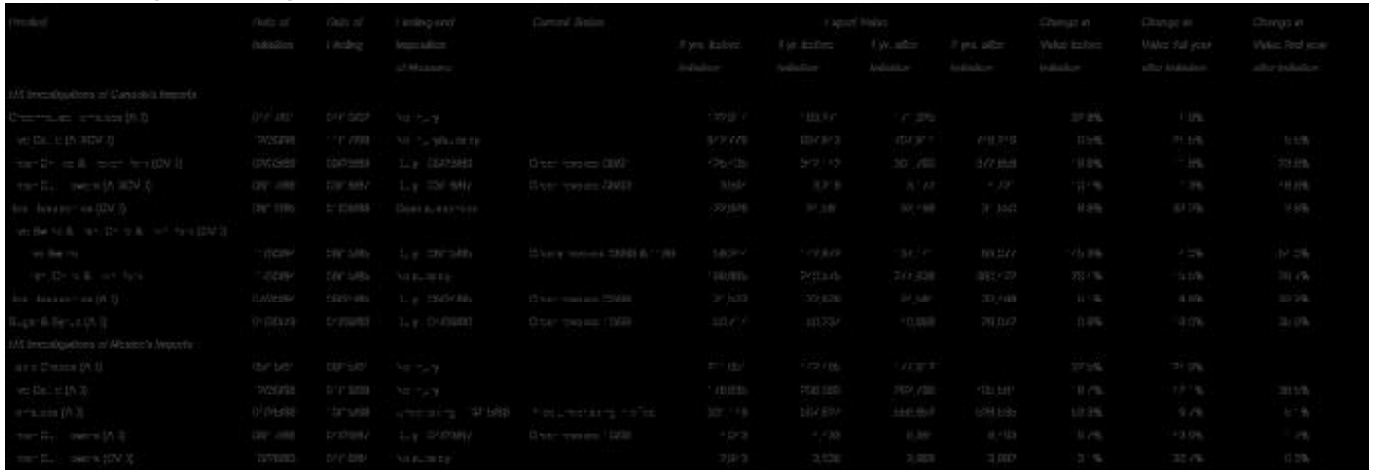


Table 9: Bilateral AD and CVD Actions within NAFTA against Food and Agricultural Exports, 1984-2001 (Continued).



Source: Foreign Agricultural Trade of the U.S. (FATUS) (1984–2001).

to evaluate the modifications—or answering the question of what we want to achieve with the changes. We propose seven possible criteria:

- reducing the incidence of trade actions;
- reducing the number of retaliatory actions, those initiated by countries in response to another countries' specific investigations;
- reducing the costs of each trade action, including the cost of conducting the suit and the economic inefficiency due to the resulting imposition of duties;
- maintaining or increasing the transparency of trade remedies;
- maintaining the ability to protect producers from unfair trade practices of other countries;
- noting the extent to which trade remedy laws are congruent with the overarching goals of the free trade area; and
- noting the extent to which modifications to trade remedy laws assist producers in considering their "domestic" market to be tri-national rather than national.

The last criterion in particular requires some explanation. Tariffs and other quantitative barriers to trade in agricultural products were phased out between 1989 and 1998 for most trade between the United States and Canada.[16] As a consequence, Canada and the United States have a bi-national market for most agricultural goods. The transition period for removal of trade barriers between the United States and Mexico will end on January 1, 2008. Following the transition period the NAFTA members will share a tri-national market.

The agreement on the creation of a free trade area and the removal of barriers to trade has occurred more quickly than the development of supporting paradigms and institutions. This may be partially due to the rapidity of change in trade rules and institutions for agriculture both within North America and within the GATT/WTO. For forty years agriculture was a special case inside the GATT, and relatively few GATT rules structured trade or disciplined domestic policies. While the importance of agricul-

[16] Exceptions include Canadian dairy, poultry and eggs, and the United States maintains tariffs on Canadian dairy, peanuts and peanut butter, cotton, sugar and sugar-containing products.

tural trade was increasing during this time, this trend did not fundamentally challenge the roles of the national government or national agricultural producer groups.

Since the completion of the Uruguay Round of multilateral trade negotiations a new set of rules apply to agriculture. National governments can still subsidize farm income and regulate food safety among other traditional functions, but rules govern how this can be done if members are to meet their WTO commitments. These rapid transitions have resulted in conflicting ideas over the role of the federal government in the market, with a tension between historic obligations to producers and the obligations imposed by trade agreements. In addition, efforts to create a binational market with a harmonious set of rules governing transactions creates tension between national desires for sovereignty and the control producers want to exert over the policies and regulations affecting foreign governments and their farmers.

Producer groups in the NAFTA market have been slow to create new institutions, namely bi- or tri-national commodity groups, to accompany the change in their marketplace (Young, 2000). The development of such institutions may increase the gains to producers from trade liberalization within NAFTA, with the gains resulting from co-operation in market development, research and development, lowering transactions costs of crossing the border and working jointly on sanitary and phytosanitary issues. The U.S. National Cattlemen's and Beef Association, the Canadian Cattlemen's Association and the Mexican Confederacion Nacional Ganadera are examples of an industry that has begun to actively pursue co-operative goals on many fronts. The continued use of administered protection inhibits this type of co-operation by emphasizing the importance of the national market and by stressing relationships between national commodity groups.

As noted in the introduction, economists have long criticized the use of trade remedies (Loyns, Young and Carter, 2000; Kerr, 2001; Barichello, 2002), however, politicians and industry groups have insisted on keeping them to manage the tension created by economic integration. Tension results when producers perceive that they are competing with dif-

ferent types and levels of government support or different marketing institutions. Tensions over differing policies run particularly high when there are pronounced changes in market share. In the next section we discuss relatively minor changes that could be made to administered protection laws to make them less protectionist. We present these options because it may be politically necessary to keep administered protection as an "escape valve" for managing tension and anti-trade sentiment during the process of economic integration. However, we believe that administered protection may not be the best way to achieve that goal.

Tweaking The Current System

The Trade Remedies Working Group (TRWG) was established by the NAFTA partners in 1993 to address issues arising from the operation of trade remedy law. The TRWG notes that the Uruguay Round Agreement (URA) resulted in significant improvements in disciplines on subsidies and also in increasing the uniformity of AD processes. The TRWG made a number of recommendations that member governments agreed to with the goal of reducing trade irritants between countries including four measures:

- to increase the transparency of proceedings and accessibility of public records;
- to increase other country's comments on standing and other factual matters;
- to simplify dumping calculations; and
- to address a variety of other technical matters relating to administered protection.

Unfortunately, the TRWG states that they have completed their assignment and are no longer meeting. However, we argue further changes should be made.

One option for consideration is to increase the difficulty of meeting the requirements for the imposition of AD and CVs and/or to change the criteria for the level of the duty. This option could be accomplished by changing some of the economic definitions used in AD and CV suits. While members of the WTO are constrained to meet the minimum level of these definitions, nothing prevents the NAFTA partners from specifying a higher

standard for the imposition of duties. A gradual increase in the criteria for the imposition of AD and CV duties could be used as a transition to eliminating their use within the NAFTA. We suggest five possible adjustments to the definitions:[17]

Increasing the de minimis level—for AD duties a margin of dumping of less than two percent of the export price is considered *de minimis.* For CVs, a subsidy level of less than one percent ad valorem is considered *de minimis* and in that case no duties are imposed. These *de minimis* levels could be increased.

Increasing the level of negligible imports— currently, the imposition of a duty requires that the imported good must be three percent of the volume of all such merchandise imported into the United States (or seven percent if a number of suits are initiated on the same day against a number of countries). This level could be increased on imports from NAFTA partners.

Restricting the duty to the level sufficient to address injury instead of the amount required to negate the dumping or subsidy margin—if the duty required to offset the injury to the domestic industry is less than the dumping or subsidy margin, (as discussed earlier in the paper) then the lesser duty could be imposed. This practice has precedence. The Canada/Costa Rica Free Trade Agreement has a provision (Chapter VII Article 2.a) that provides "for the possibility of imposing AD duties that are less than the full margin of dumping in appropriate circumstances." Mexico also has a lesser duty rule (Leycegui, Robson and Stein 1995).

Changing the calculation of duties to account for practices in the domestic industry. This modification would be to impose duties on the difference in practices between the domestic and foreign industry. For example, if Canadian producers were found to have a subsidy that is ten percent of the cost of production and U.S. producers are subsidized

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[17] In making these proposals we have generally considered United States rules as representative of what is done in all three member countries.

eight percent, then duties would be limited to the difference of two percent.

Including a provision requiring evaluation of the impact of duties on the general interest of the free trade area. This provision would be similar to the public interest provision that exists in Canada and the European Union. It would require that the broader goals prescribed by the NAFTA be considered before a determination to impose duties is made. There is also precedence for this proposal. In Canada, CITT may consider the potential impact of duties on the public interest as the "concentration of producer interests is too narrow a focus and consumer interests must be considered" (Trebilock and Howse 1995, p. 111). However, this provision is rarely used. The Canada/Costa Rica Free Trade Area does not eliminate AD cases. It does however, state that "the Parties recognize the desirability of establishing a domestic process whereby the investigating authorities can consider, in appropriate circumstances, broader issues of public interest, including the impact of AD duties on other sectors or the domestic economy and on competition . . ." (Department of Foreign Affairs and International Trade, 2003) In the European Union, once it has been shown that there is dumping or subsidization by a third country into the European Union, and that injury has been caused, before the imposition of duties the broader interests of the European Union must be evaluated. In the past, consideration has been given to the maintenance of competition, concern over the impact of duties on trade relations with other countries, and finally the impact of duties on related industries.[18]

Consultations Between Countries. Currently, NAFTA countries are not required to engage in consultations before the initiation of legal action. NAFTA allows each member to continue their use of domestic administered protection processes and, at least for the United States, administered protection processes do not require consultations. In contrast, dispute resolution systems within the WTO and NAFTA stress the role of consultations between governments before initiating formal inves-

[18] However, Trebilcock and Howse (1995) state that the European Union uses the public interest provision only to protect producers from paying more for inputs.

tigations. For example, within the WTO members must first make a request for consultations, and if the consultations are not successful, the complainant can request establishment of a panel. Consultations are confidential and without prejudice to the rights of the member in any further proceedings. Consultations are likely to involve the following steps:

- clarification of the legal basis for the dispute on the part of the complainant;
- discussion of why the defending party has maintained the policy or taken the action in question; and
- exploration and investigation of the options to resolve the conflict.

How successful are WTO consultations in resolving disputes? In July 2001, the WTO considered 51 cases with completed panel reports, indicating that initial consultations did not resolve the dispute. Thirty-seven cases were resolved in consultations without proceeding to the request for establishment of a panel, and another seven cases were resolved during the panel process before a formal report was adopted. Hence, nearly one-half of the complaints were resolved through consultations. Three examples of cases settled without a panel report include:

- the U.S. complaint against Denmark on measures affecting the enforcement of intellectual property rights;
- the Thai complaint against Colombia on the safeguard measures on imports of plain polyester filaments from Thailand; and
- the U.S. complaint against Greece on the enforcement of intellectual property rights for motion pictures and of the WTO's dispute resolution system on that matter.

Already, consultations are occasionally used between NAFTA parties during AD and CV investigations. The governments of the United States and Canada have consulted at different times during the long-standing softwood lumber dispute (Department of Foreign Affairs and International Trade, 2002). This proposal would make consultations a mandatory part of the process for resolving AD and CV suits.

If consultations were adopted as a preliminary step in resolving administered protection complaints, a process for consultations would need to be developed. One important question affecting the success of consultations is the scope of the parties included in the process. Would only the complainants be allowed to make presentations, or would the process allow for the inclusion of parties representing the broader public interest? Principles for consultations could be established to ensure that managed trade is not the outcome.

The changes in administered protection processes suggested in this section do not require major changes to the current practice, although making consultations a mandatory part of the procedure would involve legislative change. In the next section we consider a range of radical changes. The options range from the complete elimination of administered protection within NAFTA to the alternatives of "good offices" and mandatory facilitated dialogue.

Radical Changes To The Administered Protection System

One radical option for change is to eliminate AD suits within NAFTA entirely, as Canada attempted to do when negotiating a free trade area (FTA) with the United States (Kerr 2000). Other FTAs have eliminated the option to press dumping suits, notably Australia and New Zealand within the trans-Tasman market:

> *In an open trans-Tasman market, the different thresholds for anti-dumping and competition laws would have led to the protection of relatively inefficient industries in the trans-Tasman context and hence would have hampered the efficient allocation of resources between the two countries. Moreover, it was felt that the removal of trade barriers would make dumping increasingly redundant as the scope for price discrimination between the domestic and export markets was reduced, and the risk of retaliation by competitors increased. Continuation of the anti-dumping remedy would also have enhanced the possibilities for prolonged dispu-*

tation at an official level to the detriment of a beneficial commercial relationship."[19]

Other FTAs such as the Canada/Chile FTA have eliminated the use of AD measures within their FTA. Furthermore, the Canada/Chile FTA established a committee with the view to eliminating the need for CVs as well. Another goal of this committee is to work with other like-minded countries to remove the application of AD measures in FTAs (Article M-05 of the Canada/Chile Agreement). The political difficulty of eliminating administered protection processes within the European Union may have been lessened by the existence of their Common Agricultural Policy and the fact that the European Union is a customs union.[20] In contrast, fierce political opposition has been expressed to the elimination of administered protection processes by U.S. legislators (Kerr 2001).

Alternative Dispute Resolution Processes. Among other radical changes to administered protection processes is the introduction of alternative dispute resolution (ADR). The U.S. government and the Canadian federal and provincial governments have adopted ADR for use in a variety of contexts. Within NAFTA, ADR is recognized as a valuable tool for the resolution of private commercial disputes (Department of Foreign Affairs and International Trade, 2001).

ADR processes usually involve a third neutral party which has no stake in the outcome. The goal of ADR is to encourage communication, and to leave litigation as a last resort. The literature in dispute resolution suggests the following criteria when considering the introduction of ADR:

- does the current system produce acceptable and durable outcomes?
- what are the costs of the current system and are they acceptable?

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[19] (Leycegui, Robson and Stein 1995, p. 210).

[20] The European Union has also eliminated AD suits between member states. As the European Union is a customs union with a Common Agricultural Policy, this case has different characteristics than NAFTA.

- what is the impact of the current systems on the relationships between the parties and to what extent are the relationships valued?
- are the disputants involved in the generation of the solutions to the dispute or is that function given to a separate authority?

These questions may be useful to policymakers concerned with whether or not to modify existing AD and CV processes.

While ADR includes a wide variety of options, two processes are suggested for incorporation into a dispute resolution system for administered protection cases: "good offices," and mediation between the industry pressing the suit and the industry under investigation. Before these two processes are considered in detail, a hypothesis on the causes of administered protection suits and the characteristics of dispute resolution systems are considered.

Hypotheses On The Motivations For Initiating A Suit

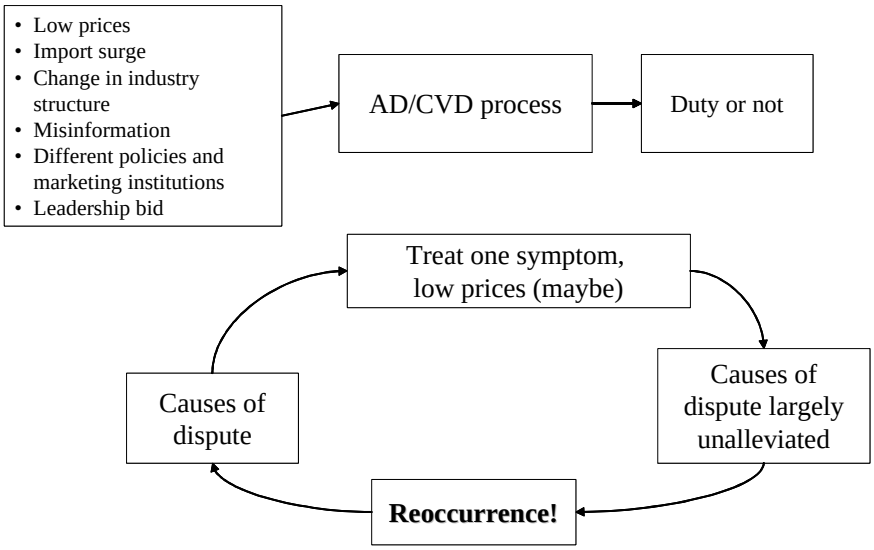
Six possible motivations exist for pressing an AD or CV suit:

- the actual evidence of dumping or subsidies;
- low prices and import surges;
- changes in industry structure;
- misinformation;
- differing policies, regulations and marketing structures; and
- leadership bids within commodity organizations.[21]

Of these six, the perceptions held by producers about the advantages given to their competitors due to differing government subsidies and policies may be most critical. As indicated in Figure 3, some of these factors may feed into the tension that motivates the suit; however, AD and CV processes are limited to the determinations of dumping and/or injury. Outcomes are limited to the imposition of a duty or not, and many of the other

[21] This hypothesis has been discussed with Chuck Lambert of the U.S. National Cattlemen's Beef Association and he was supportive of this view. Other industry groups are being approached to validate or to correct this proposition. Rice (2000) offers further support in his assessment.

Figure 3: Factors Leading to an AD and CVD Dispute.



causal factors remain unaffected by the outcome. Because many of the tensions underlying the dispute are not alleviated, the suit may occur again. This hypothesis is supported by the number of repetitive suits and investigations that exist in some industries, for example, cattle and grains (Young, 2000) and hogs (Meilke and van Duren, 1990). In the recent tomato dispute (Barichello in this publication), a suit filed by the U.S. tomato industry against Canadian greenhouse tomatoes promptly motivated a Canadian suit against the U.S. fresh tomato industry. Another example is the Mexican action against U.S. beef exports filed during consideration of a U.S. AD suit against the Mexican beef industry.

Characteristics Of Alternative Dispute Resolution Systems

If an ADR system is being considered to replace administered protection, it is useful to consider the five common elements of such a system:

Assessment of the resolution options. The complainants assess the conflict and identify the stakeholders, as well as the economic, political and legal issues. The processes available for the resolution of the dispute may be evaluated, and the cost and the timeliness of different op-

tions may constrain choices. Currently, administered protection does not offer a choice of dispute resolution processes to disputants.

Identification of the interests and the development of the agenda of issues. Identifying the interests (needs) Disreali once said, "I serve your interests and not your desires" underlying a group's positions is critical to a successful resolution of the conflict. The industry may have one set of interests around the dispute and another broader set of general interests. The general interests of the group pressing the suit may include access to other NAFTA markets, avoidance of a countersuit, a general de-escalation of the use of trade remedies, regulatory and policy harmonization within NAFTA, increased demand for their product, trade liberalization generally, and a unified domestic industry. Administered protection processes are centered on the criteria for imposing duties and do not identify or evaluate a broader set of interests.

Fact finding—may include an analysis of the data needs of the stakeholders for successful resolution of the conflict. Joint fact finding stresses the importance of all parties being involved in defining questions requiring additional data, and how data will be collected and interpreted (Adler et al., 2001; Environmental Protection Agency, 1999). The goal of joint fact finding is to avoid the use of "duelling experts" hired by one side and distrusted by the other, and instead to use methods and experts that all parties agree upon. In administered protection processes, fact finding occurs through a rigidly structured process. Public input is accepted, but stakeholders have no ability to influence the course of the prescribed investigation. Frustration has been frequently expressed over the criteria for a positive assessment of dumping, indicating a lack of respect for the process on the part of both participants and analysts.

Collaborative problem solving—along with fact finding may occur in iterations as the investigation leads to the generation of new options. Stakeholder groups may work collaboratively in generating options that will best meet the interests of all participants. This may also involve stakeholders consulting with their constituent groups over the desirability

of various outcomes. In administered protection processes, the possible outcomes are predetermined, with a duty being imposed or not.

Settlement. It involves negotiation and agreement by parties over the options for resolution of the dispute. In administered protection processes, even if a duty is imposed, trade tension almost certainly continues to exist and may well increase.

One point of the description above is to illuminate that administered protection does not have the characteristics of an ADR, but may more aptly be considered an administrative review. The process of adjudication does not assist groups in identifying their interests, nor does it involve them in generating options to advance those interests. The proposals made here to include good offices and mediation are meant to supplement the current process of administrative review.

Good Offices

"Good offices" are used when a third party works to correct misunderstandings, to reduce fear and mistrust and to increase communication. Good offices stop short of mediation as they do not involve formal negotiation. The use of good offices takes a variety of forms. Within the WTO, the Director-General may offer his good offices with a view to assisting members to settle a dispute. A similar role is frequently taken by the UN Secretary General who uses his good offices (generally meaning the weight and prestige of the world community he represents) to undertake efforts publicly or privately to prevent international disputes from developing, escalating or spreading. In some cases, a good offices commission has been established and any of the members can be called on to offer their services to resolve disputes.

The success of a good offices commission within NAFTA would depend critically on the use of commissioners who were effective in their role, who could act effectively as neutral parties, while working with industries to foster the communication required for collaborative problem solving. It is envisioned that industry could request the services of a good

offices commissioner to seek an early resolution of its dispute. This process is proposed to be voluntary, less formal and less structured than the proposal for facilitated dialog discussed below.

Mandatory Facilitated Dialogue

The proposal of mandatory facilitated dialogue is to have the complainants engage in a dialogue with all stakeholders, facilitated by a neutral party, before the national administered protection agencies for all NAFTA partners can investigate a suit. Facilitated dialogue is a type of mediation the purpose of which is to explore issues, interests and options. It is however, less geared toward negotiation and settlement than mediation. The purpose of the facilitated dialogue is to engage the complainant in a wide-ranging discussion on the consequences, costs and benefits, widely defined, of pursuing the suit. The underlying premise is that the complaining industry may have higher opportunity costs than the substantial amount of money and effort required to launch a suit. These opportunity costs are detailed below. Participants would include the industry under investigation and other stakeholders in the domestic industry. If the domestic industry is divided about whether or not to initiate the suit, all relevant divisions in the domestic industry would need to be included.

A discussion of the costs and benefits of the suit might include three topics:

- whether or not the defending industry is likely to retaliate by initiating a suit through its own domestic AD and CV process. Such retaliatory suits occur with enough frequency to be a consideration;
- if the domestic industry is divided on the question of the suit, particularly the leadership of commodity organizations, discussion is needed about the cost to the domestic industry of proceeding with a divisive action;
- discussion is needed about how the industries might gain from co-operation on issues of joint concern and the possible impact of the suit on progress toward cooperative goals and the relationships involved. It has been observed that progress on these issues may be halted during the course of the AD and CV actions.

Another important element of the facilitated dialogue would be to correct misinformation that might exist, particularly on the costs of production in both (or all three) countries, and differences in policies and marketing systems that affect returns to producers. This question might need to be addressed through a joint fact finding effort, in which all participants define the question, what data are needed, and how to interpret the data. An investigation that is jointly devised and that has the respect of all parties may be instrumental in addressing the problem of misinformation that is widely recognized to form an important part of trade tension.

In-depth, face-to-face discussions may yield other benefits. For example, the ironic fact that if the defending industry is selling at less than the cost of production (as input and output prices across the border are highly correlated), it is likely that the complaining industry may also be engaging in the same practice to some degree. The ability of commodity groups to reach this level of honesty and to have it affect their negotiations will depend critically on the skill of the facilitator and the vision of the industry held by its representatives.

Some disputes have three characteristics that favor the use of mediation:

- the outcome of litigation is unknown which would appear to be the case as for administered protection cases. The statistics for U.S. AD and CV cases between 1980 and 1998[22] are:
  - Title VII cases—positive 35%, negative 39%, terminated 25%
  - AD cases—positive 42%, negative 36.5%, terminated 22%
  - CV cases—positive 23%, negative 45%, and terminated 32%.

These percentages are based on the number of cases, not the value of imports.

- the parties are interdependent. The degree of interdependence between parties will vary by industry. Some industries may place a high value on the maintenance of relationships across the border within the industry and the up- or down-stream segments of the industry, and between commodity groups and governments;

[22] U.S. International Trade Commission 1999.

- issues are clearly identifiable and there are multiple issues, allowing give and takeand trade-offs between parties.

Five factors impede the success of mediation as a tool for resolving disputes:

- parties do not have on-going relationships;
- one party has an easier way to meet its needs;
- parties are under outside pressure to fight;
- too much or not enough urgency; and
- mandated participation in mediation.

The purpose of facilitated dialogue is to assist the complainant in making a comprehensive evaluation of the consequences of pressing an AD or CV suit. If the complainants proceed to press the suit, the outcome may still include education for all parties on the other's interests, increased knowledge of the potential for collaboration, familiarity with other country's industry leaders, and a clearer picture of the likely consequences of pressing the suit. If the complainants decide after the facilitated dialogue not to press the suit, then all of the proceeding advantages apply, as well as a reduction in the incidence and costs of the trade remedies.

An important question is whether the facilitated dialogues should be mandatory or voluntary. Mediation is argued to have the highest chance of success when all parties enter the process voluntarily. However, there is ample precedence for mediation that is mandatory. In many situations when mediation is mandated and no agreement is reached, the case will proceed to litigation, or in this case, to administrative review. Given the history of AD and CV in the United States and the proclivity of parties to use it -- it is likely that the domestic industry may be reluctant to engage in this process on a voluntary basis.

CONCLUSIONS

Domestic industries have the opportunity to pursue administered protection within NAFTA, even though the reduction or the elimination of tariffs has largely eliminated the ability of firms to price discriminate be-

tween national markets. This means that the rational for dumping, widely considered theoretically weak to begin with, has become even weaker with the implementation of NAFTA.

An examination of the data on AD and CVD suits between NAFTA parties indicates lower tariffs have not resulted in an explosion of administered protection. In fact, during most of the 1984 to 2001 period, NAFTA members were subject to fewer investigations by their NAFTA partners than their import shares might suggest. Since the agreement, Mexico has increased the frequency of its suits, but the United States and Canada have not. The agreement appears to have moderated, overall, the incidence of trade remedy actions between countries. However, with 22 percent of cases initiated, agriculture is responsible for a substantially higher percentage of cases than its import share.

While it is true that the number of suits has not increased dramatically with the elimination of most tariffs, this conference and previous ones have discussed in detail the cost of AD and CV suits. Authors have been critical of the motivations prompting the suits, the criteria used to determine the outcomes, the trade-dampening effects of a suit in progress, and the economic inefficiency caused by the imposition of duties. In Canada duties are imposed in 70 percent of the investigations, and in over 50 percent of the cases in the United States and Mexico, These odds make it extremely difficult to find a constituency with the political will to change the system, despite the economic costs and the impact these suits have on the commercial and governmental relationships that are critical to achieving the goals of the FTA.

If a constituency exits that believes that the current system does not produce acceptable outcomes, then the next question is what goals should be pursued in the adoption of a new process for resolving AD and CV complaints? How important are possible goals of cost and incident reduction, transparency of resolution processes, and the promotion of commercial ties between NAFTA partners?

The options for the modification of administered protection processes are evaluated according to the criteria presented earlier (Table 10). Options 1–3 would reduce either the size of the duty or the likelihood of its imposition. Option 4, requiring consideration of the interests of the FTA, is difficult to evaluate because it is poorly defined in an operational sense, and the literature indicates that this clause has been ineffective in other venues. The removal of AD and CV suits meets all criteria with the possible exception of maintaining the ability to protect producers. The caveat is that safeguard provisions do offer some automatic protection to producers from import surges, but not specifically from dumping.

Requiring consultations, the use of good offices, and facilitated dialogue all may reduce the incidence of suits (and thus their overall cost) by terminating the suit before it progresses to administrative review. These options score poorly on transparency, as these processes are unlikely to be open to the public and by their nature are poorly suited to rigid guidelines. However, best practices and guidelines could be developed. These three processes are appropriate if an implicit goal is to strengthen relationships between industries. By doing so they assist in a paradigm shift to a trinational market, which in itself should reduce the incidence of AD and CV suits between NAFTA partners.

However, to the extent that AD and CV processes are used as an escape valve for the tensions inherent in economic integration, it is more appropriate to try to reduce the likelihood of conflict at an earlier stage. The NAFTA agreement did set up a number of working groups to address issues of economic integration, but much remains to be done. It would be useful to offer an array of ADR processes for industries to manage tensions and to work through issues that are unconnected to AD/CD processes. This array could include good offices, facilitated dialogue and mediation offered to industries through the NAFTA secretariat.

Political opposition has thwarted past attempts to eliminate AD and CV suits within the context of NAFTA. This paper has explored the frequency of suits within the agricultural sector and has offered some ideas

about how to reduce the cost of the current system by supplementing it with other options for resolving these disputes.

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APPENDIX

Table A1: Bilateral AD/CVD Actions Within NAFTA Against Food and Agricultural Exports, 1984-2001, follows on the next page.

Table A1: Bilateral AD/CVD Actions Within NAFTA Against Food and Agricultural Exports, 1984-2001.

Product	*Initiation*	*Final Determination*	*Final Duty*	*Dispute Resolution 1/*	*Current Status*
Canada's Investigations of U.S. Imports					
Fresh Tomatoes (AD)	11/9/2001				Investigation underway
Grain Corn (AD)	8/9/2000	3/7/2001			Finding of no injury
Grain Corn (CVD)	8/9/2000	3/7/2001			Finding of no injury
Baby Food Products (AD)	10/3/1997	4/29/1998	59.76%	NAFTA panel (1)	AD Measure in effect
Refined Sugar (AD)	3/17/1995	11/6/1995	43.86%	NAFTA panel (1)	AD Measure in effect
Refined Sugar (CVD)	3/17/1995	7/7/1995			Finding of no subsidy
Apples, Red Delicious (AD)	7/14/1994	2/9/1995	28.00%	NAFTA panel (1)*	Order revoked 02/08/00
Golden Delicious (AD)					Finding of no injury
Tomato Paste (AD)	9/1/1992	3/30/1993		CUSFTA panel (1)*	Finding of no injury
Cauliflower (AD)	6/30/1992	1/4/1993			Finding of no injury
Iceberg Lettuce (AD)	6/8/1992	11/30/1992	31.00%		Order revoked 04/22/02
Christmas Trees (AD)	11/15/1991	3/30/1992			Finding of no dumping
Malt Beverages - Beer (AD)	3/6/1991	10/2/1991	29.80%	CUSFTA & NAFTA panels (4)	Order revoked 12/2/94
Dry Dog Food (AD)	3/28/1990				Terminated 6/25/90
Apples (AD)	7/8/1988	2/3/1989	27.45%		Order revoked 02/07/94
Sour Cherries (AD)	6/21/1988	N/A	35.36%		Order revoked 01/29/94
Yellow Onions (AD)	10/14/1986	4/30/1987	42.58%		Order revoked 05/21/97
Grain Corn (CVD)	7/2/1986	3/6/1987	54.00%		Order revoked - 03/05/92
Potatoes - Non-russet Whole (AD)	10/18/1985	4/18/1986	32.40%		AD Measure in effect
Frozen Pot Pies & Dinners (AD)	4/24/1985	7/4/1988			Price undertaking; now expired
Sugar (AD)	10/24/1983	4/24/1984			Finding of no injury
Potatoes - Russet Whole (AD)	9/30/1983	6/4/1984	N/A		AD Measure in effect
Mexico's Investigations of U.S. Imports					
Long-grained Milled Rice (AD)	12/11/2000				Investigation underway
Bovine Meat (AD Circumvention)	9/29/2000				Investigation underway
Live Swine (AD)	10/21/1998	10/20/1999	$.351/kg (48.13%)		AD Measure in effect
Slaughter Cattle, Frsh & Frzn Beef (AD)	10/21/1998	4/8/2000	12-76%-214.52%	NAFTA panel (active)	AD Measure in effect
High Fructose Corn Syrup	1/23/1998	9/8/1998			
Grade 90 (AD Circumvention)			$55.37-$90.36/mt		AD Measure in effect
Apples, Red & Golden Delicious (AD)	3/6/1997	5/15/1998	$.72/kg		Price undertaking in effect
High Fructose Corn Syrup (AD)	2/27/1997	12/26/1997		NAFTA panel (active)	
Grade 42			$63.75-$100.60/mt		AD Measure in effect
Grade 55			$55.37-$175.50/mt		AD Measure in effect
Bovine Meat (AD)	6/3/1994				Petition withdrawn 04/25/96
Wheat (CVD)	4/4/1994	3/7/1996			Finding of no subsidy
Various Pork Products (AD)	1/25/1993	8/26/1994			Finding of no injury
U.S. Investigations of Canada's Imports					
Greenhouse Tomatoes (AD)	4/17/2001	4/10/2002			Finding of no injury
Live Cattle (AD)	12/30/1998	11/17/1999			Finding of no injury
Live Cattle (CVD)	12/30/1998	10/21/1999		NAFTA panel (2)*	Finding of no subsidy
Fresh Chilled & Frozen Pork (CVD)	2/3/1989	7/24/1989	N/A	CUSFTA panel (5)	Order revoked 06/27/91
Fresh Cut Flowers (AD)	6/17/1986	1/20/1987	N/A		Order revoked 06/18/93
Fresh Cut Flowers (CVD)	6/17/1986	1/20/1987	N/A		Order revoked 01/01/93
Red Raspberries (CVD)	8/12/1985	1/9/1986	N/A		Investigation suspended 01/09/86; Terminated 10/09/91
Live Swine & Frsh, Chll'd & Frzn Pork (CVD)	11/30/1984	6/17/1985		CUSFTA & NAFTA panels (6)	
Live Swine (other than slaughter animals)			$.02602/lb		Order revoked 11/04/99
Slaughter Sows & Boars			$.02602/lb		Order revoked 08/29/96
Dressed Wt. Swine			$.03272/lb		Order revoked 11/04/99
Frsh, Chll'd & Frzn Pork					Finding of no subsidy
Red Raspberries (AD)	7/30/1984	5/10/1985	0%-22.76%	CUSFTA panel (1)	Order revoked 02/26/99
Sugar & Syrup (AD)	4/30/1979	11/8/1979	$.010105-$.0237/lb		Order revoked 10/28/99
Instant Potato Granules (AD)	9/28/1971	6/7/1972	N/A		Order revoked 07/31/87
U.S. Investigations of Mexico's Imports					
Table Grapes (AD)	5/15/2001	6/15/2001			Finding of no injury
Live Cattle (AD)	12/30/1998	1/19/1999			Finding of no injury
Tomatoes (AD)	4/25/1996	11/1/1996			Price undertaking in effect
From 10/23 to 06/30			$.2108/lb		
From 07/01 to 10/22			$.172/lb		
Fresh Cut Flowers (AD)	6/17/1986	3/3/1987	0%-29.4%	NAFTA panel (1)	Order revoked 10/15/96
Fresh Cut Flowers (CVD)	10/26/1983	4/16/1984			Finding of no subsidy

1/ Number of panel cases in parentheses.

* Terminated, no decision issued

Source: Cases - U.S.: International Trade Administration Database (http://ia.ita.doc.gov/); Canada: Special Import Measures Act Database (http://www.ccra-adrc.gc.ca/customs/business/sima/historic-e.html); Mexico: *The Year in Trade* (ITC publication), various years; Also, WTO - Members' semi-annual reports to the Committees on Antidumping Practices and Subsidies and Countervailing Measures (http://www.wto.org/english/tratop_e/tratop_e.htm)

Section 4

Four Commodity Studies in Trade Remedy Laws

The objective of this section is discuss legal, administrative, and economic aspects of trade remedy law application in tomatoes, corn, sugar and sweeteners and wheat.

ANTI-DUMPING IN AGRICULTURE BETWEEN CANADA AND THE UNITED STATES: TWO CASES OF TOMATOES

Richard Barichello

INTRODUCTION

During 2001, two anti-dumping cases were brought forward on tomatoes in the North American fresh tomato trade. On March 28, 2001, U.S. greenhouse tomato growers filed an anti-dumping petition with the United States International Trade Commission (USITC) and the United State Department of Commerce (DOC). Three months later, Canadian greenhouse growers announced they would file an anti-dumping complaint against U.S. fresh tomato imports, and that complaint was formally filed with the Canada Customs and Revenue Agency (CCRA) on September 28, 2001. In both cases, preliminary findings of dumping and injury were upheld, and formal inquiries are taking place at this time. The U.S. case has just had (February 19, 2002) its final determination of dumping, including the margin of dumping, and is in the final phase of determination of injury to U.S. producers. The Canadian case is also in its final phases, both in term of the margin of dumping and injury.

So we have here an unusual situation in which two similar commodities are facing anti-dumping proceedings between two countries where the charges are being leveled by both countries against the industry in the

other. Even though one case is focused on a subset of fresh tomatoes, namely greenhouse tomatoes, and the other is on fresh tomatoes more generally, it may strike one as odd that there can be dumping going on in both countries simultaneously, from Canada into the United States for greenhouse tomatoes, and from the United States into Canada for fresh tomatoes. After all, dumping is supposed to be a kind of predatory behavior of a firm that has market power across borders and is harming the other firms in the importing country's domestic industry in order to drive them out of business.

This adds an element of curiosity to what otherwise seems to be just another pair of cases in a long list of such anti-dumping cases that seem to crop up regularly in the post-Uruguay Round period. It is the purpose of this paper to give an overview of what is happening in each of these two cases, and to examine them more closely to see if there are any lessons of broader interest. One question that occurs is whether these anti-dumping cases are in some way legitimate or, as some have argued, just a different but now common expression of protectionist actions. Another question is whether anti-dumping actions make any sense within the agricultural sector where significant market power at the commodity level is not prevalent, and whether or not current regulations should be applied at all to cases within the agricultural sector. We will try and shed some light on each of these questions.

LEGAL BACKGROUND FOR ANTI-DUMPING CASES

Drawing on the 1994 updating of Article VI of the GATT, "dumping" is defined as a situation "by which products of one country are introduced into the commerce of another country at less than the normal value of the products." This kind of action "is to be condemned if it causes or threatens material injury or materially retards the establishment of a domestic industry" (GATT, 1994). The article goes on to define what is importing at less than normal value, that to offset or prevent dumping an anti-dumping duty may be levied at a level of less than or equal to the "margin of dumping" (defined as the difference between the exported and normal value of the product as described above), and that in order to impose any

anti-dumping duty it must be determined that "the effect of the dumping … is such as to cause or threaten material injury to an established domestic industry or is such as to retard materially the establishment of a domestic industry."

Importing at less than its normal value arises under three alternative situations. These are defined as being "if the price of the product exported from one country to another:

- is less than the comparable price, in the ordinary course of trade, for the like product when destined for consumption in the exporting country, or,
- in the absence of such domestic price, is less than either
  - the highest comparable price of the like product for export to any third country in the ordinary course of trade, or
  - the cost of production of the product in the country of origin plus a reasonable addition for selling costs and profit." (GATT, 1994).

Of these three situations, one commonly observes within agriculture-related anti-dumping cases that it is the last of the three (whether the import price is less than the cost of production of that product) that is used to indicate whether dumping is occurring.

Little guidance on what exactly constitutes material injury is given in Article VI, but in the Uruguay Round Agreement, there is a special "Agreement on Implementation of Article VI of the GATT 1994" which among other things spells out in Article 3 in more detail the procedures by which injury occurs. This quite lengthy article emphasizes the importance of the volume of imports, price undercutting, price depression, and the importance of separating the price effects of imports compared to other economic factors that may be relevant in price determination. In other words, some emphasis is given to showing convincingly, not just alleging, a causal relationship between increased imports and the resulting price declines that injure domestic firms.

These are the legal guidelines given to countries that investigate anti-dumping complaints that are lodged, each with its own operating procedures. Following these guidelines, the investigations have two components: proving first that dumping has occurred, and then that this dumping has provoked injury.

THE U.S. CASE AGAINST GREENHOUSE TOMATOES FROM CANADA

There were six main issues in the U.S. case:

- how to define the product and industry under consideration (what is "like product"?);
- what is the export price;
- what is normal value;
- what is the exporter's cost of production;
- what is the margin of dumping; and
- does the import of Canadian greenhouse tomatoes inflict injury on the U.S. industry?

The product definition is important in order to know the "comparison" between industry and market, and most importantly to ascertain whether or not there is injury to the U.S. domestic industry. The next three issues, export price, normal value, and cost of production, are needed, according to the legislation and regulations that are applicable, to determine if dumping is occurring and, if so, by how much (the margin of dumping). Finally, all of this is only relevant if there is judged to be injury to the U.S. domestic growers. That means determining that dumping is occurring, and that injury is involved, are the two necessary conditions required in order for an anti-dumping duty to be charged.

Like Product

The main issue here was whether the investigation should be limited to greenhouse tomatoes or should include all fresh tomatoes including field tomatoes. In this case, the Department of Commerce ruled that the investigation would focus on greenhouse tomatoes, and that they are a distinct domestic product. They arrived at this conclusion by examining

evidence on the production processes involved, costs, pricing and marketing, plus physical characteristics like skin thickness, water content, colour, texture and taste. Noticeably absent from this list, from an economist's perspective, is some indication about consumer demand and substitution relationships between fresh field and greenhouse tomatoes, in particular what kind of price elasticities of demand are likely in these two products.

Why are these considerations important? The investigating authorities needed to obtain pricing and cost information, not to mention import volume data, so it was necessary to be sure about the commodity that is being examined. However, it is even more important in the injury investigation to specify if attention should be given to all fresh tomatoes or only the subset that is greenhouse tomatoes. In that investigation, one is really interested in the own- and cross-price elasticities of demand, in order to see to what extent a specified increase in sales of imported greenhouse tomatoes would lower the price of greenhouse tomatoes. If the definition is a broad one and fresh field tomatoes substituted reasonably with greenhouse tomatoes, an increased volume of imported greenhouse tomatoes would have little effect on the greenhouse industry price (given the substantial dominance of field tomatoes in total consumption), hence there would be little injury to domestic greenhouse growers arising from the imports. Conversely, the volume of imports could have enough of an effect on the domestic greenhouse tomato price that increased imports would injure domestic greenhouse tomato growers.

Export Price

The next major issue is the export price. The objective is to ascertain the price at which the offending imports were sold into the trade in the United States. These data were obtained initially by the petitioners of the case from USDA terminal market prices, adjusted by transportation and customs duties, inland freight within the United States, and standard commissions to arrive at the ex-factory prices. Subsequently, data were obtained directly from the exporting firms alleged to be dumping by the Department of Commerce officials who were undertaking the dumping investigation. The procedure is the same: observe the U.S. selling price, then subtract the various charges and costs to arrive at the ex-factory price

(fob price) in Canada. Furthermore, because there were several product categories of greenhouse tomatoes (e.g., common round tomatoes (beefsteak), cherry tomatoes, plum or pear tomatoes and cluster or "on-the-vine" tomatoes, these calculations were done for each of the categories. In this case, twenty HS numbers (tariff lines) were involved.

Normal Value

"Normal value" is the price in the exporter's domestic market at which the product in question is sold in the course of normal trade, assuming sales into the Canadian domestic market are sufficient to allow calculation of a normal value, which was the case. To determine this normal value, standard published data from Agriculture and Agri-Food Canada were the starting point, followed by the more detailed preliminary and final determinations where actual selling prices are obtained from the exporters involved in the case. However, the petitioners or complainants in this case (the U.S. greenhouse industry firms filing the complaint) had reason to believe that the within-Canada sales of greenhouse tomatoes were made at prices that were below the cost of production of those tomatoes. Therefore they requested that the Department of Commerce conduct a "sales-below-cost" investigation. This is a fairly standard procedure, the reason for which is to see if a significant share of the sales in the domestic market is being made at prices below the cost of production. If so, then the previously constructed "normal value" is of no use since it would lead to comparing the export price in the U.S. against an artificially low domestic price in Canada.

In this situation, any sales within Canada at prices below cost were not included in the calculation of the Normal Value. This is the situation that the complainants believed was the case in their request for the sales-below-cost investigation which requires a cost of production calculation to be done.

Cost of Production Analysis

The Department of Commerce undertook such an analysis, country-wide, which follows legislative guidelines laid out for such calculations. Costs of production include cost of materials and fabrication, sell-

ing, general, administrative, interest and packing expenses. Capital costs are included and an amount for profit is added. These costs were obtained from the exporting companies concerned, with numerous interactions between the companies and the DOC investigators in the preparation of the final determination. For each Canadian greenhouse tomato exporting firm a cost for each type of tomato was arrived at by determining a weighted average of all contributing farms.

Anti-Dumping Margin Calculations

The final step in determining dumping, and a dumping margin, is to compare the constructed export prices with normal values, adjusted using the cost of production data by deleting any domestic sales made at prices below cost, as noted above. This was done for each greenhouse exporter, using a weighted average across all tomato products being exported. There was a Preliminary Determination of these margins on October 2, 2001, where the margins ranged from 0.00% to 50.75%. The Final Determination on February 19, 2002 confirmed that dumping was occurring, but the rates ranged by exporter from less than 2% (de minimis margins, which are treated as if they were zero) to 18 percent, with an average of 16 percent. These final determination rates were imposed on all greenhouse tomatoes with exporter-specific rates. They were, however, subject to the final determination of injury by the ITC to be completed by April, 2002.

Injury Determination

This part of the process is undertaken by the International Trade Commission, which completed its preliminary determination in May 2001. Its final determination is yet to be completed, as noted above, so all our information is drawn from the preliminary report. The first element of the injury examination is the subject of like product. The issues involved here are raised in the section above on like product. In the preliminary determination, the conclusion was that greenhouse tomatoes alone were the like product, but the conclusion was mixed, that there are some differences and that this question must be re-examined in the final phase of the investigation. In particular it was acknowledged that the two tomato types are substitutes in demand in a variety of situations. Given the much larger

field tomato market, if the two products are relatively close substitutes, the greenhouse tomato price would be largely determined by the field tomato price. In that case the impact of import volumes of greenhouse tomatoes would have much more modest effects on tomato prices, and comparably modest levels of injury that could arise.

In determining injury, the Commission concluded that "there is reasonable indication that the domestic greenhouse tomato industry is materially injured by reason of subject imports from Canada." However, the evidence given was sufficiently mixed that it acknowledged this would have to be examined in more detail in the final determination. Some of the evidence brought forward is the following. The market for greenhouse tomatoes have grown steadily since 1998, while the demand for field tomatoes has remained stable at a higher level of consumption. The production of U.S. greenhouse tomatoes has also expanded over this period at the same rate as consumption has expanded. Therefore the market share of U.S. production has remained constant. The volume of Canadian (subject) imports has grown quickly, more rapidly than the market has grown. Their market share has grown from 34 percent to 44 percent. What makes this all add up is that non-Canadian greenhouse tomato imports have declined equivalently. So Canadian export growth in this market has been at the expense of Mexican and European exports.

Price Effects

As is appropriate, considerable attention was paid to the price formation process in greenhouse tomatoes. At the outset, it was noted that the domestic industry is highly concentrated, but that with the product being perishable and with no inventories, the ability of individual market participants to affect market-wide prices is constrained. This position is confirmed by the fact that most of these tomatoes are sold on the spot market or under one-week contracts. Of particular relevance to this inquiry, is the question of whether Canadian imports depressed the price in this market or have they prevented prices from increasing. Price patterns on individual sales show a mixed pattern of underselling and overselling, but increasingly they undersold domestic product in the last year, 2000, in 61 percent of the cases to retailers which is the dominant channel of sales.

Looking at average unit values of prices to domestic producers, they fell from 1998 to 1999 but then rose from 1999 to 2000. The Commission noted that the supply and price of field tomatoes appeared to influence prices of greenhouse tomatoes, and the seasonal pattern conformed to field tomato seasonality which predates greenhouse tomato production. Finally, it was observed that 2000 prices, although higher than 1999, were lower than in 1998, and this was more so for those tomato product types where the Canadian product was more common. The Commission found that, for the purposes of its preliminary determination, there was "sufficient information to conclude that the subject imports had significant price depressing and price suppressing effects on prices of the domestic like product" (i.e., greenhouse tomatoes). It also acknowledged that in the final investigation, it would explore further the effects of Canadian imports as well as field tomatoes and non-subject imports on prices of greenhouse tomatoes.

In its summary of injury assessment, the Commission noted that production was growing, net sales were increasing, and hours worked by and wages paid to production and related workers were also increasing. But by many financial indicators, the U.S. domestic greenhouse industry was in some difficulty. Profit margins were flat or declining over the three years. Therefore, the Commission concluded that due to the price depressing effects of the Canadian imports and the industry's poor financial condition, there was a reasonable indication that the U.S. industry was materially injured by reason of these imports.

THE CANADIAN CASE AGAINST FRESH TOMATOES FROM THE UNITED STATES

On September 28, 2001, a group of greenhouse tomato growers in Canada (Canadian Tomato Trade Alliance, or CTTA) filed a complaint alleging dumping by U.S. fresh tomato growers. On November 9, 2001, the Canadian Customs Revenue Agency (CCRA) initiated a dumping investigation into this case and filed a Statement of Reasons to outline the initial analysis. At the completion of that investigation it was to issue a preliminary determination of dumping that is expected at the end of March 2002.

At the same time the Canadian International Trade Tribunal was conducting a preliminary inquiry to determine if there were a reasonable indication that the dumping had caused or threatened to cause injury to the Canadian industry. If these investigations found dumping and injury, a provisional duty could be applied equal to the estimated margin of dumping. Final determinations regarding dumping and injury, or termination of the investigation if dumping were not found, follow within three to four months of the preliminary findings.

Like Goods

Under Canadian anti-dumping legislation, like goods have "the same physical characteristics (same genus and species), are substitutes, follow the same distribution network and fulfill the same customer needs. On this basis, fresh tomatoes produced by the Canadian industry, largely greenhouse tomatoes, were found to be "like the subject goods (U.S. fresh tomatoes, almost always field tomatoes). However, fresh tomatoes for the fresh market were distinguished as being different from fresh tomatoes used for processing. It should be noted that in the Canadian case, the determination of like goods or like product is different than in the U.S. case against Canadian greenhouse tomatoes, despite using similar criteria as to what constitutes like goods.

Export Price

The export price in Canada is considered to be "generally the lesser of the importer's purchase price or the exporter's selling price to Canada, less all costs, charges and expenses resulting from the exportation of the goods." The CTTA estimated these prices in its complaint, drawing on terminal market prices published by Agriculture Canada. These were compared to actual declared selling prices on customs documentation by the CCRA and it was found that the CTTA prices if anything were higher. This would make dumping less likely (i.e., a more conservative estimate), so the CTTA prices were accepted by the CCRA as reasonable.

Normal Value: Domestic Price

Much as in the U.S. anti-dumping legislation and procedures described above, Canadian anti-dumping procedures base "normal values"

on the domestic selling price of goods in the country of export, or on the total unit cost of the goods plus an amount for profit. In this case, the CTTA chose not to use U.S. domestic selling prices for estimating normal value because the CTTA alleged that there are substantial quantities of tomatoes sold domestically at prices below production costs in the U.S. This is not unusual in sales of agricultural products in both Canada and the U.S., and the CTTA were able to find newspaper articles to support their claim that U.S. field tomatoes were being sold below cost for the majority of the year.

Normal Value: Cost of Production

When normal values are derived from costs of production, those costs are defined to include the costs of producing the goods, plus a reasonable amount for administrative, selling, all other costs (presumably including capital costs), and profit. Because there are two main field tomato producing areas of the United States, (California and Florida account for more than seventy percent of U.S. field tomatoes), the CTTA produced two sets of production costs, one for each region. For California, a University of California study of tomato costs was used as the base for cash costs, and a consultant developed a cost model that added non-cash overhead costs that included capital costs. In addition, local distribution and freight were added, as were an administrative, marketing and selling cost component. For Florida, a University of Florida (Food and Resource Economics Department) study was used as the base, adjusted to include local distribution, freight, administrative, marketing, and selling costs. No component for profit was added. These estimates, done for 1998 and 1999 respectively, were brought up to the year 2000 by indexing them by the U.S. Farm Input Price Index. The CCRA verified the cost estimates with the I.T.C. and the California Tomato Commission and found the CTTA estimates to be "in line" with other data. Given the conservative nature of these cost estimates (ignoring profit), the CCRA accepted the CTTA's estimated normal values.

Margin of Dumping

On the basis of these CTTA data comparing normal values with export prices and accepted by the CCRA, the CCRA concluded that there

was reasonable evidence that dumping of field tomatoes did occur in the period under consideration, Oct. 1, 2000 to Sept. 30, 2001. Further, the estimated dumping margins ranged from 14 percent to 76 percent as a percentage of normal value.

Injury

The issue of injury was first addressed by the complainants (CTTA) who argued that incomes had been reduced resulting from price suppression by U.S. imports. What makes this occur so clearly was that they claimed that Canadian greenhouse grower are price takers, that their price is primarily determined by the Canadian selling price of tomatoes from the United States. They estimated the loss of revenue due to this dumping at $20 million annually. They argued that the lowered prices, in addition to reducing incomes, have reduced incentives to expand and upgrade operations and this raises the risk of lowered capital investment, employment and market share. The argument that Canadian tomato growers are basically price takers, is in contrast to the arguments made by U.S. complainants in the U.S. anti-dumping case described above.

The issue of injury was taken up further by the Canadian International Trade Tribunal (CITT) which issued its preliminary determination of injury on January 8, 2002. As in the U.S. case, the issues of "like goods" and "domestic industry" were the first that were addressed. The criteria are similar to those used by the USITC, except that demand side factors including substitutability and pricing appear to get (appropriately) more attention. With briefs submitted from both sides, the Canadian greenhouse growers and the U.S. field tomato growers, the CITT concluded that the similarities between greenhouse tomatoes outweighed the differences. Therefore, the "subject goods" were judged to be one class of goods, fresh tomatoes, and that domestically grown tomatoes for fresh consumption are "like goods" to the subject goods, imported fresh tomatoes. On the "domestic industry" question, greenhouse growers were judged to represent a major proportion (over 85 percent) of domestic fresh market tomato production.

On the question of injury, the Tribunal examined the evidence submitted by the CTTA, which cited persistent dumping of U.S. tomatoes that has depressed Canadian greenhouse tomato prices. This argument was supported by many letters from greenhouse tomato producers. The Tribunal did not collect independent data on these matters, but found from the evidence presented that there is a reasonable indication that the domestic industry has been injured by dumping of the subject goods.

THE ECONOMICS OF ANTI-DUMPING IN TOMATOES

There is a long history in the literature of economics of dissatisfaction with anti-dumping measures and procedures. It has long been argued, going back at least to Viner (1923), that anti-dumping provisions only serve protectionists, particularly the interests of firms desiring protection against normal and fair competition from foreign firms. Much of what is argued to be dumping is garden-variety price discrimination, which is neither illegal in domestic commerce nor rare.

Another argument is that if dumping occurs, it benefits consumers by offering them a cheaper source of the commodity in question. Measures that prevent consumers from obtaining a cheaper source would typically not be in a country's overall interest, unless of course it would represent only temporary gains, followed by higher prices, as would occur from predatory pricing.

The only substantial concern that anti-dumping measures address is this exercise of market power by a firm wishing to injure its competitor sufficiently by undercutting its prices, and driving the competitor out of business, then later raising prices. This is the practice known as predatory pricing. In this context, anti-dumping measures might be considered as an international application of anti-trust or competition policy. If this aspect of anti-dumping were given importance, there would be within the regulations some effort to address the extent of market power of the dumping firm, yet such provisions are not in place. There have been attempts to modify anti-dumping procedures so they would more closely mimic anti-trust or competition policies (Krishna, undated). However, efforts such as

these to limit the applicability of anti-dumping measures have usually run into strong political opposition from firms that see anti-dumping measures as helpful sources of protection when any industry is under some competitive stress.

In fact, many would argue that the abuse of anti-dumping measures by firms and industries seeking another means of achieving protective duties against imports is one of the major weaknesses in the existing trade rules. Consequently, it is on the agenda of the current Doha Round of WTO negotiations to find ways to reform the existing Article and the national regulations that fall under the original GATT Article VI (1994) and the WTO Agreement on Implementation of GATT Article VI.

However, I wish to focus more on the economics of the agriculture industry in general and the tomato industry in particular, and the validity of these anti-dumping actions from an economic perspective. I wish to argue that proving dumping and injury is particularly easy in the agricultural sector due to some of its inherent economic characteristics, when combined with the kind of anti-dumping procedures we see so clearly applied in both tomato cases. We will consider first determination of dumping and the normal value calculation, with reference to domestic prices and costs of production. Then we will turn to injury determination, where the comments will focus on the evidence needed for injury.

On domestic prices and normal value, all it takes for a dumping margin to be determined is for there to be some price discrimination between the domestic market and the export market. Especially for smaller countries selling into larger ones, it is not unusual to find there is more competition in export markets than in the domestic market. Either for reasons of active price discrimination or for a firm that is a price taker in export markets but with an element of market power at home, any profit-maximizing firm will price higher domestically than in the more competitive, more elastic demand, export market. By itself, this will meet the test of dumping. As there is more product differentiation as one can expect with increased consumer interest in identity preservation, the ability of firms to choose their prices will be enhanced and the situation described

above will be more common. It is already common in horticultural products.

On cost of production and normal value, the situation is even more pre-disposed to meet the test of dumping. In virtually all agricultural commodities, especially in the horticulture sector, the trend in real producer prices is downward. What is going on is no mystery to economists in the agriculture sector, of course; there is a long history of improvements in technology and increased productivity in producing the farm commodity. This means two things. First, it means that firms which are slow in adopting the improved methods are going to face cost-price squeezes and some will be driven, by poor financial performance, out of the industry. These situations will bias upward the likelihood of disclosing losses in the industry. Second, with the necessary lags in getting cost data up-to-date, yet the more immediate evidence on prices, there will be a stronger likelihood of finding costs exceeding revenues, even for the firms that are keeping up-to-date in their technology. Third, in a slight variation on this last point, farmers will be making decisions on which market to serve and at what prices based on marginal costs, yet the calculated cost of production data is explicitly average cost in nature.

In addition, there are cycles in agricultural commodity prices that frequently extend beyond the two or three years used in anti-dumping analyses, and in the lower parts of the cycle, it is a foregone conclusion that farm prices will be below costs of production.

As a consequence of a variety of reasons, it is not surprising to find in the production of an agricultural commodity that export prices may be below costs of production. What makes the results on anti-dumping investigations even more meaningless in terms of the economics of the industry is that firms can be found to be "selling at a loss" in both their export markets and their domestic markets. What kind of economic sense does this make? Obviously the time period is too short to give a long run picture, or the cost data are inappropriate.

For similar reasons, these characteristics of the agriculture sector make it pre-disposed to a finding of injury. First, on like-product questions, what is really important is the price determination process of the domestic product in the allegedly injured industry. What effect in the medium to longer term on the price of that product is likely to arise from an increase in the "dumped" imports? This requires attention to demand side characteristics and the substitutability of the import and the domestic product in the consumption decisions of the consumers. Supply side characteristics are secondary.

In terms of injury to the industry, let us look at the greenhouse tomato industry from an aggregate perspective. Here is a market where demand is growing at 13 percent per year. Production within the United States is growing at about the same annual rate, 12.3 percent, and capacity is growing at about the same rate, 12.6 percent. This means that the U.S. market share is being maintained, despite growing Canadian imports. However, industry volume growth rates of 12 percent per year is unusually rapid growth in any context, and investment in the industry is growing equivalently. This does not suggest injury. The same kind of data emerged in the Canadian case against US imports.

On the pricing side in this market there are several salient characteristics. First, with the institutional arrangements for pricing and the industry structure, this market does not look like one with any significant market power being exerted. This is especially true when you look at the strong influence of fresh field tomatoes on the greenhouse price. So there is no evidence of any predatory pricing or the structural elements that would generate it.

Second, Canadian product in the greenhouse tomato market accounts for one-third of all greenhouse tomatoes, which by itself would give a modest degree of market power. However, in the context of substitution with fresh tomatoes, Canadian imports account for only about 5 percent of the market. The ability to affect prices under these conditions is very small indeed.

Third, real prices in this market are falling, just as is the case in virtually all farm commodities. Taking USDA annual prices for fresh tomatoes from 1989 to 2000 for the country as a whole, deflating them by the Consumer Price Index, and regressing the real price series against a time variable, the trend rate of decline is –3.3 percent. This is a relatively rapid rate of decline in real prices, although not unusual for the horticultural industry. These data serve to underline all that was said above about the impact of declining real prices. Injury as defined for dumping investigations will be relatively easy to show under such conditions.

From this quick review of the apparent economics of the U.S. tomato industry, it does not appear that the industry is being injured in aggregate, and it certainly does not look like any financial distress that may exist with some firms is due to Canadian imports.

Once the preliminary determinations are available for the Canadian case, it is highly likely that the same observations can be made. There is a healthy U.S. tomato industry that is growing and exporting field tomatoes, albeit with more competition from the greenhouse tomato sector (Cook, 2002). But there is substantial technical change occurring with relatively rapid declines in real prices, and it is likely this situation will lead Canadian investigators, following their own legal procedures, to find that dumping is also occurring. These investigations may also find injury, but again, the injury is not due to an economic definition of dumping. Any injury being imposed on Canadian tomato growers will be due to the normal market forces of improving technology and declining real prices, conditions faced by all participants in all segments of the fresh tomato market.

CONCLUSIONS

Anti-dumping regulations and actions are one of the most controversial elements of current trade policy. The economic arguments against dumping have been going on for the best part of this century and these tomato cases illustrate the weak economic foundations of those regulations once again. Moreover, the rationale for these trade applications are even weaker in the agricultural sector than for cases in manufacturing.

Both of the tomato dumping cases we have reviewed followed established legal structure and procedures. However, due to the combination of the dumping tests and procedures, and certain characteristics of the agricultural sector, in both the U.S. and Canadian cases, the decisions had a high probability of resulting in dumping decisions and duties. The conditions within the agriculture sector that pre-dispose it to dumping decisions are a combination of price cycles and negative real price trends, plus the more general phenomenon of price discrimination that is not unique to agriculture.

Neither of these cases represents behavior that an economist would call dumping. There is no monopoly power involved in one or a small number of firms and no evidence of predatory pricing. In both cases, the exporting firms alleged to be causing the dumping are selling the same commodity in their own markets and were found to be selling below cost in those markets. How can it be that a large number of firms in both countries, with apparently plenty of competition and market growth for their product, are hurting themselves by selling below cost in both markets? There is no economic logic to such behavior. Selling below cost is sometimes unavoidable when a firm is a price taker and in a period of low prices. It is not a choice for such firms and it is not dumping by any reasonable definition of the term.

What makes the current dumping regulations laughable is that the facts of both the cases are indistinguishable from normal competition in international markets where there are some firms that may have acquired some competitive advantage or increased efficiency, for example from improved technology or favourable exchange rate movements, and who are acting to exploit those advantages in competitive markets. There is no injury occurring due to exports from the other country. The only injury some of these firms are experiencing is due to declining real prices that are putting pressures on the finances of these firms, a situation we find in most parts of agriculture. However, the end result of these anti-dumping provisions, that are so well illustrated by these two cases that are not unique to one country or another, is the considerably increased likelihood of extra

duties being imposed, a retreat from freer trade, and a reversion to more protection in the agricultural sector.

POSTSCRIPT

In April 2002, the U.S. International Trade Commission completed its Final Investigation of the case on Greenhouse Tomatoes from Canada. Although the U.S. Department of Commerce had earlier established that greenhouse tomatoes had been dumped into the U.S. market (sold at less than fair value), the ITC determined that "an industry in the United States is not materially injured or threatened with material injury by reason of imports of greenhouse tomatoes from Canada" (USITC, p. 1). This decision was not unanimous; one commissioner held a dissenting view.

A critical part of this decision was the determination of domestic like-product and industry. In this case the Commission found "that differences between greenhouse and field tomatoes generally represent variations in the quality of the tomato rather than distinctions that represent clear dividing lines." (USITC, p. 4). This judgment follows three previous USITC tomato cases where no distinction was made across all forms and varieties of fresh tomatoes. Furthermore, this conclusion was shown to be consistent with end uses of the tomato as well as physical characteristics, distribution channels, and consumer perceptions. The Commission also determined that there is a single domestic industry that includes all fresh tomatoes, and that it includes all producers of fresh tomatoes. The dissenting view drew the opposite conclusion on what was "like-product."

On the issue of injury, the Commission stated that the facts are consistent with the characterization that tomato growers are "price-takers" (p. 18). The volume of Canadian greenhouse tomato imports were judged to be not significant absolutely or relatively, with reference to the U.S. market. Over the period of growth in Canadian greenhouse tomato exports in the latter 1990s, the share of the U.S. market accounted by U.S. tomato production generally grew. Prices tended to be driven by the volume of all fresh tomatoes, not by Canadian greenhouse tomatoes. Indeed, the Canadian product tended to sell at prices above the U.S. competition.

When looking at only U.S. greenhouse tomato growers, any financial difficulties were due to short term (one to two year) industry price movements, not the impact of Canadian imports. Finally, there was judged to be no threat of material injury in the future due to Canadian greenhouse tomato imports.

In the Canadian case on the dumping of U.S. fresh tomato imports into Canada, the result was very similar. Although there was a determination by the CCRA on dumping (selling below fair value) in March 2002, the Canadian International Trade Tribunal concluded, like the U.S. ITC, that "the dumping of the aforementioned goods has not caused material injury or retardation and is not threatening to cause material injury to the domestic industry" (CITT, p. 1).

A unique aspect to this finding is that the Canadian tomato industry complainants (the CTTA) decided just prior to the public hearing in June, 2002, that it did not wish to advance its case at this hearing and requested that the CITT terminate proceedings on the dumping investigation. The Tribunal did cancel the hearing but completed the investigation on the basis of previously available written evidence.

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Discussion

NAFTA TOMATO DUMPING CASES

Linda Calvin

INTRODUCTION

NAFTA tomato conflicts have a long history. Currently all three NAFTA countries are involved in tomato dumping cases or in a review of the suspension agreement. Only Mexico has not instigated tomato dumping cases against its NAFTA partners. To put the current U.S./Canadian tomato dumping cases in perspective, I will first discuss the U.S./Mexican tomato dumping case. Then I will turn to the U.S./Canadian tomato cases and speak about market conditions that could explain selling below total production costs. I will conclude with an analysis of the impact of the United States dumping case on Canada.[1]

BACKGROUND ON THE U.S./MEXICAN TOMATO DUMPING CASES

With low tariffs, the U.S. tomato industry has used trade remedy laws to seek protection for their industry. The pre-NAFTA tariff rates for tomatoes were specific duties that had eroded in value over time as the general price level for tomatoes increased. In 1993, the weighted average ad valorem equivalent tariff for Mexican tomatoes was 4.0 percent during the winter season and 5.3 percent during the rest of the year (U.S. Department of Agriculture, 2000).

The traditional North American tomato conflict has been between Florida and Mexico, where producers compete in the field-grown tomato market during the winter season. In 1970 and 1973, Florida growers tried unsuccessfully to use marketing orders to impose additional barriers to

[1] This paper was presented on March 8, 2002. Footnotes update developments to May 31, 2002.

Mexican imports (Bredahl, Schmitz, and Hillman 1987). In 1978, Florida producers tried to use dumping legislation against Mexico, but in 1980 the U.S. Department of Commerce (DOC) found that Mexican producers were not dumping winter vegetables. Failed efforts to obtain temporary import relief under Section 201 of the *Trade Act* of 1974 (safeguard law) followed in 1995 and early 1996.

A second dumping case was initiated in 1996 and Commerce made a preliminary determination of dumping. On October 28, 1996, Commerce announced a suspension agreement with principal Mexican producers/exporters to settle the dispute and on November 1, 1996, DOC suspended the anti-dumping investigation. Signers of the suspension agreement agreed to honor a minimum U.S. import price of $5.17 per 25-pound box of tomatoes from Mexico. As long as the suspension agreement is in effect, the dumping investigation remains suspended. The suspension agreement covers all fresh tomatoes from Mexico except for greenhouse cocktail tomatoes sold on the vine.

Initially Florida also set a minimum price of $5 per 25-pound box through their marketing cooperative, the Florida Tomato Growers Exchange, but that pricing strategy was abandoned after the 1999/2000 season in favor of a voluntary minimum pricing strategy. In 1998, the minimum suspension price regime was altered to provide one minimum price during the winter Florida/Sinaloa season of $5.27 per 25-pound box and another during the summer California/Baja California season of $4.30 per 25-pound box. In 1997 and 1998 the California Tomato Growers Exchange set a domestic floor price but abandoned that strategy in 1999. (However since 2001, California has had a minimum export price plan in effect.) Currently this suspension agreement is undergoing a statutory five-year review.[2]

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[2] On May 31, 2002, DOC received notification from a group of Mexican producers/exporters that they intended to withdraw from the suspension agreement. The agreement is not valid unless producers/exporters representing at least 85 percent of the traded volume participate and the withdrawal will bring the share of participants below this level. The effective date of withdrawal is July 20, 2002 at which time the original dumping case will resume.

DOC has the authority to negotiate suspension agreements but rarely uses this option. U.S. antitrust laws prohibit competitors from restraining trade but an exception is made when a group petitions the government for proper relief under trade statutes (*Florida Journal of International Law*, 1997). Still, use of the suspension agreement is approached with care because of possible antitrust law implications. Suspension agreements have been used only for a handful of agricultural cases. Currently the only agricultural suspension agreement in effect is the U.S./Mexican tomato agreement.

U.S./CANADIAN GREENHOUSE TOMATO DUMPING CASES

The 2001 tomato dumping cases involved a new product—greenhouse tomatoes—and additional grower groups. In March 2001, the U.S. greenhouse industry brought a dumping case against Canadian greenhouse growers. Canada is the largest NAFTA producer of greenhouse tomatoes and a small producer of field-grown tomatoes for the fresh market. Canadian greenhouse tomatoes exported to the United States are in the market at the same time as U.S. greenhouse tomatoes and both Florida and California field tomatoes (Cook, 2002).

One of the key issues in the case is the definition of the relevant industry, specifically whether greenhouse and field-grown tomatoes are "like" products. The U.S. greenhouse producers argued that greenhouse and field-grown tomatoes are not "like" products; the Canadians argued that they are. The definition of the industry is important for determining injury. In the preliminary injury finding, the U.S. International Trade Commission (ITC) stated that the relevant industry was just greenhouse tomatoes but that it intended to re-examine this issue in any final phase of the investigation because the evidence was mixed (U.S. International Trade Commission, 2001). After DOC issued preliminary dumping margins,

Canada proposed a suspension agreement but it was not accepted.[3] Currently, both sides are waiting for the final ITC ruling expected in April 2002.[4]

In November 2001, Canadian growers brought a dumping case against the United States for tomato exports of any type for the fresh market, not just greenhouse tomatoes as in the U.S. case.[5] Canada imports mostly field-grown tomatoes although some greenhouse tomatoes are imported to augment the low Canadian winter supply. The Canadian case also covers any tomatoes originating in or exported from the United States (Canada Customs and Revenue Agency, 2001).

This case affects Mexican tomatoes. During the winter season, almost all Mexican field tomatoes for export are grown in Culiacan, Sinaloa, and then sent by truck to Nogales, AZ, where the tomatoes are marketed to both the United States and Canada. Many of the marketing firms in Nogales are owned by large Mexican growers; in 1997, 63 percent of the volume of tomatoes imported through Nogales was sold by Nogales-based Mexican grower-owned marketing firms (Calvin and Barrios, 1998).

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[3] In April, an attorney for the Canadian side was quoted as saying there was "not enough middle ground for a deal" (*The Packer*, 2002f). There was some speculation that the Ontario industry thought it would have low margins compared to British Columbia and might try to obtain segregated treatment (*The Packer,* 2002a). Ontario growers filed an appeal to NAFTA to obtain a separate dumping margin from BC Hot House Foods (*The Packer*, 2002e). This competition between Ontario and British Columbia might account for the lack of a middle ground.

[4] On April 12, 2002 the ITC ruled that Canadian greenhouse exports had not caused damage to the U.S. industry and dismissed the U.S. case against Canada (U.S. International Trade Commission 2002). The ITC determined that greenhouse and field-grown tomatoes were "like" products.

[5] On March 25, 2002 the Canada Customs and Revenue Agency issued its preliminary determination on dumping margins which ranged from 0 to 71 percent (Canada Customs and Revenue Agency, 2002). The U.S. side offered an undertaking proposal (the Canadian term for a suspension agreement) on April 15, 2002, but this proposal was rejected in early May.

Table 1: U.S. and Canadian Greenhouse Tomato Production, 1998-2000.

Year	*Canada*	*United States**
	—metric tons—	
1998	115,970	106,594
1999	158,042	129,727
2000	182,736	123,831

*Estimates

Source: Statistics Canada and U.S. International Trade Commission

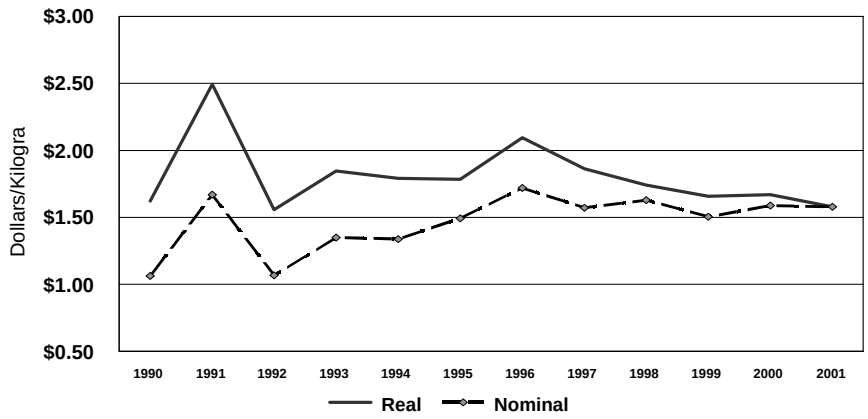
Canada has stated that tomatoes shipped in bond from Mexico to Canada will not be included in any dumping margins (*The Packer*, 2002b). Very few tomatoes are now shipped in bond, perhaps less than 10 percent. Shipping tomatoes from Mexico to Canada in bond would incur additional costs and reduce marketing options in Nogales. Currently, tomatoes arrive in Nogales, and shippers then select tomatoes to prepare orders for buyers. To meet buyer specifications, a shipper might use tomatoes from several truckloads to fill the order. If some incoming truckloads were off-limits because they were in bond shipments to Canada, shippers would have less marketing flexibility. Shippers might, however, be able to make adjustments to the way they prepare their loads to reduce this problem.

NAFTA GREENHOUSE TOMATO INDUSTRY

Greenhouse tomato production has increased in all three NAFTA countries. Canada is the only country that routinely provides public greenhouse production statistics so exact numbers on total NAFTA supply are not available. Between 1998 and 2000, Canadian production of greenhouse tomatoes increased 58 percent (Table 1). The only published information on U.S. production is based on ITC surveys for 1998–2000. Total U.S. production is estimated to have increased 16 percent over this period, although production from the largest firms increased 27 percent (U.S. International Trade Commission, 2001). Mexican production has also increased but by an unknown amount.

As production increased, prices fell. The U.S. Department of Agriculture provides no shipping point prices for greenhouse tomatoes so trade statistics are used to analyze price trends. Figure 1 shows the annual

Figure 1: Average Unit Value for U.S. Imports of Canadian Tomatoes, 1990-2001.



Source: U.S. Department of Commerce; Economic Research Service

unit value of U.S. tomato imports from Canada from 1990 to 2001. The nominal price declined 8 percent from 1996 to 2001 (falling from $1.72 per kilo to $1.58); however, the price increased from the low of $1.50 in 1999. Deflating the price series by the fresh vegetable consumer price index shows that the real price per pound declined 25 percent from 1996 to 2001 (from $2.09 per kilo to $1.58).

The large greenhouse operations represent a considerable fixed investment, mostly made before the recent declines in price. The three largest U.S. firms have over 100 acres of greenhouses each.[6] Canadian firms tend to be smaller. In 2001, all Canadian greenhouse growers had fewer than 100 acres each (Agriculture and Agri-Food Canada, 2001a). Many growers in all three NAFTA countries are struggling financially with large loans to repay. Two of the big three U.S. greenhouse firms declared bankruptcy in 2000 and 2001. One firm was purchased by another operation. The other entered Chapter 11 bankruptcy proceedings and is still in operation (U.S. International Trade Commission, 2001).

[6] ITC reports that the cost of constructing a new greenhouse is $500,000 per acre (U.S. International Trade Commission, 2002).

Because of the high fixed costs, growers are unlikely to reduce quantity temporarily when prices are low. In a downturn, growers still need to maintain their markets and labor force. The three largest U.S. greenhouse producers grow only tomatoes so shifting to other greenhouse crops is probably not a short-run option. Growers can, of course, adjust some inputs to reduce costs.

The industry has had to face rapid growth in supply, falling prices, and a high-fixed-cost technology adopted when prices were higher. Firms could face market prices below their cost of production. In the short run, the competitive solution is to sell if the market price is greater than the variable costs of harvest and marketing. This behavior is clearly not sustainable over the long run. But even in profitable years firms are most likely to sell below cost of production occasionally since perishable commodity prices are so variable. Greenhouse tomato prices also follow a strong seasonal price pattern with higher prices in the winter and lower prices during the summer.

COSTS TO THE CANADIAN INDUSTRY OF THE U.S. DUMPING CASE

Whether or not the United States wins the dumping case, Canada has already incurred high costs. There are two big greenhouse tomato-growing areas in Canada—Ontario with 72 percent of total Canadian tomato greenhouse production in 2000 and British Columbia with 21 percent (Agriculture and Agri-Food Canada, 2001b). Ontario has spent C$3 million on legal fees defending itself against U.S. dumping charges and the case is not over yet (*The Packer*, 2002c). The value of the Canadian greenhouse tomato industry in 2000 was C$288 million. Assuming that the British Columbia industry spent an equal amount, costs so far are a little over two percent of the total value of the crop.

DOC announced preliminary dumping margins on October 2, 2001 and began collecting duties from Canadian growers. Table 2 shows the preliminary, the revised preliminary, and the final U.S. dumping margins against Canada. After issuing preliminary margins, DOC continued to fine-

Table 2: U.S. Dumping Margins for Canadian Greenhouse Tomatoes.

Firm	*Preliminary margins*	*Revised preliminary margins*	*Final margins*
		—percent—	
BC Hot House	50.75	33.95	18.21
Red Zoo	23.17	23.17	1.86
Mastronardi	5.54	5.54	14.89
Veg Gro	2.45	2.45	3.85
J-D Marketing	0	0	1.53
All others	32.36	24.04	16.22

Source: U.S. Department of Commerce

tune their calculations. It is not unusual for margins to change during the course of an investigation. In the preliminary announcement, BC Hot House Foods (BCHH) and Red Zoo received margins of 50.75 percent and 23.17 percent, respectively. The revised preliminary margins, announced on October 19, 2001 lowered BCHH's margin to 33.95 percent. The high margins produced an uncertain environment for Canadian greenhouse growers who plant in December to begin harvesting in March. Commerce released the final dumping margins on February 19, 2002. Three of the Canadian companies had very small margins and two had significantly higher margins—BCHH and Mastronardi (Red Zoo's margin had decreased to 1.86 percent).[7]

Under the shadow of a dumping case, the rapid growth of Canadian greenhouse production has reportedly come to a halt, at least until the case is resolved. Producers have also reacted to rising costs (particularly higher fuel costs) and lower prices (U.S. Department of Agriculture, 2002). However, much of the change in the last few years has occurred in British Columbia. BCHH appears to have struggled to market its rapidly increas-

[7] On March 28, 2002 DOC issued an amended final determination of dumping duties (*The Packer*, 2002d). The duty for Mastronardi declined from 14.89 percent to 0.52 percent. Other changes were very small: BCHH declined from 18.21 percent to 18.04 percent, Red Zoo declined from 1.86 percent to 1.85 percent, and J-D Marketing declined from 1.53 percent to 0.83 percent. The duty for Veg Gro did not change. The "all other" duty increased from 16.22 percent to 16.53 percent since *de minimis* duties are not included in the calculation for this category.

ing supply of tomatoes. British Columbia's tomato greenhouse area increased 147 percent in three years (1997–2000) while the total Canadian area increased only 75 percent. British Columbia is much more dependent on exports than the rest of the Canadian industry. In 1999, 82 percent of British Columbia's greenhouse tomato production was exported, compared with 46 percent from Ontario. Until 2002, BCHH was the mandated marketer for almost all production in British Columbia. In January of this year, the British Columbia Vegetable Marketing Commission (BCVMC) allowed four growers, representing a substantial portion of tomato production, to start another marketing company, Global Greenhouse Produce. This action appears to be in response to low returns from BCHH to growers in recent years. The BCVMC, which controls production through area quotas, did not allow any tomato expansion in 2001 and 2002 and it did not allow growers to switch from tomatoes to other greenhouse crops.

CONCLUSIONS

Dumping investigations may pick up other events that do not necessarily imply dumping from an economist's perspective (Barichello, 2003). Selling below cost of production, particularly for a perishable commodity, can simply represent rational profit-maximizing behavior during a short-run downturn in the market (Regmi, 2000). The greenhouse tomato industry is facing growing pains. A stable and profitable economy for this sector requires a steady increase in consumer demand for greenhouse tomatoes consistent with the growth in production.

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MANITOBA CORN GROWERS ASSOCIATION INC. vs U.S. CORN EXPORTS (An Application of Regional Market Rules under Canadian Trade Remedy Law)

R.M.A. Loyns[1]

INTRODUCTION

Prairie corn production is, by almost all standards, a small crop. Manitoba production represents most of the corn produced on the Canadian Prairies so its production is also small. But it is not a "small" crop for the three or four hundred producers who grow it, and it is a relatively high input and risky crop. These growers, like most other Canadian crop producers, are aware of the high level of public support available to crop producers across the border in the United States. They are also aware that their ability to obtain favourable returns from the marketplace is reduced by that public support. Along with a fledgling soybean effort in a few areas, U.S. production and imports dominate the corn market more than any other commodity on the Canadian Prairies. As a consequence, this small group of Manitoba corn producers attempted to seek relief from the unbalanced trading environment by an application to Canadian trade remedy law as expressed in the *Special Imports Measures Act*. In August 2000,

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[1] The author researched and wrote this paper and is responsible alone for contents and accuracy of the paper. I am indebted to several colleagues for helpful review comments at various stages of writing, and for suggestions from both U.S. and Canadian officials with expertise on their respective trade laws.

the Manitoba Corn Growers Association (MCGA) filed anti-dumping and countervailing duty actions against imports of grain corn from the United States. Because of the geographic area covered by the action, this case was subject to regional, as opposed to the more frequently used national, rules of inquiry, findings and injury.

In its preliminary investigation reported in October 2000, Canada Customs and Revenue Agency (CCRA) upheld the claims of dumping and subsidization and proceeded to determining the initial assessment of injury. On November 7, 2000, large dumping and countervailing duties were applied which effectively cut off all corn imports from the United States into the Prairies. This development caused major disruptions in the livestock/feed sectors of southern Manitoba, and many groups became involved in lobbying the investigation process to have the duties removed. There was very little visible intervention in this process from the United States. On March 7, 2001, the Canadian International Trade Tribunal (CITT) reported a finding of *non-injury "to all or almost all producers" in the prairie region* and, according to the rules, terminated the action and the duties. This finding occurred in the presence of a large, combined dumping and subsidization margin, despite the finding of significant price reductions for many producers, and despite evidence of a direct and close relationship between U.S. corn prices and prairie corn prices. The finding of no-injury was entirely the result of the "regional rules" under which the case was administered.

This purpose of this paper is to describe the nature and the process of this regional application of Canadian trade remedy law. Background information is intentionally limited because ordinary market relationships had little to do with the outcome of the case. For this workshop, what is important is the action that was filed, the findings and reasons given by Canadian regulators, and an economic assessment of those factors in relation to two factors:

- the contribution of this trade remedy action to removing policy and trade stress; and
- how these factors relate to the use of NAFTA as a vehicle for promoting free trade and harmonious trade relations.

Table 1: Canadian Grain Production, by Region

Production	*1990/1991*	*1999/2000*	*2000/2001**
Total E. Canada	271 million bu.	350 million bu.	257 million bu.
Manitoba	6.5	9.4	10.4
Total W. Canada	7.1	10.2	11.5
United States	> 30 x Canada	> 30 x Canada	> 30 x Canada

Note: * indicates estimates.
Sources: CITT Research Branch Paper dated 1.2.01 and Canada Grains Council, *Statistical Handbook 2001*.

Contrary to comments made by the discussant from the National Corn Growers Association (discussion following), the author of this paper is much more interested in implications of this case for dispute resolution and trade harmony within NAFTA than in the actual outcome. This objective fits the intent of presenting four case studies at the workshop.

THE PRAIRIE CORN MARKET

Grain corn production on the Canadian Prairies is a relatively new crop and it is highly concentrated in southern Manitoba. Its history really began in the late 1970s when lower degree-day varieties became available, weather conditions seemed more favourable, and producers were shopping for alternatives to congested conventional crop markets. Acreage reached 225,000 acres in 1981 but high interest rates, weather problems and production limitations reduced acreage to early 1970 levels in the 1980s. Production increased again after 1996 when there were 45,000 acres in Manitoba and by 2000 there were 110,000 acres. Production in 2000 and 2001 was about 10 million bushels. By contrast, Quebec and Ontario produce up to 350 million bushels which represents 96 percent of Canadian production. Barley, historically the main feed grain, is grown on over 1 million acres in Manitoba and around 10 million acres on the Prairies. (Table 1 and Appendix Table A.1).

The major use of grain corn on the Prairies, both domestic and imported, is livestock feed. A small amount is used in distilling, ethanol production and other minor uses. As a result, grain corn competes with

domestically produced wheat and barley, and it co-exists with soybean and canola meal as protein sources, in feed mixes. The livestock feed market in Manitoba has been growing very rapidly since the mid-1990s because of the growth of livestock feeding in the area, mainly hogs. For example, from 1994 to 2000 hog slaughter in Manitoba doubled and when weanling and finished pig exports are included, the data indicate that total Manitoba hog production has almost tripled in ten years.

This livestock/feed expansion occurred during a period when two major events influencing the feed grain market unfolded. The first is deregulation. In 1995 the Government of Canada removed a long-standing U.S. irritant in the grain industry by terminating almost all of the freight subsidy programs that existed for grains exported from the Prairies. The impact was to significantly lower grain prices within the Prairies and to increase the motivation to feed livestock. In Manitoba, prices were influenced the most and incentives were strongest to diversify to hogs. But higher transportation costs also caused crop producers to grow higher valued crops (canola, peas, beans, lentils, soybeans, forage seed, corn and potatoes) with the result that wheat production is falling and barley production is not increasing despite increased demand for feed.

The second major event is the incidence of fusarium head blight (FHB). In most of southern Manitoba, FHB has progressed to the point where it is severely limiting the ability to produce wheat and barley, effectively cutting off local supplies of hog-quality feed wheat and barley. Corn, despite its other production risks in northern conditions, is the only feed grain that has reasonable FHB resistance in the infected area. The alternatives are to import barley and wheat from non-infected areas to the west and north, or to import U.S. corn. Both of these feed sources have increased in Manitoba over the past five years.

When these factors are combined, they mean that the intensive livestock area of Manitoba has become an import-based market for feed grain that meets the quality requirements of hog feed. The import basis, by itself, provides a transportation advantage to local producers who have hog-quality feed stocks; corn producers and a few “lucky” wheat and bar-

Table 2: Manitoba Hog and Weanling Exports (million live hogs)

Category	*1994*	*1995*	*1998*	*1999*	*2000*	*to Nov. 2001*
< 50 kg	0.26 m	0.41 m	0.85 m	1.35 m	1.44 m	1.56 m
> 50 kg	0.17 m	0.32 m	0.81 m	0.93 m	0.90 m	0.81 m

Source: Janet Honey, Policy and Program Branch, Manitoba Agriculture.

ley producers are the only ones in the area who can supply that quality. Corn (and soybean) imports from the United States, as well as the subsidy impacts of U.S. programs on wheat and barley in international markets, reduce overall price levels, limit profitability of crop production and, along with FHB, reduce the incentive to produce corn and all feed grains in the area.

On top of this, the United States has feed prices which are held down by crop subsidies. The impact of these factors has been to switch the competitive advantage in livestock feeding from the prairies and the Manitoba corn area, to the producers south of the border. In market terminology, there has been a "basis switch" between southern Manitoba and the northern states sometime after 1996. What began as an advantage to the eastern prairies in feeding livestock (when the transportation subsidies were removed) has shifted south as U.S. crop subsidization has increased. This proposition is confirmed by feed mill buyers and by the fact that Manitoba exports of weanling pigs has increased from 260,000 in 1994 to over 1.5 million in 2001 (Table 2).[2] This situation has evolved despite the significant fall in on-farm prices resulting from termination of the export freight subsidies on the Prairies.

Imports of U.S. corn into western Canada have exceeded production in the area every year since 1990-'91 except 1991-'92, sometimes by a factor of two or three (Table 3). Over the period 1990–2000, at least half of the imports were into Manitoba. Imports from the United States into eastern Canada (distributed between Ontario and Quebec) are about double those into western Canada, but they represent a much smaller proportion of production (on average about 10 percent).

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[2] Data released by Manitoba Agriculture since this paper was presented indicate that weanling exports in 2002 will show a further increase.

Table 3: Canadian Grain Corn Imports (Million Bushels) from the United States, by Region.

Volume	***1990-91***	***1994-95***	***1995-96***	***1996-97***	***1998-99***	***1999-2000***
E. Canada	6.7	31.8	21.7	20.7	20.6	25.0
W. Canada	8.5	9.9	9.3	9.7	13.1	13.6
Manitoba	1.2	6.9	5.8	4.7	8.3	9.4

Source: CITT Research Publication dated 1.02.01.

One other market characteristic that is relevant is the relationship between U.S. and Manitoba corn prices. There are no barriers to importing U.S. corn, there is a virtual infinite supply of corn (relative to demand) within easy trucking distance, and there is a constant supply of grain trucks prepared to load soybean meal and corn at "backhaul rates" from anywhere along the route between Minneapolis and Winnipeg. Usually, not much more organization is required to get immediate delivery of U.S. corn than having the right cell phone numbers. *If one ignores the existence of significant direct public support to U.S. corn growers*, this highly integrated, well-arbitraged little market could be said to perform very well in economic terms.

Casual analysis and an unpublished AAFC paper conducted for the CITT indicate that Manitoba cash corn prices track very closely those in Minneapolis, both in level and in direction of change. Unusually large supplies of feed quality barley and wheat on the eastern prairies may drive a wedge between Minneapolis and Manitoba corn prices because these markets do not arbitrage as closely as corn, but generally there is a close relationship in corn prices. Domestic feed wheat, barley and corn prices on the eastern prairies cannot move much above corn equivalent prices without attracting more U.S. corn imports.

This brief description of the prairie corn market illustrates the market environment into which the MCGA imposed their anti-dumping and countervail action in August 2000. This action ultimately led to imports being terminated on November 7, 2000 by the imposition of duties. Clearly Manitoba corn growers are small players in the overall feed and livestock market and they are directly impacted by market conditions in the United States. However, their market situation, and the conditions that brought

about their trade action, are symbolic of a much larger element of Canadian agriculture. Corn imports into Ontario and Quebec certainly impact on prices there. Indeed, in the final determination by CITT, it was reported that subsidization margins were the same across Canada on imported corn.

Further, according to evidence and comments provided by Mexican participants throughout our workshops, it is probable that the Manitoba corn situation is also representative of the situation facing many Mexican farmers. Consequently, this trade action and its outcome have economic significance far beyond MCGA and the prairie corn market. There are direct and immediate economic effects of subsidization in open markets like this one whether the program is "domestic" as claimed by the U.S. Corn Growers Association, or targeted in some other manner.

THE ACTION AND PRELIMINARY FINDINGS

Canada Customs and Revenue Agency (CCRA) has the responsibility under the *Special Imports Measures Act* of conducting the preliminary investigation of unfair trading complaints and of making preliminary findings related to the imposition of duties. CITT is responsible for the final determination of amount of duties and determination of any "material injury" to domestic producers. The CCRA investigation, other than geographic scope, was not altered by the fact that this trade remedy law action was "regional." The significance of regional rules is apparent in the second level of investigation, conducted by CITT, when injury determination is made. At that point, the "all or almost all" (producers) rule applies which severely tightens the evidence on injury, making injury determination much less likely than in an national action. CITT required that more than 90 percent of producers had to be materially injured to meet the regional test. This section provides an overview of how these steps unfolded in the Manitoba corn case.

The MCGA filed an action in August 2000, alleging injurious dumping and subsidization on grain corn exported by the United States for use in the geographic area west of the Manitoba/Ontario border. There were minor exclusions for corn used as seed and for consumer products manu-

facture but these exclusions are not important in either volume or impact on the case. On November 7, 2000 CCRA announced the results of its preliminary investigation and imposed anti-dumping and countervailing duties on U.S. grain corn imported to the Prairies.

The Preliminary Dumping Investigation

According to the rules, *grain corn is dumped when it is sold to importers in Canada at prices which are lower than prices in the United States* ***or*** *when it is sold into Canada at unprofitable prices.* The latter application of this rule is the so-called "normal value rule." In economic terms these two versions are very different in substance and in testing. The agricultural economic literature is full of theoretical and empirical evidence that there is no compelling "normalcy" to the notion that prices should be above "cost of production" (COP) in any particular, short time period. Nor is there a single "cost of production" for a large or even small group of farmers. Instead there is an array of costs just as there is an array of market prices at any point in time. Cost of production is an inappropriate measure in agricultural dumping because farmers usually have little or no market power. However, these are the rules and it is the "normal value " version of the rule that was applied in the corn case.[3]

The investigation determined that over the previous two years, 45 percent of the corn imports came from Minnesota, 34 percent came from North Dakota and 10 percent from South Dakota. For determination of normal value, USDA ERS data on COP were used, indicating that in 1998 the "normal value" was US$2.60/bu., and US$2.78/bu. in 1999.[4] CCRA claimed that in aggregate, grain corn had not generated commercial profit in those states in four years. According to their definition, they reported that nearly all corn had been dumped over the period of investigation. The

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[3] Throughout our workshops, participants have been critical of the use of cost of production as "normal value." In this case, corn prices were readily available on both sides of the border, they could have been used, and likely they would have changed the dumping finding. But regulators appear to avoid this approach. This example is one among many of how arbitrary administrative rules might swing results.

[4] At existing exchange rates and all other things held constant, these estimates imply that the corn would be valued at about C$4.30 in southern Manitoba.

average dumping margin was determined to be 36 percent which was equal to US$1.01/bu. on the "normal" price of US$2.80/bu.

This stage of the investigation also found that the U.S. LDP and MAL programs, Marketing Loss Assistance Payments, and federal Crop Insurance programs constituted subsidization. The estimates were *US$0.32/bu. in 1998 and US$0.57/bu. in 1999 which represented 33 percent of the weighted average export price*. Applying the countervailing duty rules, this magnitude of subsidization was found to be "significant." CCRA announced these findings on November 7, 2000 and anti-dumping duties and countervailing duties were applied to all corn imported to the Prairies equivalent to ***US$1.58/bu.*** Duties of this magnitude effectively shut down imports of U.S. corn to the Prairies.

On February 5, 2001 the CCRA announced the results of their final investigation, concluding that subsidy and dumping of U.S. corn "**was not insignificant**" . . . **but slightly reduced the combined margin of US$1.30/bu.** composed of US$0.63/bu. for subsidization and US$0.67 for dumping. As a consequence of this finding, CITT initiated the next stage of the inquiry under the regional case rules into injury or potential injury to "all or almost all" producers on the Prairies.

FINAL DISPOSITION

The 2001 Annual Report (March 2001) of CITT summarizes the major findings and the final decision and disposition of the Manitoba corn case. CITT noted that the injury standard for a regional market is very stringent. The evidence must demonstrate that the imported product injured producers of "all or almost all" grain corn in western Canada. The following excerpts are provided almost verbatim but are presented in relation to the purpose of the paper. Comments follow each excerpt to reflect the role of this paper in the workshop.

CITT found that ***dumped and subsidized corn imports from the United States had caused prices of corn sold in western Canada to de-***

cline, causing financial injury to many domestic (corn) producers. This conclusion in a final report of a trade law administrative agency is somewhat unusual; in national cases it is common at this stage to determine that there was no injury caused to domestic producers, or that the degree of injury was not significant (*de minimus*). When significant injury is found, as this statement indicates, then the conclusion is to ensconce the duties. But this was a regional case and the rules require much more than this level of evidence. Following are the arguments related to determining what proportion of producers were injured.

CITT also reported that there was a certain proportion of commercial production that had not been "materially" injured. The rational for this conclusion was that "*some producers were able to achieve better than average prices for their corn despite the presence of dumped and subsidized imports from the United States.*" Analytically, this statement is tautological and trivial, unless CITT assumes there should have been one price for corn over the relevant period. That proposition would be taking the notion of the Law of One Price to the extreme. Clearly in any distribution of market prices, some prices are above and some must be below an (arbitrarily determined) mean. This wording also suggests that a market organization in which producers were paid a flat price (as in a pooled price) would help ensure a finding of injury.

> "*In addition, certain major corn users pay a higher-than-average price for domestic corn because it has qualities or characteristics that may be required in processing.*"

As in any agricultural market, all product is not perfectly substitutable; some product may have added value for some purposes, other product, less. But the real question is: higher than what "average price?" Clearly according to CITT's own findings, the answer is "an average price that has been reduced by the claimed subsidized and dumped imports." Alternatively, this statement demonstrates the total irrelevance of market characteristics in the administrative process that is applied in assessing injury.

> "*It was apparent that some producers were able to achieve reasonable rates of return, even in the 1999/2000 crop year when U.S. import prices were at their lowest levels*."

To an economist, this statement reads much more like a value-loaded assessment than an evidentiary statement. In addition, simple logic says that if subsidized and dumped imports had not depressed prices, these particular producers would have had a **higher** rate of return. That conclusion would be consistent with evidence of economic injury. The dichotomy between the conclusions of CITT (and trade remedy law in general) and the way economists analyze market results comes about largely because injury in these cases is not determined in relation to the economic losses/ costs created by the imports. **The criterion employed in these cases is an administrative concept—"*material injury*"—which means reducing returns below administratively defined costs of production.** This definition is extremely restrictive and its application to the broader issue of free trade and gains from trade creates problems. It is also one of the fundamental complaints by economists about the application of trade remedy law and it is particularly troublesome when applied to agricultural markets.

CITT identified another category of corn growers that was not affected by subsidized and dumped imports in the same way as producers that operate in the commercial market. . . . *Diversified farmers who have livestock operations and who also grow their own corn for feed . . are able to achieve "certain synergies between their animal and grain operations." The evidence showed that these producers have costs of production that are much lower than the industry average.*

Livestock manure is used as fertilizer, usually on all crops. Notice how the argument has shifted to cost of production from corn prices. Even though the dispute is about corn prices, livestock accounts became relevant to the analysis, meaning that the enterprise mix of farmers in Manitoba is part of the assessment of impacts of U.S. crop subsidization. If the livestock aspects of enterprise mix is important, in economic terms, other feed grains should be as well.

> "*On-farm users are also effectively insulated from most market price fluctuations*."

Although some of these TRL cases consider price variability contributions of imports, the author saw no reference in the documents about that being a criterion in this case. Fluctuations in prices are not levels of prices. Moreover, this CITT argument applies only if corn has no opportunity value which is certainly not the case for Manitoba corn—corn in southern Manitoba very decidedly has a market price and the price is readily available. In fact, CITT used time series data on Manitoba prices in its analysis. The impact of dumped and subsidized corn imports on **all** livestock producers in the area was not considered. Only if CITT had recommended the continuation of the duties and had initiated a third stage of the investigation to explore the "public interest" aspects of the duties, would the interests of all livestock feeders have been considered.

> "*Finally, corn grown for on-farm feed use was a significant and increasing part of the western Canadian corn growing industry, comprising as much as 30 percent of total production according to some estimates*."

The implication of this statement, reinforced by feed manufacturers in hearings and the U.S. Corn Producers in discussion comments on this paper, is that *injured corn producers would not increase acreage*. There are several reasons for expansion in corn acreage, not the least of which are the removal of freight subsidies and the increasing impossibility in Manitoba to produce economically wheat or barley for feed because of the increase in (FHB) disease. Corn growers, like any other prairie farmers, do not make their production decisions in isolation of other production possibilities. Their production decisions are made in the face of many factors. In this region those factors include rotational considerations, growing marketable feed, and an assessment of relative (not absolute) profitability of corn, cereals and oilseeds. All of these options, including corn, are influenced by field crop production in the United States because U.S. production has a direct impact on Canadian prices.

These arguments by CITT in support of their conclusions manifest a remarkable absence of basic economic principles (opportunity cost and value, arbitrage, relative profitability) and of market realities (array of market prices, array of production costs). This conclusion arises as a result of the application of administrative rules for determining material injury. The rules are applied in absolute terms and they are administrative estimates of conditions which may or may not exist. In addition, the application of regional rules are, as indicated, firm/enterprise specific, not product specific.

This latter observation has very important implications. If, for example, two separate regional corn cases were brought in Canada, one in a strictly mixed farming area (say Quebec) and one in a strictly corn monoculture area (irrigated southern Alberta), the same subsidization and dumping margins could produce injury (and permanent duties) in one region (Alberta), and nothing in the other region (Quebec). This polar- extreme finding would turn strictly on the organization of farms (enterprise mix). Such a conclusion flies in the face of simple economics and it would be contrary to positive, economics-based public policy. On a final point, the rules as they were applied in this case might also have been used on the interrelationship between corn and other feed grains as there are likely potential and real "synergies in corn/barley/wheat production combinations," especially under the disease conditions of crop production in Manitoba. If this relationship had been examined, it would have produced the opposite conclusion to livestock because depressed corn prices mean all feed grains in the area are depressed. The arbitrary inclusion of farm fed corn makes no economic sense.

CITT's main conclusion on injury was as follows:

> **"Thus, while many domestic producers who sold their corn on the commercial market had been [materially] injured by the subject imports, when the non-injured production represented by on-farm use was combined with the portion of commercial sales that had achieved reasonable returns, there was little doubt that the *'all or almost all' injury threshold had not been met in this case*."**

The duties were removed, effective March 7, 2001 and imported corn began to flow again.

CITT CONCLUSIONS AND SOME OBSERVATIONS

The inquiries by CCRA and CITT, the dual trade remedy agencies in Canada, concluded that subsidized and dumped U.S. imports reduce corn prices on the Prairies. This conclusion was not a major revelation to market observers because U.S. subsidies are reducing all crop prices on the Canadian Prairies. What may have been a revelation was the magnitude of the subsidization and dumping margins. The combined margin was originally determined to be US$1.58/bu. in the preliminary investigation, then revised to US$1.30/bu. These are large margins, both in absolute and relative terms. The trading price on corn in southern Manitoba in late 2000 was around C$2.80/bu. or about US$1.80/bu. These duties cut off the supply of U.S. corn for feed.

Putting aside for the moment the issue of accuracy of the margin estimates, in economic terms, the price effect of U.S. imports on the corn market in the Prairies is the critical issue, given that those imports reflect a heavily subsidized production system. Casual analysis of adjustment in futures and cash prices when the duties were imposed in November 2000 and their subsequent levels suggest an upward movement of $10–20/tonne on local corn, feed wheat and barley.[5] Certainly the impact extended beyond Manitoba. If the dumping margin had been determined by direct use of reference prices and found to be small or zero, the subsidization impact would still have been significant in economic terms.

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[5] To put these numbers in perspective, an average C$15/tonne for barley, wheat and corn represents between 30 and 40 cents per bushel. That further represents between $20/acre to $35/acre for producers in southern Manitoba at conservative yields, with corn being the larger amount because of its absolute yield advantage. Most producers in the area would be satisfied to receive a costless increase in net return, and even half the official margins over total costs would be extremely positive in terms of farm health. In economic equilibrium with free trade and no U.S. subsidization, these amounts should be larger because U.S. corn prices would be higher. Of course, this would create the undesirable spin-off of rising land prices on the Canadian Prairies!

Imposition of duties and cutting off imported corn threw the feed market in the intensive livestock area of Manitoba into major confusion and uncertainty. Hedges on corn were immediately rendered useless; forward buying of feed became uncertain; feed costs rose unpredictably; and the market area for feed was extended further westward contributing to higher freight costs on feed grain. These outcomes are not trivial and it is not at all surprising that there were strong opponents in the livestock and feed sectors to the duties. In November and December 2000, holding a long cash corn position in Manitoba was a decided asset for livestock feeders, a feedlot or feed mill operator, or grain dealers. However, a long cash corn position for members of the MCGA produced some symptoms not unlike being declared infected with a serious communicable disease.[6]

Table 4 summarizes some of the impacts of these trade actions and the distribution of costs and benefits of the actions. The categories of costs and benefits are defined in relation to economic considerations and in terms of criteria deduced from objectives of free trade agreements. Without conducting quantitative analysis, it appears that these actions produced a negative sum game outcome.[7]

In the author's view, the Manitoba corn case has the markings of a seminal case in the application of trade remedy actions as a solution to agricultural trade disputes for two reasons:

- The estimate of the combined subsidization and dumping effects was incredibly large, representing about 90 percent of the trading price in the affected area. The estimate was conducted in accordance with usual administrative rules, and was not seriously challenged in terms of accuracy.[8] A subsidization/ dumping valu-

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[6] These impacts of the imposition of duties reinforce the comments made by two bankers at the workshop indicating they are reluctant to lend to firms subject to trade actions.

[7] Loyns, Young, and Carter (2001) reported the same result in the 1998 R-CALF case.

[8] At a similar conference to this one in Chicago in August 2001, Carole Goodloe criticized the administrative approach to determining dumping margins in the Manitoba corn case. Her comments were directed at the process of determining dumping margin, not its application in this particular case. That is the perspective that is intended in this paper as well.

Table 4: Descriptive Summary of Costs and Benefits of the MCGA Action on U.S. Exports.

Factor		*Bearer*	*Prairie Region*	*United States*
COSTS:	***Process***	Producer Association	√√	very small
		Government	some federal	small
		TRL Agencies	√	some
	Corn Acquisition	Dealers	√√√	0
		Livestock Feeders	√√√	0
	Trade Relations	Corn Producers	damaged	?
		Federal Governments	improved	improved
		Provincial/State Governments	0	0
BENEFITS:	***Corn Price***	Corn Producers	√√ short term	almost 0
	Feed Wheat/Barley Price	Wheat/Barley Producers	√√ short term	0
	Reduce subsitization		n.a.	no
	Reduce dumping		n.a.	no
	Remove irritant		no	n.a.
Create Freer Trade Environment			no	no
Improve Economic Efficiency			no	no
BALANCE SHEET			**NEGATIVE**	**NO CHANGE**

ation of the magnitude determined is very unusual in NAFTA agricultural cases.

- The finding of no-injury and termination of the countervailing and dumping duties turned on ”regional” (as opposed to “national” case) rules. CITT described the rules as being very “stringent” which is an accurate description. Those rules require that “all or almost all” of grain corn producers in western Canada were injured.

Apparently a 90 percent rule was applied. The corn growers case missed that threshold by a small amount, according to the methods used to calculate injured producers. This finding of no injury has a very significant implication—it seems that an already extremely high estimated margin could have been double, triple or even more, and the same lack of injury would be determined. In situations where a region has some production, it is contrary to economic logic that injury is not related to the magnitude of subsidization and dumping. In fact, a reasonable economic hypothesis would be that injury is directly related to the level of the margin through price and the level of market integration. These particular markets are highly integrated because there are no trade barriers beyond the differential subsidization levels.

The injury arguments posed for the finding of less than “all or almost all” production were wrong in several economic and market analysis terms. They ignore opportunity cost/value, arbitrage, relative profitability and enterprise accounting principles; they lead to the absurd implication that if all corn produced in western Canada were fed on-farm there would be no subsidy or dumping impact, and no cause for action. Size of subsidy or dumping margins would not alter that absurd conclusion. In other words, the supply curve for corn in Manitoba is deemed to be perfectly inelastic, another absurdity.

In relation to Canadian farm and food policy, this case typifies the inherent Canadian tendency to promote divergent and counterproductive interest representation based on regional and commodity lines, to the point of inhibiting policy development and collective gains associated with pro-

moting "national interest."[9] The intervention by the livestock and livestock feed sector on the Prairies, particularly in Manitoba, successfully defended the status quo of accepting subsidized imports. At the same time, because of subsidized grain markets in the United States, the competitive (not comparative) advantage in livestock production is moving toward the northern tier states, away from the Canadian Prairies where reduction of a major subsidy (freight for grain exports) had created a comparative advantage. This situation demonstrates the serious dilemma for livestock producers and the entire feed/feeding sectors in Canada in the presence of U.S. crop subsidization. They are forced to be U.S. competitive on feed costs in the livestock sector, but the U.S. level of subsidization has created the situation where that objective, relative to normalized market conditions, cannot be achieved. Accepting subsidized corn from the United States reduces the risk of becoming even less competitive, at the same time increasing economic costs associated with distorted markets.

Similarly the relationship between corn growers in Manitoba and Ontario has been fractured by this action. Ontario corn producers fought one of these battles in the 1980s and decided they did not want another one. In the meantime, they have apparently secured public support for corn processing plants in the province which implies motivation for a "harmonious" corn market in Ontario. To head off a second national trade action, the Ontario corn growers passed a motion that they opposed such a trade action, effectively killing the prospect of a larger, more visible, and potentially successful national initiative. Despite the reality (and the CITT finding) that the U.S. subsidy impact extends across Canada, corn grower interests were revealed to be different between eastern and western Canada vis-á-vis subsidized imports. None of the other crop interests made the connection between this case and their market prices and ignored the corn growers case.

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[9] Dr. Hartley Furtan observes in a recent book on agricultural policy in Canada that, because of regional, commodity and distance characteristics of Canadian agriculture, we may be unmanageable in a policy sense. (Personal communication with the author). There are innumerable examples of interest group posturing and government indecision that support this hypothesis. The outcome of this case certainly does not reject the hypothesis.

Together, the Ontario corn growers and the prairie livestock and feed sectors, provided the public (and perhaps their governments) with the image that subsidized and dumped corn from the United States is necessary to our economic existence, and that these matters are acceptably determined entirely south of the border. The manner in which the federal and provincial governments approached this action (there were no visible statements, analysis or positions put forward by either level of government) reinforces this observation.

On the matter of overall U.S./Canadian trade relations, this case probably did not even count. U.S. producers, other interest groups, and governments did not intervene in the process. This non-representation of "aggrieved" parties in a trade dispute may be precedent setting and it may imply that what occurred behind the scenes was much more important than the transparency of processing the action. In production terms, even though the situation is representative of a much wider set of producers, this action was small enough and isolated enough to be seen to be immaterial.[10]

At the government-to-government level (United States and Canada), this case likely had a small positive contribution to U.S./Canadian relations. That ironic outcome results from the fact that U.S. crop subsidization and its effects on prairie crop economics did not get much exposure from the case. Had the case gone to the next level of public interest hearings and the issue of dealing with semi-permanent loss of corn imports and livestock interests, greater attention would have focused on these issues. The action did not, and probably could not, address the rela-

[10] A reviewer of a draft of this paper observed that regional rules must be much tighter than national rules to prevent repeated small group, harassment-type cases. While there is some substance to that argument, harassment is certainly not just a characteristic of small groups; governments may even be involved (Stiglitz 1997). The point is, this instrument is simply not suited to the task of dealing with serious subsidization and dumping, nor to promoting free-trade conditions. The logical starting point for reform when a "free trade" agreement exists is within the agreement. Knutson and Loyns present some observations on that argument in a paper on a "NAFTA Policy Leadership Commission" (included in this set of papers).

tionship across the feed market on the prairies of US. corn, wheat and soybean subsidies but those relationships do exist. From the standpoint of farm enterprises, the U.S. crop subsidies are more important in the grains sector than they are in the livestock sector. In economic, free trade, and policy harmonization terms, this isolated, relatively innocuous case involving a virtual handful of Manitoba corn growers, taking a position against the entire U.S. corn production system, had enormous symbolic importance which did not come through. It pitted Manitoba corn growers against the Canadian livestock and commercial feed sectors—U.S. subsidies won.

In the end, this case, like so many others, challenges one of the primary dispute resolution mechanisms being used among the NAFTA partners to settle policy and trade differences in agriculture. In an upcoming book from the Center for Agricultural Policy and Trade Studies at North Dakota State University (2002), Jabara and Reeder of the U.S. International Trade Commission make the point that NAFTA was never intended to achieve "free trade," rather it was intended to promote greater trade among the three countries and to achieve deregulation in some sectors. Assessed within that context, undoubtedly NAFTA has achieved considerable progress. In fact, addressing that issue was the purpose of the 2000 Policy Disputes Information workshop, and the results of the workshop supported this conclusion (Proceedings 2001) as have several others. Trade has increased and there has been major improvement in the terms of trade in many areas.

THE CORN CASE, TRADE DISPUTES AND NAFTA

The purpose of this paper and other case studies in the workshop was to examine how trade remedy laws are applied and how they contribute to resolution of trade disputes: are trade actions under domestic trade remedy law positive or negative contributors to longer-term freer trade and trade harmony among the NAFTA partners? The author's conclusion from reviewing the Manitoba case, and others presented in these workshops in the past, is that ***in economic terms, trade remedy laws do not fit the problem and their application is not contributing to more even terms***

of trade.[11] They are costly, they are divisive, and there is not much evidence that they effectively resolve trade and policy differences. Non-economists can argue that conclusions like these are reflective of a profession which is "not in the game." Certainly economics is not the only relevant discipline. However, free and increased trade are institutional arrangements which are grounded in economic principles. Unless one believes that free trade agreements are a form of formalizing a leadership-followership association, they are signed because the parties expect net economic benefits from their existence. When trade agreements designed to accomplish economic objectives are implemented, economic conduct and consequences have to work if the objectives are to be achieved. The purpose of freer trade is not to provide employment to particular categories of administrators and consultants, nor is it to provide a mechanism to allow groups or nations to protect the status quo. The politicians and the officials in three countries who negotiated NAFTA had a vision of the organization of the North American economy for the benefit of their own nations and for the benefit of the region. That organization is certainly grounded in economics, business and more balanced trading relations within the region.

Trade remedy law as it is being applied is not contributing to that vision in the agricultural sector. It is not entirely clear from other papers in this workshop that the number of trade disputes is increasing under NAFTA. However, it is clear that there are some disputes processed under trade remedy law that are caused by increased trade because of NAFTA, and there is clear evidence that the application of trade remedy law is costing some NAFTA sectors significant amounts of resources. Certainly the most visible dispute resolution mechanism is the application of domestic trade remedy law.

This particular case also demonstrates an important, basic and growing flaw in the NAFTA. Canada and Mexico, both significant crop and livestock production sector partners within NAFTA have created "nearly"

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[11] The Stiglitz article (1997) reaches the same conclusion from a more comprehensive review of the application of U.S. trade remedy law.

open borders in crop and livestock commodities and their products,[12] but the resulting trade is played out on a field where the dominant partner has been increasing subsidies to field crop producers. Those subsidies impact all the way through crop and livestock production.[13] Given the U.S. support to its producers, there are only two ways to level the playing field and to achieve the economic efficiencies contemplated under "free trade." The preferred economic option is to achieve balanced subsidization by removing it where it exists—in the United States. The other option is to balance subsidies by increasing them in Canada and Mexico, a solution bearing a host of negative economic consequences. Except for one provincial jurisdiction in Canada, that solution is claimed to be too expensive to be considered by either country. Retaining the status quo produces consequences and distortions like those discussed in relation to this corn action.

This paper and many others have demonstrated that trade remedy law contributions are at best evasive, and at worst counterproductive in settling most agricultural disputes. Clearly they are not tools that may be used to alter subsidy imbalances, particularly those that exist in the North American crop sector. As a result, we have to conclude that a level playing field within NAFTA for prairie corn growers, for most Canadian crop and livestock producers, and for most Mexican producers in these areas is not on the NAFTA agenda, nor is it likely to be. NAFTA does not even deal with these issues. Some policy analysts, including the discussant on this paper, use this observation to indicate that NAFTA is not part of the problem. That line of logic fits neither the author's views nor the raison d'Ltre of the workshops. From the economic perspective and from the economic evidence that has been generated by these workshops, major changes in

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[12] "Nearly" is the key word. The author of this paper is well aware of the lingering impediments to open trade in the crop and livestock sectors, and he is a strong supporter of negotiating them away. In fact, slowly, some progress is occurring. The issue of crop subsidies in the United States has become a new issue since NAFTA was put in place and it is an issue that dwarfs all others in terms of costs and economic significance.

[13] If there is any doubt about the validity of this statement, consider the "adjustments" that are being made in the new U.S. Farm Bill on soybeans and the export to the United States of Canadian weanling pigs.

both trade and policy dispute resolution are indicated. The executive summary circulated from the 2001 Policy Disputes Information workshop closed with the following conclusion:

> *Currently, there is a shortsighted tendency to protect domestic industries, rather than to plan for the long-term benefits to be gained from market integration.* (Executive Summary, 2001).

The MCGA case against imports from the United States demonstrates this conclusion yet another time, and it demonstrates that Canadian trade remedy law does not contribute to resolving major subsidization in neighboring markets. And it demonstrates that, for all the positive contributions of NAFTA to North American trade, NAFTA is of little use in achieving balanced terms of trade in the crop sector.

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APPENDIX

The data in Table A.1 indicate that in Canada, corn and barley are about equivalent as feed grain sources, and wheat is much smaller but still significant. Over the 1990s, wheat has been declining in production but it has been reasonably stable as a feed source. Corn production and imports are increasing. Barley production and use as a feed grain have grown. Feed barley exports from Canada have fallen significantly over this period.

Table A.1: Canadian Feed Grain Use 1991-92 to 2000-01 Averages.

CORN:	
Production	7.3 million metric tonnes ↗
Imports	1.1 mmt ↗↗
Exports	0.4 mmt ↘ since early 1990s
Human and Industrial Use	1.6 mmt ↗
Feed, Waste, Dockage*	**6.4 mmt ↗**
BARLEY:	
Production	12.4 mmt ↗
Imports	< 0.1 mmt
Exports and Domestic Human Use	5.5 mmt ↘
Feed, Waste, Dockage*	**6.5 mmt ↗**
NON DURUM WHEAT:	
Production	21.9 mmt ↘
Imports	—
Exports and Domestic Human Use	18.7 mmt ↘
Feed, Waste, Dockage*	**2.4 mmt →**

Note: The 'Feed, Waste, Dockage' category is a derived residual.
Source: Canada Grains Council, *Statistical Handbook 2001.* The wheat numbers were corrected to reflect 10-year averages.

MANITOBA CORN GROWERS ASSOCIATION VERSUS U.S. CORN EXPORTS

Rick Tolman

INTRODUCTION

Dr. Loyns presented a very interesting paper. It chronicles the anti-dumping (AD) and countervailing duty (CVD) action brought under the Canadian trade remedy laws by certain Canadian prairie corn producers in the case of the Manitoba Corn Growers Association Inc. (MCGA) versus U.S. Corn Exports. As Loyns recounts, the ultimate disposition of this case was to deny relief to the petitioning industry because it was unable to demonstrate the applicable standard for material injury. He concludes, "This particular case also demonstrates an important, basic and growing flaw in NAFTA." (Loyns, 2003).

We, the National Corn Growers Association (NCGA), would offer several comments on the paper from the perspective of our 32,000 members and the 300,000 growers whose interests we represent. On behalf of the growers, the NCGA works on six major issues: biotechnology, ethanol, research and market development, transportation, and two that are linked to this discussion, U.S. farm policy and trade. No sector of the U.S. economy is more dependent on trade than agriculture, and corn growers are significantly influenced by trade. One of every five rows of U.S. corn is exported, and exports of other value-added corn products such as meat, dairy, poultry and other foods add to the importance of international trade to the NCGA members and the other growers that we represent.

OUR CONCLUSIONS

We respectfully disagree with the contention that the failure of the MCGA to obtain AD or CVD relief in this case was either the result of a questionable decision by the Canadian International Trade Tribunal (CITT),

or because of a "flaw" in NAFTA. Manitoba corn production is a small and recently developed regional industry that emerged because of increased hog production among Manitoba farmers. In its biggest year the Manitoba crop was barely 10 million bushels. Much of that corn is fed on the farm, and the recent lower prices in the corn market—suffered by both U.S. and Canadian corn farmers alike—had an offsetting effect in Manitoba. Commercial sales prices were lower, but so also were input costs for hog production.

NAFTA did not create the rules that govern under the Canadian trade remedy laws. In forming NAFTA, the United States, Canada and Mexico agreed to permit each country to continue to apply its AD and CVD laws to the others' imports. The MCGA attempted to invoke Canadian law, and was found by a Canadian legal tribunal not to have met the Canadian legal requirements for relief. If Loyns' argument is that NAFTA is inadequate because it did not create a perfectly level playing field, the Canadian government's decision to favor the protection of Canada's eastern poultry and dairy sectors rather than to promote a more trade liberalizing agenda contributed significantly to establishing the current trade environment.

BASIS FOR CONCLUSIONS

We base these conclusions on ten points:

- We think it is difficult to attribute the failure of the MCGA to obtain relief in this case to a "flaw" in NAFTA.

The decision was rendered by CITT and under Canadian law. Pursuant to NAFTA, the member countries are free to retain their trade remedy laws, including AD and CVD actions and to apply those laws to one another's exports. Indeed, there have been several AD and CVD cases brought since the inception of NAFTA, and various industries in the several NAFTA member countries have successfully invoked those laws to obtain relief in the form of special and additional duties. NAFTA does, however, provide a special mechanism that provides for a bilateral review of trade actions to

prevent a member country from inappropriately granting relief where the facts do not so merit.

- In this case however, the special review procedures did not have to be invoked for the simple reason that the MCGA was denied relief by its own government.

One might understand the paper's complaint about a "flaw" in NAFTA had the MCGA prevailed before their national tribunal, and subsequently had that decision overturned in the course of a special NAFTA review. But that was not the case. The Canadian authorities determined that the MCGA had not met their burden for demonstrating material injury under Canadian law. Given this basic fact, it is difficult to agree that this case represents a "flaw" in NAFTA.

- We would note our disagreement with the initial decision of the Canada Customs and Revenue Agency (CCRA) in concluding that U.S. corn had been "dumped" in Manitoba.

Under both national and international law, the preferred method of determining whether a product has been dumped is to compare prices in the export market with the prices for the like produce in the home market where the product originated. Without a question, there was adequate information about U.S. prices to conclude that no dumping had occurred and there was no reason therefore, for CCRA to fall back in its investigation on a less economically coherent approach, the so-called "unprofitable prices" or "normal value" rule.

- Interestingly, while Loyns is critical of CITT's decision in this case, he is notably tolerant of the CCRA's failure to proceed on the basis of comparison with home market prices and its questionable foray into cost of production methodology.

The Marketing Loan and Crop Insurance programs that were the subject of the CCRA's investigation are not export subsidy programs, but rather domestic support programs designed to provide a safety net for U.S. farm

income. The marketing loan rates during the period had been set under the terms of the *Freedom to Farm Act* well below traditional marketing clearing levels. If the Marketing Loan and Crop Insurance programs had the effect of dramatically increasing production, there might be a stronger argument that they lowered prices or caused excessive exports. But, U.S. corn production has not increased over the past four years when low world prices began to trigger marketing loans. Indeed, U.S. corn production in 2001 (9.55 billion bushels) was almost the same as it was in 1998 (9.76 billion bushels).

- The annual U.S. corn crop is over 9 billion bushels, much of which is located in close proximity to the Canadian border. The Manitoba crop, in its biggest year, was barely 10 million bushels. Most of the Canadian crop (96 percent) is grown in Ontario and Quebec and the producers in those provinces actually opposed trade actions against the U.S. corn imports. Even if there were no Marketing Loan or Crop Insurance programs in the United States, Manitoba corn producers would still face competition from U.S. imports.
- It should also be noted that U.S. wheat and barley benefit from precisely the same government programs as U.S. corn (the Marketing Loan and Crop Insurance programs).

If these programs were subsidies that promoted unwarranted U.S. exports to Canada, then why have there been no significant wheat and barley exports to Canada during this same period? Indeed, during the very same period, almost all bilateral trade between the United States and Canada in wheat and barley has been U.S. imports from Canada.

- The failure of the MCGA to obtain relief under Canadian law was directly attributable to its decision to prosecute the action as a "regional industry."

The paper points out that there is a stricter legal standard of injury applied when the case is brought by a regional industry rather than by a national

industry, Dr. Loyns' own description of CITT's decision indicates why this stricter standard makes good policy sense.

> • Manitoba farmers are not monocultural producers who grow corn exclusively or even predominantly; they are diversified farmers who grow primarily wheat, barley and oilseeds and have increasingly moved into hog production.

While corn production has increased recently, this increased production has occurred while (and to a great extent because) hog production is increasing. A significant portion of the corn grown in Manitoba is fed on the farm to hogs. And while corn prices have been low in both the United States and Canada since 1998, have Manitoba farmers been materially injured by these low prices? CITT determined that many of them had not. CITT found that "diversified farmers who have livestock operations and grow their own corn for feed . . . are able to achieve certain synergies between their animal and grain operations. The evidence showed that these producers have costs of production that are much lower than the industry average."

> • Loyns' complaint about NAFTA apparently is that the agreement did not go far enough to integrate the North American agricultural markets. He suggests that the NAFTA negotiators should have pursued the elimination or the equalization of governmental support rather than relied on the application of trade relief laws to protect regional producers.

If so, Loyns' criticism is directed at the Canadian government that steadfastly refused to negotiate the type of comprehensive agricultural deal that he would appear to favor. Recall that when NAFTA was negotiated in the early 1990s, there was no substantive negotiation between the United States and Canada on agriculture. The agreement on agriculture is not a single agreement; rather it is three two-way agreements. The United States negotiated a substantial market liberalization agreement with Mexico. Mexico and Canada negotiated a rather small agreement limited to a few products. The United States and Canada agreed to extend into NAFTA the agree-

ment on agriculture that they had previously reached in the negotiation of the Canada/United States Free Trade Agreement in 1988 which preserved Canada's ability to protect certain "supply control" Canadian agricultural sectors.

- The reason for Canada's refusal to negotiate a more liberal NAFTA agreement on agriculture is clear; Canada was unwilling to accept a free trade agreement that would have provided real access opportunities to the Canadian market for U.S. dairy and poultry products.

This decision was an accommodation to Canadian dairy and poultry producers in Quebec and Ontario who felt they needed protection, in the form of very high tariff walls, from their more efficient U.S. competitors. When Loyns states that NAFTA "created 'nearly' open borders in crop and livestock commodities and products," he may have forgotten Canada's decision to take dairy and poultry market access off the table in NAFTA negotiations, and the political importance of that decision on both Canada and the United States.

Loyns writes that the failure of the Canadian government to provide relief to the MCGA in the case under discussion indicates "corn grower interests appear to be different between eastern and western Canada vis-á-vis subsidized imports." Indeed, the decision taken by the Canadian government in both NAFTA and the WTO Uruguay Round negotiations not to pursue a more aggressive trade liberalizing agenda demonstrates that the east/west split in Canadian agricultural and trade policies extends well beyond corn.

FINAL COMMENTS

At the time of this case, the NCGA chose not to become directly involved because of the high costs of entry. The NCGA solicited information from a variety of law firms regarding the elements of the case and the estimated costs for being formally represented. We determined that the costs were prohibitive for the NCGA's involvement. We chose instead to

provide background information and comments through the U.S. Trade Representative's office. We would generally agree with Loyns' final comments. Trade remedy laws are at best evasive and at worst counterproductive in settling most agricultural trade disputes. They need continued and ongoing review and refinement. In this particular case our decision not to be directly involved paid off. But this decision was based on economic reasons and not on strength of argument or principle.

We also agree with Loyns in favoring the elimination or the equalization of subsidies throughout North America as a way of "leveling the playing field." However, a level playing field also requires the elimination of tariff and non-tariff barriers to trade. And as long as there are protected sectors and interests in any of the three countries, there is no level playing field.

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TRADE DISPUTES IN AN UNSETTLED INDUSTRY: MEXICAN SUGAR

Kenneth Shwedel and Alejandro Ampudia[1]

INTRODUCTION

One of the outstanding trade disputes between Mexico and the United States revolves around the market for sweeteners. This, of course, should come as no surprise since around the world sugar is a highly politicized commodity. In the Mexican/U.S. case the dispute moves beyond sugar into the sweetener market involving high fructose corn syrup (HFCS). The dispute is also wrapped in the last minute wheeling and dealing that was necessary to get the North American Free Trade Agreement (NAFTA) approved by the U.S. Congress. It also brings into the dispute corn policies, which are important to both countries.[2]

In an attempt to put the trade dispute in perspective, this paper will focus on the Mexican sugar industry. Two distinct groups, growers and

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[1] The opinions and conclusions expressed in this paper are those of the authors and not necessarily Rabobank.

[2] Corn, which is a stable in the Mexican diet, is the most widely grown crop in Mexico. Only a small portion of the domestic crop, which is predominately white corn, goes into animal feed and industrial use. The importance of corn both for its impact on rural incomes and consumption makes it a highly politicized crop in Mexico.

mill owners characterize the industry. Historical circumstances and legal issues have separated these two groups over time preventing the development of an integrated sugar sector. In fact, the relationship between these two groups can be characterized as, at best, antagonistic. At the same time, the industry has been characterized by a series of policies and direct government interventions that left the industry in a state of confusion and disarray.

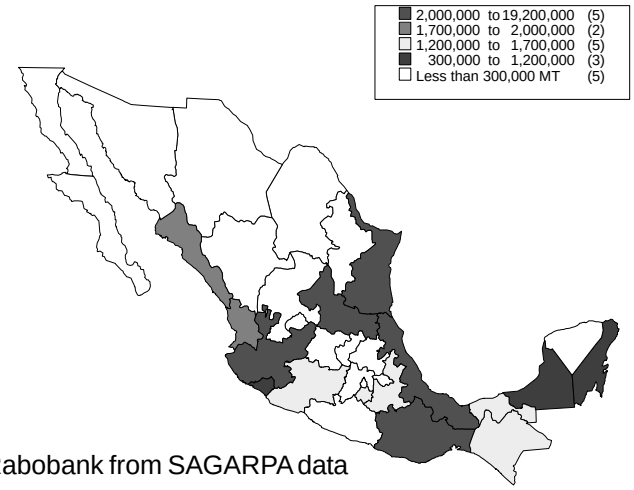
This paper has four sections:

- the first will review the troubled background and history of the sugar industry through the first years of the NAFTA;
- the second section will look at the NAFTA agreement and subsequent disagreements regarding both sugar quota and the HFCS dumping demand;
- the third section looks at recent events in the Mexican market, including expropriation of approximately half of the production capacity, Mexico's acceptance of NAFTA, WTO panel findings regarding the HFCS, and the subsequent decision to link the HFCS imports to the level of duty free exports of sugar accepted by the United States; and
- the final section discusses facing the future.

A TROUBLED BACKGROUND

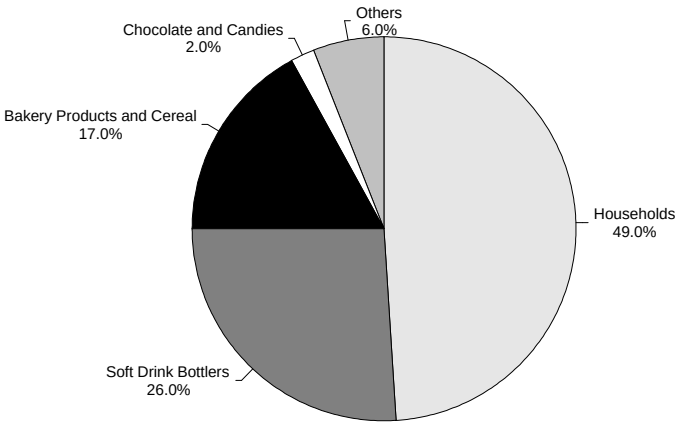
To understand the industry, its politics and the trade disputes, it is important to recognize its importance both economically and socially within Mexico. Sugar cane production tends to be is concentrated in the poor tropical areas of Mexico. This concentration implies that policy decisions have an important social impact in rural Mexico (Figure 1). Sugar production in Mexico is destined mostly for domestic consumption as opposed to other countries that rely on the international market. Mexico has consumed on average more than 85 percent of its production domestically. Major Mexican industries, such as the soft drink industry, strongly rely on Mexican sugar production (Figure 2). The Mexican sugar industry generates 0.7 percent of Mexico's GDP, and some 400,000 direct jobs (in the fields) and 700,000 indirect jobs, affecting between four and five million people

Figure 1: Sugar Cane Production is Concentrated in the Warmer Areas of Central Mexico.



Source: Rabobank from SAGARPA data

Figure 2: Consumption of sugar by major use categories, 2000.



in Mexico. Therefore, the government has a strong commitment to this industry for social and political reasons. This commitment has manifested itself through a series of polices that have attempted to regulate the market for the benefit of mill owners as well as to protect cane producers and mill

workers. At times this commitment has led to direct management and expropriation of the sugar mills.

Private Management and Government Intervention

Prior to 1970, Mexico's sugar mills were essentially in private hands. Production had been growing at rates even above that of the population. In part this growth was a response to favorable prices and changes in the U.S. sugar policy. Sugar production was stimulated during World War II by high prices and again in the early 1960s after the United States canceled Cuba's sugar quota, which was distributed among a number of sugar producing nations, including Mexico. The fact that the sugar mills were in private hands did not mean that the government had left the sugar industry to the forces of the market. Going back as far as the 1930s, the government in conjunction with the private sector attempted to regulate the domestic sugar market through the *Comisión Estabilizadora del Mercado de Azucar* (Commission to Stabilize the Sugar Market). In 1943 *Financiera Industrial Azucarera, S.A.* was created to finance the sugar industry. It became the *Financiera Nacional Azucarera* (FINASA) in 1953, and in 1966 the Federal Government formally took control of FINASA in order to assure that financing reached the industry at preferential rates.

The government's control over the industry went beyond the milling and marketing of sugar into the production of sugar cane. Two legal measures, which are still in effect today, contributed to the structural inefficiencies that characterize the industry. In 1944 the government issued a decree *Decreto Cañero* (Sugar Cane Growers Decree) that required farms, whether they be *ejido*[3] or private farms, that operated within the sugar mills areas of influence to produce exclusively sugar cane. The decree, in turn, required that the mills buy all the sugar cane produced in their area of influence. This requirement assured a market for farmers' cane and jobs for rural laborers. As a result the area dedicated to sugar production almost tripled.

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[3] The term *ejido* refers to a specific land tenure structure, whereby the use rights over a tract of land is given to a group of farmers, *ejidatarios*, in perpetuity as long as they continue to work the land. They may work the land in individual units, as a cooperative or in a collective-type scheme.

The decree limits the mills' ability to adjust purchasing to market conditions. The decree also sets forth a pricing formula for the sugar cane. One of the elements of the formula relates the price of sugar cane to the previous year's sugar prices. When sugar prices are rising, the formula is favorable to millers since they pay last crop's prices (lower) to cane growers. Likewise, when sugar prices are falling the millers pay above market prices for sugar cane. Taken all together, the Decreto Cañero separates the sugar industry from the market.

In addition to the Decreto Cañero, the government also imposed a set of contractual obligations, the *Contrato Ley*, on the relations between mill owners and their workers in the mill. Dating back to when mills were located in relatively isolated areas, mill owners were required to provide such services as housing, schooling, etc. for their workers and their families. As a result the millers' legal obligations to their workers were, and still are, more rigorous than those of other industries that compete for financial capital in Mexico. Even today when the government is able to provide these services, and taxes companies for these purposes, the Contrato Ley obliges the mills to continue providing these services.[4]

Although government programs impacted on the sugar industry at several levels, essentially the policy objective was to assure a stable supply of sugar to consumers at affordable prices. In practical terms this meant price controls at the consumer level while letting prices rise at the producer level to stimulate sugar cane production.

The Government Take-Over of Mills (1970–1988)

Being squeezed at both ends, the sugar mills bordered on bankruptcy. The government's answer to this impending crisis was to rescue the troubled mills, taking over the control through the Operadora Nacional de Ingenios (ONISA). In 1971 when ONISA was formed the government had control of 19 mills. By the end of the decade they controlled 49 of the

[4] Mill owners charge that when the mills were under government control, the size of the labor force was padded, which after privatization has made the Contrato Ley burden even more onerous.

66 mills in the country. To co-ordinate the sugar policy, the government set up the *Comisión Nacional de la Industria Azucarera* (CNIA) in 1970. Eventually CNIA took over ONISA's functions.

Between 1970 and 1989, when the mills were under government administration, sugar production grew from 2.2 million metric tons (mt) in 1970, to 3.49 million mt in 1989 . Most of this growth came from bringing new land under cultivation. The sugar cane area increased by 35 percent while average yields increased by only 7.7 percent. At the same time the number of sugar cane growers increased 56 percent. The disproportionate relationship between the growth in the number of producers and sugar cane area contributed to the contraction in the average size holding to only 4.1 hectares. In other words, sugar cane production is characterized by a predominance of small scale agricultural units or *minifundios*. By 1990, for example, only 5 percent of the sugar cane area was harvested mechanically.[5] Sugar mills did not fare much better under government control. The number of workers increased 37 percent. Plant productivity increased by only 5 percent.

Sugar consumption, helped by falling real prices, increased 103 percent. By the 1980s Mexico had gone from being a net exporter to being a net importer of sugar. What kept the industry afloat during those years were growing subsidies. Garcia Chavez (1996) calculates that between 1983 and 1990 government transfers to the sugar industry reached about 934 billion pesos. In fact, in 1988 subsidies to the sugar industry represented one quarter of the Secretary of Agriculture's total budget, about US$988 million.

Government Sale of the Mills (1988–1992)

During the de la Madrid Administration (1982–1988), Mexican economic policy moved away from direct state control and intervention in the economy toward favoring more market orientation. Among the sectors marked for a reduction in the government's participation was the sugar

[5] The low level of mechanization was also related to reluctance on the part of the government to stimulate mechanical harvesting since it was seen as a labor displacing technology.

sector. Initially, the government had intended to reduce only its participation in the industry from around 75 percent to 50 percent. However, because of the recurrent economic crises and budgetary limitations, the government decided to withdraw completely from running sugar mills.

Selling the government's interests in the sugar mills was easier said than done. Potential buyers were aware of four problems inherent in the acquisition of the sugar mills:

- low levels of investment in technology;
- difficult labor situations in the mills;
- organizational problems with sugar cane producers; and
- high dependence on government subsidies.

In response to these problems, the government designed schemes for purchasing the mills that allowed for buyers to put up a small portion of the purchase price[6] at the time of sale, with concessions on the terms of the remaining amount. In other words the mills were privatized in highly leveraged operations. Interestingly enough, a number of bottlers of carbonated beverages purchased sugar mills during the privatization process, vertically integrating an important part of Mexico's beverage industry.

Even with these terms one could question the feasibility of the business venture. It should be remembered that at that time imports of sugar were tightly controlled. There was the implicit understanding that imports would remain under tight controls to maintain domestic sugar prices. This was not to be. Between 1989 and 1991 imports grew exponentially reaching over one million metric tons.

Between 1990 and 1992, according to the *Cámara Nacional de la Industrial Azucarera y Alcoholera* (National Sugar Chamber) net losses for the milling industry reached 1.77 billion pesos. In 1991 the debt of the privatized mills was restructured. In 1993 the government had to extend credit to the mills on the order of 900 million pesos in order to liquidate the debt that they had with sugar cane growers.

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[6] Some reports say that it was as low as 20 percent.

As might be expected with the growing financial difficulties, a number of mills changed hands after the privatization, creating increased concentration in the industry. At the same time a number of companies initiated programs to restructure production processes. As a consequence the area planted in sugar cane increased concurrently, production yields (tons of sugar cane per hectare) increased. At the same time, processing yields (tons of sugar per tons of cane) in the mills improved.

Going into 1994, the outlook for the sugar industry was mixed. Any thoughts of optimism, however, disappeared at the end of the year. While much has been made of the economic crisis in terms of the devaluation of the peso and subsequent contraction of the economy, for the sugar industry the rise in interest rates proved most damaging. Average interest rates increased from 13.9 percent in 1994 to 48.6 percent in 1995. For the already highly leveraged mills, this added debt burden was unsustainable. FINA had to carry the debts on their books, about $1.2 billion in 1996 and $2.0 billion in 2001.

THE NORTH AMERICAN FREE TRADE AGREEMENT

Much has already been written about sugar and the NAFTA including one paper prepared for the Sixth PDIC Workshop (Kennedy and Petrolia, 2001). What stands out in the literature is that for what appears to be a straightforward agreement, there is so much disagreement over what was actually said and what was meant. In part, the disagreement may be due to the negotiating objectives of the different parties. For Mexican negotiators, NAFTA was part of the policy of structural reform that characterized the de la Madrid and Salinas Administrations' economic policy. In fact, Mexican policy-makers and -negotiators saw NAFTA as a mechanism that would keep structural reform policies in place beyond the normal six-year political cycle. For the U.S. and Canadian negotiators, by way of contrast, NAFTA was "one more" trade agreement. As such they tended to respond more to the interests of their clientele (producers) than did the Mexican negotiators.

Likewise there were important differences in the way Mexico and the United States approached the negotiations. Mexico saw and consequently negotiated NAFTA in the limited terms of their domestic sugar policy needs. The United States on the other hand, took a broader view, focusing on sugar in the context of the wider sweetener market and policy. In essence at the insistence of the United States, the original agreement was rewritten at the last moment in the form of two side letters that redefined the conditions for Mexico's duty free access to the U.S. market, incorporating HFCS into the equation. The two main differences related to the formula for determining Mexico's status as a surplus producer and the quota size for duty free sugar.

In the original agreement, Mexico was to be considered as a surplus producer if domestic sugar production exceeded domestic consumption of sugar for two consecutive years. As a surplus producer, Mexico would have the right to export all surplus production into the U.S. market. In response to concerns from U.S. producers, the side letters introduced HFCS into the formula for calculating the surplus status. After the exchange of the side letters, to be considered as a surplus producer, Mexico domestic sugar production had to be greater than domestic consumption of both sugar and HFCS.

For the United States this difference was crucial. Historically, the United States has been a surplus producer of livestock feed corn, while it has maintained a deficit position in the sweetener market. Both of these markets have been the objective of government subsidies. The growth of the HFCS industry appeared to take up part of the corn surplus while it reduced the sweetener deficit. Yet the growth of HFCS posed the possibility of depressing the U.S. sweetener market. Maintaining exports of HFCS is crucial to the U.S. sweetener policy.

An additional element of confusion and uncertainty comes from what appears to be two different versions of the side letter. The English version signed by the U.S. Trade Representative makes specific reference to the "consumption" of HFCS, while the Spanish version, signed by the Mexican Secretary of Commerce, says only that HFCS will be used for

calculating net surplus. This discrepancy in wording leaves open the possibility for the Mexican production of HFCS to be included along with domestic production of sugar.[7]

The other area of controversy relates to the quota for Mexican sugar. According to the agreement, during years seven to fourteen of NAFTA, the quota was raised from 150,000 mt to 250,000 mt.[8] While this seems to be rather straightforward, there have been differences on interpretation. Mexico understands that this gives them access to 250,000 mt, i.e. they can export duty free up to that level. The United States understands that level to be the upside limit, i.e. Mexico does not automatically have access to the entire 250,000 mt. Mexico called for a NAFTA panel to challenge the U.S. interpretation and subsequent actions. In light of the controversy that has ensued, it is interesting to reflect that in 1994 Mexico was a net importer of sugar and that imports of HFCS were minimal.

The side letters have been subject to much controversy in Mexico. In general the feeling in Mexico is that the baby was given away with the bath water. At the same time the situation has left many Mexicans doubting the commitment of the United States to free trade.

High Fructose Corn Syrup

In the United States there has been heavy investment in HFCS production capacity. The main market for HFCS is for carbonated beverages. The switch-over from sugar to HFCS in the United States was relatively fast and easy since the carbonated beverage industry used liquefied sugar. Not only was it used in the production of carbonated beverages, but it was also transported and stored in liquid form. Yet even with the switch-over in the carbonated beverage industry, the HFCS industry continued to face excess capacity. Kennedy and Petrolia (2001, pp.239-240) pointed out that increases in consumption of HFCS in the United States lagged behind

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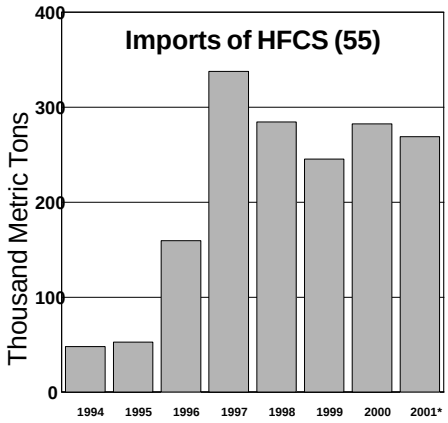
[7] If this discrepancy were not enough, the Mexican Senate never officially approved the side letter. This omission has allowed the Mexican government to argue that it never agreed to the side letter. As such, it has no validity and does not supercede the original agreement.

[8] The quota for years one to seven remained unchanged.

Figure 3: Mexico's Imports of HFCS, 1994-2000.



Total Fructose Mexican Imports.

	United States	*Other Countries*	*Total*
1994	74,092	26	74,118
1995	57,758	1	57,759
1996	198,918	91	199,009
1997	347,799	3	347,802
1998	295,923	5	295,928
1999	344,910	1	344,911
2000	295,016	15,243	310,259

Source: Rabobank with data from the Secretaria de Economia

growth in production capacity. Mexico, which is the world's second largest consumer of carbonated beverages, was the logical market for the excess capacity (Figure 3). Exports from the United States of HFCS increased, displacing sugar.[9] Finally, in 1997 the *Cámara Nacional de la Industrial Azucarera y Alcoholera* (National Sugar and Alcohol Chamber) formally accused the U.S. industry of dumping HFCS in Mexico.

Following the formal investigation, the Mexican Commerce Secretariat (SECOFI) ruled in favor of the Mexican sugar producers. SECOFI found that dumping had occurred and that it had caused damage to the Mexican sugar industry. Mexico imposed countervailing duties on imports from those U.S. companies involved in exporting to Mexico. The response from the United States was to ask for both a NAFTA panel and a WTO dispute settlement panel. In all cases the panels have ruled against Mexico. In spite of these panel rulings, Mexico had been able to put off reversing the countervailing duties. After what was the final ruling in late 2001, Mexico entered into negotiations with the United States looking to solve both the

[9] Because of differences in flavor, the Mexican industry continued to use sugar along with the HFCS, with some bottlers favoring a 50-50 formula of HFCS and sugar.

differences on the interpretation of the side letters and the dumping resolution.

In a bungled attempt to resolve Mexican sugar producers' problems, the SECOFI requested the soft drink industry to limit its use of HFCS. Following the adverse reaction from the United States to the SECOFI press release on the "request" to the soft drink industry, SECOFI denied that this request had taken place.

Following the dumping resolution, imports of HFCS fell from 374,000 mt in 1999 to 283,000 mt in 2001. This drop, however, does not mean that the consumption of HFCS has fallen because domestic production of HFCS has grown. In 2001, Mexican production of HFCS reached 350,000 mt. Only two companies are involved: Arancia Corn Products, a joint venture with Corn Products International (CPI), produces 300,000 mt, and Almidones Mexicanos, a joint venture between ADM and Tate and Lyle, produces the other 50,000 mt.

High-Tier Tariffs

While much of the attention and tension has focused on the dispute surround the duty free tariffs (also known as the "low-tier tariffs"), NAFTA also put into place a declining tariff schedule for sugar.[10] "For calendar year 2002 the raw sugar tariff is 9.07 cents a pound and the refined sugar tariff is 9.61 cents a pound. The raw sugar tariff drops around 1.5 cents each year, and the refined sugar tariff drops about 1.6 cents a year. Both rates reach zero in 2008."[11]

The combination of low world sugar prices and the falling high-tier tariff rates would suggest that Mexico would eventually find it profitable to redirect its sugar exports from the world market into the high-tier U.S. market (Figure 4). USDA baseline data projections show a jump in

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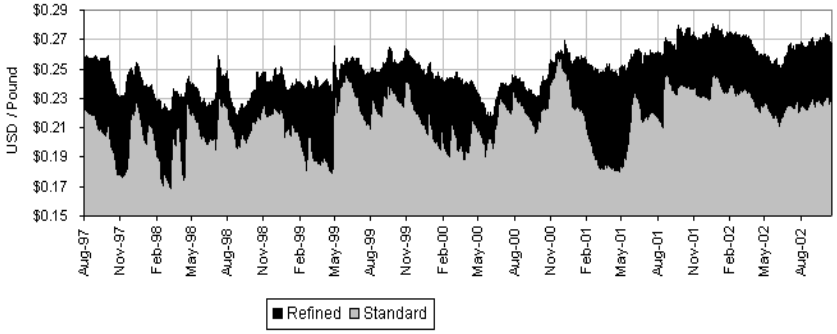
[10] Besides sugar, NAFTA also incorporated a number of declining tariff schedules for over-tariff exports, including those for U.S. shipments of corn and poultry, among others into Mexico.

[11] USDA, "USDA Baseline Projections," February 2002, p.45.

Figure 4: Mexico Standard and Refined Historical Sugar Prices, 1997-2002.



Source: Rabobank from Fidiecomiso para el Mercado de Azucár (FORMA) data.

Mexican exports to the United States in 2003 taking advantage of the falling tariff rates.

WTO Commitment

The United States during the Uruguay Round, committed to importing a minimum of 1.256 million mt of raw and refined sugar, raw value.[12] Of this amount at least 24,251 mt has to be refined sugar. This commitment was rolled over into the WTO when it replaced GATT.

Mexico's duty free exports of sugar to the United States have been included in the U.S.'s WTO commitment. As indicated above, the quota assigned to Mexico has been a source of trade friction. Into the future as Mexico's exports to the U.S. increase, they will take an increasingly larger share of the WTO quota. The USDA baseline projections indicate that once the U.S. market for Mexican sugar opens completely under NAFTA, exports will increase to the point where in 2011 they will equal the entire WTO quota commitment.

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[12] This section is based on "USDA Baseline Projections," February 2002, p.45.

RECENT EVENTS

Following the government's sale of the sugar mills and, in part, in anticipation of access to the United States market, sugar production increased in Mexico (Table 1). With consumption flat, increased production moved the industry into a surplus position. Over time the already precarious financial situation of the industry was worsened. The Mexican government was, and is still, very much involved in attempting to regulate the sugar market, since many of the sugar mills continue to face serious financial problems, even with the countervailing duties on the HFCS.

The government has attempted to support the sugar industry by keeping domestic prices above world prices, through limiting the amount of sugar that is sold on the domestic market. The government does this by estimating the domestic demand and the sugar harvest. Based on this information, the government assigns an export quota to the mills divided into NAFTA duty free and NATFA non-duty free market components. The mills are required to comply with the government assigned export quotas. Essentially, therefore, Mexican sugar producers deal with three prices: the U.S. price for the sugar exported under the NAFTA/sugar quota, the low world price, and the Mexican price.

From Bankruptcy To Expropriation

In spite of the government's attempts to support the domestic price, the debt burden proved too much for many mills. In some cases, for example, they raided pension funds. In others, they delayed payment to cane growers. There have also been charges of fraud, with sugar that was said to have been exported actually being sold on the domestic market. This sugar had the effect of depressing domestic prices, further exacerbating the worsening financial situation for some mills. In May 2000, GAM, the second largest company in the industry filed for "suspension of payments," an equivalent to a Mexican Chapter 11. Although the company restructured and paid most of its short-term debt, it was unable to reach an agreement regarding its long-term debt.

Table 1: Production and Consumption of Sugar in Mexico, 1991- 2002.

Period	*Production*	*Consumption*	*Surplus/ Deficit*	*Consumption/ Production*	*Exports/ Production*
1991/92	3,577	4,329	(752)	121%	-17%
1992/93	4,431	4,459	(28)	101%	-1%
1993/94	4,010	4,404	(394)	110%	-9%
1994/95	4,650	4,397	253	95%	6%
1995/96	4,685	4,443	242	95%	5%
1996/97	4,822	4,100	722	85%	18%
1997/98	5,490	4,179	1,311	76%	31%
1998/99	5,147	4,160	987	81%	24%
1999/00	4,696	4,195	501	89%	12%
2000/01	4,924	4,500	424	91%	9%
2001/02	4,872	NA	NA	NA	NA

Source: Fidiecomiso para el Mercado de Azucár (FORMA)

Into 2001 the domestic market was in disarray. Due to the seasonal nature of sugar prices,[13] mills usually obtain sugar inventory financing during the production period (November-August), and repay the loans August-December each year. In 2001 however, after years of difficulties, companies such as Escorpion (CAZE), Santos, Machado, and GAM were negatively affected by their lack of short-term inventory financing. This inability to monetize inventories pushed millers to accelerate sales of sugar in order to obtain funds to cover operating expenses (mainly payments to cane growers). By May 2001 standard sugar prices reached their lowest level in the previous three years, impacting negatively on cash flow and profits. The effect was felt throughout the entire industry. Sugar cane growers demonstrated for payments, closing SAGARPA's offices. The mill workers were threatening to go on strike. Looking for a way out of the immediate crises, the government implemented a program to finance inventories and

[13] Seasonal movements of sugar prices in Mexico are characterized by three different stages:

- January–May sugar prices drop as a result of an excess supply on the market. This period corresponds to the main months of the sugar harvest.
- May–August sugar prices increase as the harvest winds down. This period occurs when sugar producers usually would obtain financing for sugar inventories; therefore supply is lower than demand and prices increase.
- August–December, when mills usually undergo maintenance. There is no production, sugar prices increase, and demand grows at year's end.

to pay the sugar cane growers. In the short run, the crisis was diffused. With the inventory financing implemented by the government for distressed mills, standard sugar prices increased 28 percent between June and August. This measure was effective and assisted not only distressed mills, but also those mills with regular access to credit who were also affected by low market prices.

With the new harvest just around the corner and no real solution in sight, on September 3, 2001, the government expropriated 27 out of the 61 mills in the country. These mills represent approximately 55 percent of the total sugar production. The mills belonged to four companies: GAM (6 mills), Escorpion (9 mills), Machado (4 mills), Santos (6 mills) and 2 independent mills. Machado kept three of their seven mills. For the other companies the expropriation represented their entire operations. After the expropriation, the government established a special agency to manage and eventually to sell the mills. They originally said that the mills will be privatized within 18 to 24 months. Most analysts saw this time frame as highly optimistic. With mill owners challenging the expropriation in the country's courts it could be years before they exhaust their legal options, postponing indefinitely the re-privatization of the mills.

Since the government's expropriation of the 27 mills on September 2001, at least five fundamental factors are at work to the structure and performance of the industry as follows.

Price Stability. Immediately after the expropriation, prices increased by 20 percent, and have remained stable through June 2002. Although in the first half of the year, sugar prices were expected to drop based on supplies generally being larger than demand, prices have remained at attractive high levels. For instance, in May 2001 prices for a 50-kg bag of standard sugar ranged from 175 to 180 pesos. In May 2002, prices ranged from 230 to 240 pesos. Prices have remained at seasonably high levels because the government now controls the milling groups that had previously dumped sugar into the market to raise working capital. It is clearly in the government's best interest to have a stable, orderly and less volatile sugar market to facilitate these sales and to maximize value.

Controlled Exports And Domestic Sales. The government has granted to an international trader a mandate to manage all sugar exports (from the expropriated mills) both under NAFTA and into international markets. At the same time, the government and the private companies have created a company to control all the exported sugar. Another international trader has been granted a mandate to market all the domestic sugar produced by the 27 expropriated mills.

Social Stability. All cane growers at the expropriated mills are being paid according to the industry payment terms. Full payment to cane growers must be done by the end of July 2002 or according to terms specifically negotiated with each mill. The risk of previous years' strikes or warehouse blockages by unpaid cane growers has virtually been eliminated.

Legal Structure. The government continues to evaluate the law that regulates payments to sugar cane growers and the labor law governing mill workers. Details have not been revealed, but changes are expected to make the industry more competitive in the world market (which should facilitate the privatization of the expropriated mills).

NAFTA. Negotiations continue with the United States to resolve disputes under NAFTA relating to Mexican sugar's access to the United States (currently limited to 125,000 metric tons). The new quota was not announced in October. Negotiations between the two countries continue. In addition to the sugar quota and HFCS issue, the United States is said to be looking for a commitment to restrict second-tier tariff exports from Mexico.

Seeking HFCS Solutions

In February 2002 the government announced its *Política Nacional Azucarera* (National Sugar Policy) 2002–2006. It sets forth the policy objective of bringing about order in the market and modernizing the sugar industry. To accomplish this objective, among other aspects, it talks about export credit and credit facilities for inventory finance. It hints at revision of the Contrato Ley. In addition, since the regulation of the supply of sugar

on the domestic market was an essential element to their sugar program, as part of the policy measures, the government announced the creation of a sugar exporting company, owned jointly by the public and private sectors.

HFCS Tax

The HFCS tax was introduced as part of the reforms that the new Fox Administration tried to put into place as a fiscal reform package. Over the course of the year, the reform package got bogged down in Congress. As the year came to an end, the Administration and the Congress faced a deadline for the new budget. As part of the wheeling and dealing that characterized the final days of 2001- -with Congress flexing its muscle- -a special tax on the use of HFCS for soft drinks was passed. As a result, all soft drink bottlers quickly eliminated HFCS from their recipes and converted to all-sugar formulas. This conversion is expected to increase domestic consumption by 400,000 mt per year.

The tax initiative did not begin with the Administration, rather it came from Congressmen related to the sugar growers union. They were dissatisfied with the Administration's apparent willingness to negotiate a settlement to the HFCS dumping case. Interestingly enough, the reaction from the United States appeared to blame the Administration for the special tax, accusing the government of going back on its word when they agreed to negotiations on the HFCS issue. Besides the pressure from the U.S. government, the Administration is also under pressure from the companies producing HFCS in Mexico.

Caught between a rock and a hard place, the Administration temporarily suspended the HFCS tax in March 2002.[14] Subsequently in July 2002, the Mexican Supreme Court declared the suspension unconstitutional. Nevertheless, even before the Supreme Court ruling, bottlers were not expected to switch back to HFCS in the interim given the short-term nature of the moratorium and the uncertainties surrounding this tax. The temporary suspension ran through September 30, 2002, reflecting a bal-

[14] The temporary suspension did allow for the delivery of a number of contracts that were in place when Congress enacted the HFCS tax.

ancing act among the different interest groups, and the government's expectations to have reached an agreement with the U.S. on the HFCS and sugar quota issues by that date. That is the end of the U.S. government's fiscal year.

In April the government decided to formally recognize the NAFTA panel and a WTO dispute settlement panel ruling, eliminating the countervailing duties on HFCS. In an attempt to link the HFCS and NAFTA sugar quota issues, the Mexican government set a duty free quota of 148,000 mt for HFCS, applying a 210 percent tariff on imports of HFCS over the duty free quota amount. This amount is equal to the quantity of duty-free Mexican sugar allowed into the United States.

FACING THE FUTURE

It is clear that the recent expropriation gives the government a one-time opportunity to comprehensively restructure the sugar industry, including the level of inventories, price, the Decreto Cañero, Contrato Ley, and industrial rationalization. However, part of the future of the sugar industry will also depend on the trade situation and negotiations under NAFTA. Within the Mexican sugar industry there are those who doubt that in 2008 the United States will allow for the free entry of Mexican sugar, or, for that matter, any other country's sugar cane sugar, into the U.S. market. The USDA in their baseline projections apparently sets the stage for a challenge to Mexican sugar imports, especially the high-tier imports. Stating that production costs of Mexican sugar are higher than world prices, they raise the possibility that to export competitively to the United States under the high-tier quotas, Mexican exports would have to involve dumping practices.[15]

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[15] In conversations with one of the authors, representatives of the USDA/ERS said that this was not their intention. Nevertheless, a high official at the U.S. Embassy in Mexico said that the United States would not hesitate to initiate a dumping demand if they thought that high-tier imports would damage the U.S. sugar industry.

If the U.S. were to allow free and unlimited access of Mexican sugar two basic scenarios emerge. Under the first scenario, the United States would abandon their sugar support program. Access to the U.S. market would stimulate Mexican production, the result of both Mexican and foreign investment. With Mexican sugar production more efficient than U.S. sugar cane or beet production, the price of sugar from Mexico would be more attractive. Prices on the U.S. market, while still above world prices, would be depressed, driving beet producers out of the market. At some point, U.S. policy makers would come to realize that the sugar program resulted in a transfer payment to Mexican producers. Once the United States abandoned their sugar program they would be willing to open the market. An open market would drive down prices to world levels to the detriment of those Mexican sugar producers who are unable to compete at international price levels.

This scenario is not seen as highly probable. The political costs on both sides of the border in both countries would be high, and it is doubtful as to whether policy makers would have the will to confront the social consequences. A variant of this scenario has the United States adapting mechanisms akin to those incorporated into the new Farm Bill for peanuts.[16] This approach would allow the opening of the border while providing income support to U.S. beet and cane growers. To the extent that this policy framework drove down prices in the U.S. market, it would also work against those Mexican sugar producers who are unable to compete at international price levels. Needless to say, this outcome would lead to further trade disputes between the two countries.

More likely is the second scenario. As Mexican exports to the U.S. market grow, the United States would adjust its quota program to continue protecting the U.S. market. A basic assumption here is that the United States is willing to abandon the sugar quota as an instrument of foreign

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[16] In the case of peanuts the new Farm Bill does away with the production quota, offering growers two different "buy out options," and establishes an acreage base for subsequent support. These changes bring the new peanut program in line with other major commodity programs through a marketing loan, direct payments and countercyclical payments.

policy. What would emerge is a common North American sweetener market. HFCS would flow south and sugar would flow north.[17] There are already companies considering investment strategies based on this scenario.

With the second scenario considered more probable, what happens over the next five years will determine where the market goes. With most of the attention, due obviously to the trade disputes, focused on the duty free exports, it is easy to forget that NAFTA calls for over-the-quota tariffs on Mexican sugar. Estimates are that with the reduced tariffs this year, exports to the United States are near the break-even point with exports to the world market. Next year the United States will become a more attractive alternative to the world market. This situation suggests that Mexican exports to the U.S. market will grow significantly over the next five years, and the over-the-quota tariff rate falls. The United States may be pushed to a policy decision even before 2008.

The Spoilers

As we look ahead, two issues stand out. The first is post-Castro Cuba. The obvious question is how will the United States treat Cuban sugar? Before the suspension of imports of Cuban sugar in 1960, Cuba was a favored source of sugar for the United States receiving 72 percent of the total U.S. import quota with a tariff rate 20 percent lower than that faced by other exporters.[18] By the late 1950s Cuba accounted for "about 35 percent of U.S. annual domestic consumption."[19] There is no reason to believe that in a post-Castro Cuba, especially one that has come to terms with the Cuban refugee population living in the United States, there will not be a move to extend favorable access for Cuban sugar to the U.S. market. Any

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[17] Significant growth is not seen in the demand for HFCS in the U.S. market since it is already used extensively for sweetening carbonated beverages. The physical and organoleptic properties of HFSC suggest that there are limited options for its use as a sweetener for other food products. Sugar remains the sweetener of choice.

[18] Boughner, D.S., and Coleman, J.R. (2002). "Normalizing Trade Relations with Cuba: GATT-compliant Options for the Allocation of the U.S. Sugar Tariff-rate Quota." *The Estey Centre Journal of International Law and Trade Policy* 3, 1: p.48. Downloaded from www.esteyjournal.com.

[19] Ibid. p. 48.

favorable treatment for Cuba would reduce Mexican participation in the U.S. sugar market.[20]

The second issue relates to the Free Trade of the Americas initiative. As this initiative moves forward it is safe to assume that the negotiations will look to the NAFTA as a model, suggesting that some time into the future there will be a regional sweetener market. Right now, neither the Mexican nor the U.S. industries are competitive with those of other countries in the Americas' region.

For the United States one could predict the end of domestic sugar production. For Mexico the longer it takes for the regional market to come about, the more time it will have to develop and to restructure its industry. The real question is will Mexico take the hard decisions needed to turn its sugar industry into a world class competitive sugar producer?

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[20] Recently Cuba has taken steps to rationalize sugar production and increase efficiency. This initiative would suggest that, if successful, Cuba would be more competitive in the U.S. market in the event of a possible opening.

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TRADE DISPUTES IN AN UNSETTLED INDUSTRY: MEXICAN SUGAR

Ben Goodwin

Shwedel has provided a comprehensive review of the Mexican sugar industry and the current trade situation between Mexico and the United States. Following are some perspectives of someone who has spend a number of years in the industry in California.

Shwedel made the point that sugar is a commodity for which the rules are unresolved under NAFTA. Back in 1993, I was informed there was a side letter to the NAFTA that set out the rules for trade in sugar. I reported this to the California Beet Growers Association (CBGA) membership in my annual report that year. Later it was learned that the Mexican government and sugar industry had differing opinions. Shwedel reviewed these and the other circumstances which led to the current situation in sugar trade. The bottom line is that the U.S. and Mexican sugar industries are currently awaiting negotiations by their governments on sugar trade rules between the two nations.

There are similarities between the Mexican and U.S. sugar industries. Both have governmental policies to protect their industry, both have highly efficient producers and both have inefficient producers, and they have similar internal sugar prices. The sugar issue is clouded because it concerns not only sucrose produced from beet and cane but also HFCS from corn. In the United States, HFCS entered the market with a vengeance in the mid 1980s. This low-cost sweetener took its market share, and sales of sucrose plummeted. U.S. sugar factories closed, and imports of foreign sugar declined. The U.S. government took no action to limit the sale of HFCS, unlike Europe and other countries that discouraged its production and sale through tariffs, legislation, and regulation. Today in the United States, caloric sweetener consumption is about 65 pounds of sugar and 62 pounds of HFCS.

Since 2000, three U.S. beet processing plants have closed, not because of HFCS but because of a poor sugar economy. Two of these were in the state of California and one in Washington state. There has also been closure of a cane refinery or two in the South, and the Hawaiian industry has declined in production.

Tate & Lyle, a worldwide processor of sugar and sweeteners, has divested themselves of their Domino refineries to Florida cane producers. They are also in negotiations with their beet growers who produce for Tate & Lyle's Western Sugar operations in the Midwest for those growers to purchase the plants and operate them as cooperatives. To date, this effort has not been completed due to financing problems.

The largest processor/marketer of sugar in the United States, Imperial Sugar, has recently emerged from bankruptcy on the backs of their former shareholders who lost all their equity in the bankruptcy. In an action to reduce their debt, Imperial sold their Michigan Sugar operation to beet growers in Michigan who are currently operating it as a co-op. Imperial has sold other assets, and I'm certain they will sell other facilities in time to put their balance sheet in order. The two plants that closed in California also belonged to Imperial, which closed the factories and put the land on the market because the potential sale of the land would give the company a higher return than operating the factories. To date, the property has not been sold, and the company has reduced the price of the real estate. I do not foresee that sugar processing will start again since growers cannot operate the plants profitably.

Currently, there are 27 beet processing plants operating in the United States. If Western Sugar (Tate & Lyle) is able to finalize their deal with their beet growers, only five factories out of 27 will be operated as proprietary businesses; all the others will be cooperatives. This puts all the risk of growing and processing sugar on the farmers.

On the cane side of the business, because of low margins, producers in Florida are vertically integrating, either by purchasing refineries or installing refineries on their raw cane mills. One producer-miller in Florida

has joined a beet sugar marketing co-op to jointly sell their refined sugar. Millions of dollars are being expended to improve the efficiency of the beet and cane industries in the U.S. through these consolidations.

In Mexico, as Shwedel pointed out, the government has expropriated 27 out of 60 cane mills because they faced large and mostly unpayable debts to the Mexican government. The Mexican government has announced their intention to resell these mills to private industry over a period of some 18 months. Industry sources believe that not all the 27 mills will continue to operate; some smaller units will consolidate with larger plants that have underutilized crushing capacity.

Unlike Mexico, the United States is not self-sufficient in sugar production. This past year, for instance, it is estimated that about 84 percent of consumption came from domestic production, about 12 percent came from foreign countries, and the remaining four to five percent came from stocks and other sources.

Shwedel showed that Mexico is self-sufficient in sucrose and has roughly 600,000 metric tons to export. Sugar exported to the world (dumping) market will be sold at below cost of production for most mills in Mexico. Sugar that is exported to the United States is sold at a premium of nearly three times the world price. The Mexican industry and government must be careful not to take action to disrupt this price or they also will suffer from lower pricing.

This export figure is compounded when HFCS is added to Mexican production. To combat the inroads of HFCS and to protect domestic producers and the Mexican treasury from exposure to low sugar prices for their expropriated plants, the government has recently placed a 20 percent tax on sodas sweetened with HFCS. This has further complicated the negotiations over the sweetener trade between the two countries. However, in the last few days, this tax has been suspended for an indeterminate time, in an attempt to speed up the sugar negotiations between the countries.

Because of the potential oversupply of sucrose, there must be rationalization for both the Mexican and U.S. sugar industries. In the United

States, rationalization has occurred and is occurring by eliminating those plants or firms that cannot compete. The U.S. government has not acted to help individual plants or firms. The Mexican government should provide rationalization of their expropriated mills or incentives for ethanol production. If those mills cannot compete in the current trade arena, they certainly will not be able to compete as trade is liberalized between the countries. Having said that, the social and political implications of downsizing the Mexican industry must be recognized. There are also implications to the development of an ethanol industry in Mexico since that country's petroleum industry is controlled by the government monopoly, PEMEX.

From a strictly California perspective, California producers look forward to the time their industry could supply sugar to the border towns of Mexicali, Tijuana, and Tecate. There are several million customers in those towns. The California plants are closer than the Mexican-produced sugar. Sugar prices in the border towns are close to U.S. prices, and economists report the industry is price competitive.

Shwedel raised the issue of the Free Trade of the Americas (FTAA) initiative. Other than NAFTA, international sugar agreements should supercede regional trade agreements. Sugar is a commodity produced by over 50 major supplying countries and another 50 less important producers. The WTO should continue to reform sugar trade. Sugar economists tell us that the sugar industry in the United States is price competitive. If this is true, then in a level playing field it can compete. However, there are many factors that do not allow the world sugar playing field to be completely level. Shwedel raised the question about post-Castro sugar trade with Cuba. It seems that any Cuban imports to the United States would fall under the WTO tariff rate quota.

I don't envy the negotiators as they try to forge sugar trade rules between the United States and Mexico. It is a very complicated and difficult problem, and it's going to take some time to resolve the differences. There must be patience and creativity from both the U.S. and Mexican industries as this process moves forward.

THE SECTION 301 ACTION AND EFFECTS OF THE CANADIAN WHEAT BOARD ON U.S. HARD RED SPRING AND AMBER DURUM WHEAT

William W. Wilson and Bruce L. Dahl

INTRODUCTION

Another trade dispute was initiated in 2001 involving parties in the United States against the Canadian Wheat Board (CWB). This trade dispute was initiated by concerns raised by the North Dakota Wheat Commission, and represented through their council and experts. Compared to previous trade disputes, this one differs in that it focused on trade practices both within North America and in third countries and it included both hard red spring (HRS) and durum wheat. Ultimately these concerns were deemed legitimate by the U.S. International Trade Commission (ITC), and the Special Trade Representative (STR) concurred. Most important was that an affirmative decision was reached in the early stages of the action, as well as a determination that the CWB acts as an arm of the Government of Canada.

The case has been resolved (as of early 2002) and the Trade Representative is now seeking appropriate remedies. Not all the papers and evidence from the case are available and the resolution process is currently proceeding. These factors affect the scope of this paper. The purpose of this paper is to describe the evolution and findings of the case. In

the next section we describe the evolution and findings of previous related cases. Then, we identify the details of the Section 301 case and present the major claims and responses by the parties. We provide the results of the ITC investigation and the interpretation of the Trade Representative. In the last section, we discuss the likely next steps and issues that economists and policy analysts may consider in future deliberations.

EVOLUTION OF TRADE DISPUTES

The trade practices of the Canadian Wheat Board (CWB) have been a long-standing area of contention between the United States and Canada. Several investigations and negotiations have been conducted concerning the behavior of the CWB and its impacts on U.S. farmers since 1989. These investigations/negotiations have been undertaken under different auspices, which remain a point of contention within the WTO. The range includes the Canada/United States Free Trade Agreement (CUSTA); the U.S. International Trade Commission (ITC), Sections 22 and 332; General Accounting Office (GAO); North American Free Trade Agreement (NAFTA); Canada/United States Joint Commission on Grains; and the U.S. Department of Commerce,. Investigations have focused primarily on trade in durum wheat and within North America. These are summarized by Schmitz and Furtan in Table 1.

The issues between Canada and the United States were first addressed during the period 1989–2000 within the Canada/United States Free Trade Agreement (CUSTA). Under CUSTA, concerns over pricing, Canadian transportation subsidies, market access and import restrictions for wheat were addressed. Under this agreement, both sides agreed that neither country could sell agricultural products at a price below the "acquisition price" of goods plus storage, handling and other costs. CUSTA did not define the acquisition price so it failed to resolve concerns of the United States.

The United States requested a dispute resolution panel under CUSTA in 1992 to address their belief that Canada was selling exports at below acquisition costs. The panel in this dispute ruled in favor of Canada and defined the acquisition price in Canada as the initial price paid to

Table 1: Canada/United States Grain Border Disputes.

Investigation	*Conducted by*	*Completed*	*Outcomes*
Durum: conditions of competition	U.S. ITC, under Section 332 of the *Tariff Act* of 1930	1990	CWB deemed clean. No evidence of price cutting by CWB in U.S. market
Review of CWB and Australian Wheat Board	U.S. GAO	1992	No evidence of unfair trade practices
CUSTA	Bi-National Panel under CUSTA	1993	Ruled in favor of Canada. Received 3.5 year audit of durum sales.
Wheat and products: harm to U.S. farm programs?	U.S. ITC, under Section 22 of the *Agricultural Adjustment Act* of 1930	1994	1994/1995 cap on exports to the US precluding more severe trade restrictions
Canada/U.S. grain market and policy environment	Joint Commission on Grains	1995	Many recommendations were made to improve trade in both directions.
Ability of state trading enterprises to distort trade	U.S. GAO	1996	Acknowledged that there was no evidence that the CWB was violating existing trade agreements.
U.S. agricultural trade; Canadian wheat issues	U.S. GAO	1998	No solid conclusions, but focused on areas of U.S. concern
Countervailing duty on live cattle from Canada alleging CWB results in barley subsidy.	U.S. Department of Commerce	1999	Final ruling confirmed that the CWB did not provide a subsidy to cattle producers April 1997 to July 1998.

Sources: CWB and Schmitz and Furtan (2002)

farmers. Canadian sales into the U.S. market were again brought up in the negotiations for NAFTA. However, under NAFTA, the same commitments and definition of acquisition price contained in CUSTA were maintained despite appeals from U.S. wheat farmers for changes.

The ITC has conducted several investigations into conditions of competition between the United States and Canada. In 1990, the ITC investigated the durum wheat market from 1986 to 1989 and found no significant difference in prices paid by U.S. processors for Canadian or similar quality U.S. durum. In 1992, the ITC within Section 22, was asked to examine if imports of wheat, flour or semolina affected wheat support programs. Since Canada is the largest exporter to the United States for wheat, the ITC focused its analysis on Canada and found that Canadian imports were interfering with U.S. wheat. This was resolved with a Memorandum of Understanding negotiated between the United States and Canada which implemented tariff rate quotas on Canadian imports to the United States for one year.

The GAO investigated issues involving the ongoing dispute between the United States and Canada over wheat on several occasions, focusing on several specific issues. In 1992, the GAO confirmed that the CWB had received payments from the Canadian government for shortfalls in their pool account in 1990 and 1991. In 1995, the GAO examined the CWB as a state trading enterprise (STE) in the context of GATT and the WTO. In 1996, the GAO again examined STEs including the CWB. They found that the CWB benefitted from government subsidies covering occasional operational deficits, monopoly over domestic consumption and export markets, and pricing flexibility obtained through delayed producer payments. In 1998, the GAO again examined Canadian wheat imports into the United States with regard to STE activities of the CWB. They reiterated that the CWB is an STE, but indicated that available information was insufficient to determine whether the CWB was operating within existing laws.

In all cases, the CWB's response to these investigations has been to claim vindication as a fair trader. The CWB repeatedly states that it has withstood the eight trade challenges initiated by the United States since 1989.

THE SECTION 301 CASE

In October 2000 the U.S. Trade Representative, at the request of the North Dakota Wheat Commission, initiated an investigation under Section 301 of the *Trade Act* of 1974 examining the wheat marketing practices of the CWB. This case differs from prior cases in that it extends the areas of competition examined beyond direct comparisons within the North American market to offshore markets and includes the Hard Red Spring (HRS) wheat market as well as the durum wheat market. In the first subsections below, we summarize the claims, counter-claims and interpretations by the parties and government agencies. This is done without critique. Then, in the following section we provide our economic interpretation of the claims and interpretations.

U.S. Claims

The United States advanced several claims against the CWB in this action. It was argued that the CWB had special privileges and protections by virtue of its relationship with government that gave the CWB unfair advantages that could not be replicated or would incur additional costs/risks if implemented by commercial firms in the United States. Specifically, it was argued the CWB, as a government monopoly, has six benefits:

- government borrowing for operations and export credit extensions at reduced rates;
- government-guaranteed initial payment to producers;
- price pooling;
- lack of price transparency;
- preferential transportation legislation and regulations; and
- non-tariff import barriers.

In addition, the CWB benefits due to its supply monopoly, which allows it to enter into long-term contracts risk free. Due to the supply monopoly, the CWB can call supplies at any time without regard for prices or market signals. Extension of longer-term commercial contracts would incur higher costs/risks that would have to be accounted for. Finally, it was argued that the CWB has no mandate to maximize producer profits; that its only mandate is to avoid the undue accumulation of Canadian wheat stocks.

As evidence, the North Dakota Wheat Commission (NDWC) indicated an eight-percent price advantage on CWB offers in third country markets. The NDWC indicates that traders in third countries report a long-standing pattern of the CWB offering wheat at average selling prices five percent under U.S. bids. In addition, the practices of over-delivery of protein and over-cleaning of Canadian wheat amounts to an additional advantage of two percent and one percent, respectively. Further, the NDSWC indicates other transportation (rail) benefits.

The NDWC proposed five changes to induce more competitive practices:

- elimination of the CWB supply and export monopolies;
- definition of CWB "acquisition costs" under CUSTA must be changed to include all payments to producers;
- full transparency of CWB operations including acquisition costs, export pricing and other sales information unique to single desk exporters;
- national treatment (i.e., treating US and Canadian wheat similarly in each others's market system) for any U.S. wheat entering Canada including full and equal access to Canada's marketing and transportation system; and
- tariff rate quotas on imports of Canadian durum wheat ($50/ton for imports exceeding 300,000 tons) and non-durum wheat ($50/ton for imports exceeding 500,000 tons) into the United States.

Responses by the CWB

The responses by the CWB to the complaint and the requests of the ITC were generally limited, non-forthcoming and predictable. Most of their arguments are contained in the paper by Sumner and Boltuck (2001) summarized below.

Sumner and Boltuck evaluated the arguments in the Section 301 case for wheat for the CWB. Their responses were in three areas: the structure of the global wheat market, price discrimination, and the CWB as a farmer co-operative in procurement. They also commented on certain as-

pects of competition and trade between the United States and Canada. Their major conclusion is that the complaints leveled against the CWB were a simplistic view of cause and effect with regard to U.S./Canadian wheat trade. They included four specific arguments:

- the analysis does not take into account the world global market, national producers, and competing exporters;
- the focus on sales to eight specific countries ignores the losses in market share that are offset by gains in other markets;
- the analysis ignores the performance of competing exporters;
- the analysis does not consider that the efforts of the CWB may actually increase U.S. exports.

Further, Sumner and Boltuck indicated four aspects of the structure of the global wheat market that must be considered when analyzing competition between Canada and the United States:

- while the United States and Canada are large exporters (Canada is the third largest exporter), they are not the largest producers of wheat;
- the United States is a special case in that it exports wheat, yet it also imports wheat from other countries to supplement different class/quality needs;
- U.S./Canadian wheat trade is affected geographically; production areas in Canada are closer to demand sources in the United States than some U.S. production. In turn, U.S. production areas are closer to export locations than U.S. demand areas; and
- marketing performance of U.S. farmers is affected by actions of multinational traders who contract with importers and can source from multiple origins (Canada, the United States, and other countries).

In response to these arguments, the experts for the U.S. case indicated that Canada incorrectly combined the durum market and the wheat market in its presentation. The U.S. experts argued that durum does not have close substitutes and should be evaluated separately. If durum is examined separately, Canada is the second largest producer, behind the European Union and accounts for 59 percent of world durum exports. These

large market shares suggest that the CWB may be able to exercise unilateral market power in the world durum market.

The NDWC said that the CWB practices price discrimination (as has Kraft Furtan and Tyrchniewicz, Schmitz and the Canadian Wheat Board). Sumner and Boltuck argue that NDWC allegation of predatory pricing as related to price discrimination is simply not credible because the CWB could not expect to recover profits lost by engaging in predatory pricing. They claim that the price discrimination present in international markets is classic third degree discrimination (Phlips). Further, the ability to price discriminate is limited by the integration of importing markets into the global market; the prevalence of alternative sources of wheat including domestic and international supplies; the contestability of the market by potential entrants; downstream competition in flour, semolina and pasta; and the competition among wheat classes. Finally, the presence of third degree price discrimination may not necessarily be harmful to U.S. producers and may in fact benefit them. The prime example of this benefit is the CWB restricting exports to the United States.

In response, the U.S. experts argued that Sumner and Boltuck indicated the CWB would have no incentive to engage in predatory pricing because they would not be able to recover profits lost. The U.S. experts argue this would have some relevance if the CWB's overriding objective were to maximize profits for Canadian farmers. However, they argue the CWB has neither a statutory requirement nor actual incentive to maximize profits. Further, they argue that Sumner and Boltuck later indicate the objective of the CWB is to maximize revenues. The U.S. experts argue that maximizing revenues from the sales of wheat bought from Canadian farmers is not consistent with maximizing profits for Canadian farmers.

The NDWC argued that the CWB has a government monopsony for supply. Sumner and Boltuck indicate that while not technically the same, the CWB operates much like U.S. co-operatives. In addition, the CWB cannot have a monopsony in procurement because it does not retain profits.

Sumner and Boltuck indicated that while the CWB is more successful in forward sales than U.S. firms, U.S. firms are free to conduct business that way. They also argued that the Board success in offering long-term contracts is primarily due to scale of sales and not due to a supply monopsony.

In response the U.S. experts indicated that while the CWB cannot earn monopsony profits from Canadian farmers, it can benefit from running up excessive administration costs at the expense of Canadian farmers. Further, the CWB can enter into long-term contracts because it faces no market determined acquisition risks as the *Canadian Wheat Board Act* provides for jail sentences for farmers who attempt to market wheat to anyone other than the CWB. U.S. grain firms have no such assured supply and would need to purchase futures contracts to reduce risks to acceptable levels. The CWB does not have to hedge long-term contracts because the Canadian farmers (collectively through the pools) bear the risks of unexpected price changes.

ITC Interpretation

The ITC examined aspects of competition between Canada and the United States and made statements on nine dimensions.

The ITC indicated four structural differences between the Canadian and U.S. durum markets:

- Canada's durum production is three times larger than in the United States, and the U.S. durum market is more heavily dominated by Canada than the HRS market;
- there are no close substitutes for durum wheat, unlike the HRS wheat market where HRS and Hard Red Winter (HRW) typically compete for the same products;
- the market for durum is dominated by a few large sellers and a few large buyers. This domination has resulted in durum price discovery being more opaque due to limited observed trades and the demise of the Minneapolis Grain Exchange durum futures

contract. The demise of the MGE durum contract has been attributed to the presence of the CWB.

- Canada can forward contract durum sales while the United States typically sells on the spot transactions. The ITC argues that because the few trades occur for durum futures and cash sales are spotty and thin, the process of price discovery is more opaque. Thus, the CWB can make forward sales which no U.S. firm could due to the high level of risk and price volatility facing traders in a thinly traded market.

The ITC also identified several structural differences between the United States and Canada in ordinary wheat. First, The CWB has both monopsony and monopoly powers in marketing of western Canadian wheat. Also, the ITC claimed the CWB has several deductions applied to prices paid to farmers which they control and dictate (cleaning, transportation, handling charges). These deductions have been argued to be phantom charges which can be manipulated to Canada's advantage when pricing. The NDWC indicates that charges are deducted from all producer deliveries and that these do not reflect actual costs for all shipments. The excess can be used either to increase final payments to producers or to lower bids to the United States. The CWB disputes these allegations.

The ITC found three significant differences between the CWB and producers co-operatives:

- the CWB has financial security from government and backing of its borrowing and lending;
- all western wheat producers must use the CWB to market, however producer participation in a co-operative is voluntary. Thus, the CWB has no "free riders' adding to Canadian supply, nor under-cutting the CWB's pricing structure.
- the CWB does not have to accept all saleable western wheat offered to it (but it is contractually obliged to request delivery of 100% of the amount it does accept), whereas a cooperative does. This control gives the CWB power over quantities as well as prices.

The ITC surveyed market participants for terms and conditions of pricing in the United States. Respondents indicated that many purchases of Canadian wheat are quoted and contracted relative to U.S. prices, often using the Minneapolis HRS prices. Prices for U.S. grain typically included premiums and discounts for grade factors not meeting specifications while Canadian sales contained only premiums for grade differences. The ITC indicated that the premium for No. 1 over No. 2 CWRS was three cents per bushel which is consistent with U.S. price differentials for grades. Other differences in pricing centered around delivery terms, where Canadian sales were more likely to be forward sales than spot sales and were more likely to have longer delivery terms.

The ITC also examined the issue of over-delivery of protein for U.S. and Canadian sales in the U.S. market by surveying market participants. They found that 65 percent of U.S. HRS and durum shipments examined were over-delivered on protein, while 54 percent of the Canadian contracts were over-delivered on protein. Most of the over-deliveries were small with all deliveries within 1.5 percent of the protein level specified in the contract. None of the respondents indicated adjustments in price due to over-delivery on protein. However, the ITC's analysis indicated that when a delivery exceeded the contract protein specification, the delivered price exceeded the contract price in about one fifth of the reported purchase contracts.

The ITC examined prices of U.S. and Canadian wheat. Direct comparison of contracted and delivered prices were not possible due to differences in reporting contract terms (grade, protein, timing, and other factors). Two analyses were conducted. The first examined contracted (largely gateway) prices for comparable wheats (No. 1 CWAD and No. 1 HAD; No. 1CWRS and No. 1 HRS; and No. 2 CWRS and No. 2 HRS). The second analysis examined delivered prices, basis Minneapolis. Results indicated that prices basis Minneapolis for CWAD were higher than HAD for all months except one over the period 1996/1997 to 2000/2001. Comparisons for No. 1 CWRS versus HRS were mixed. Some CWB prices were higher and some lower than U.S. prices. For No. 2 CWRS, prices at Minneapolis were generally higher than No. 2 HRS.

The ITC sought to examine market practices and prices for exports from Canada and the U.S. to selected countries. Issues examined included quality differences including overdelivery on specifications and export price comparisons. Foreign and U.S. buyers indicated that Canada was more likely to over-deliver on quality than U.S. shippers. Most over-delivery for protein was within 0.2 percent. However, Canada was more likely to over-deliver in excess of 0.8 percent higher than specifications versus exports from the United States. Prices were often not adjusted for over-delivering on protein.

The Commission asked survey respondents for information on monthly export prices for HRS/CWRS and HAD/CWAD for the eight exporting countries examined. Direct comparisons of export prices were limited due to non-response and the unavailability of prices. Some countries bought only from either Canada or from the United States so prices were available from only one of the exporters. Others received exports directly through the CWB where no price data were supplied. Direct comparisons were made for the Venezuelan market (a market served by CWB accredited exporters). They indicated that prices for No. 2 HAD and No. 2 CWAD offered to importers in Venezuela generally moved in the same pattern. Otherwise, the ability to verify claims about price discrimination and marketing were extremely limited.

There are several important features of rail transportation that are important for wheat trade between Canada and the United States. Canada has regulated rates (now regulated for maximum revenue) to eastern and western ports for export of wheat. These rates are below comparable commercial rates and significantly below U.S. rates. Shipments of Canadian wheat to the United States are not covered by regulated rates. The CWB is the shipper of record (in other words, is presumed to pay the bill) and rates are negotiated between the shipper and the railways. The CWB also provides some rail cars without charge to the railroads. The CWB argues that higher U.S. rail rates are due to a greater railway monopoly concentration in the United States. However, the ITC saw no difference in Class 1 railroad servicing areas or the layout of shortlines between the United States and Canada. They indicate that when alternative modes of transportation

included (barge, truck), transportation concentration is lower in the United States than in Canada.

Finally, the ITC examined effects of Canadian trade and market regulation on U.S. exports to Canada. They found participants in the U.S. industry indicated Canadian regulation and laws, as well as the CWB operations, have virtually precluded the marketing of U.S. milling grade wheat or milled flour to Canadian mills and buyers. Specifically, they identified varietal registration and end-use certificates as hindering U.S. movements into Canada. Further, U.S. interests argued that the CWB lowers prices to Canadian mills to eliminate any possibility of U.S. wheat or flour coming into Canada. The Wheat Access Facilitation Program which was designed to allow U.S. wheat access to Canadian rail is no longer in use.

Response by the Special Trade Representative

The U.S. Trade Representative found in favor of the NDWC that the CWB's monopolistic system disadvantaged U.S. farmers and undermined the integrity of the U.S. trading system (USTR, 2002). Specifically, the USTR indicated that "the monopoly CWB has taken sales from U.S. farmers, and is able to do so because it is insulated from commercial risks, benefits from subsidies, has a protected domestic market and special privileges, and has competitive advantages due to its monopoly control over a guaranteed supply of wheat" (p. 8).

The USTR committed to undertaking several strong initiatives to address problems with the CWB and specified four steps:

- examine prospects for a dispute settlement case against the CWB in the WTO;
- work with the NDWC and the U.S. wheat industry to examine the possibilities of filing U.S. countervailing duty and anti-dumping petitions with the U.S. Dept. of Commerce and the ITC;
- work with the industry to identify specific impediments to U.S. wheat entering Canada and present these to Canadians;
- provide ongoing effort to vigorously pursue comprehensive and meaningful reform of monopolistic STEs within the WTO agriculture negotiations.

The USTR decided not to apply tariff rate quotas at this time as this application would violate NAFTA[1] and WTO commitments, it could result in retaliation by Canada, and it would not achieve a longer-term solution to market distortions caused by the CWB.

Post-Announcement Positioning and Spin-Doctoring

As has become usual in these types of proceedings, all affected players began spin-doctoring their positions. Following is a synopsis of what has been said.

Canadian Wheat Board and Other Canadian Interests. The CWB released an initial statement indicating that because "the U.S. did not impose tariffs, we have successfully come through our ninth trade challenge" (Canadian Wheat Board, 2002; p. 1). Other respondents from Canada were less optimistic. Art Enns, president of the Western Canadian Wheat Growers Association indicated that the ruling was a serious threat to western grain producers. He also indicated that "it was interesting that the main targets of the investigation are the very same things that the CWB claims as its strengths" Western Canadian Wheat Growers, p. 1). Further, the fact that the focus is only on the practices of the CWB and not on non-board grain markets, poses a major challenge for western farmers (Western Canadian Wheat Growers). The president of the (Canadian) Western Barley Growers Association said, "The CWB's lack of transparency continues to be an irritant to our trading partners, which results in continual action against Canadian farmers. It is time that the CWB and the Canadian government took action to make participation in the Canadian Wheat Board voluntary, thereby removing the basis of complaints and trade investigations" (Western Barley Growers Association, p. 1).

U.S. Responses. Responses from U.S. parties included the Secretary of Agriculture Ann Veneman, who supported the decision. She indicated that the investigation "clearly establish that the trade-distorting practices of the Canadian Wheat Board and the country's restrictions on imports of wheat are detrimental to the U.S. wheat Industry" (U.S. Wheat

[1] However, since then there has been disagreement on this interpretation of NAFTA.

Associates, 2002 p. 1). North Dakota's congressional delegation and Governor supported the ruling, yet they had wanted a stronger, more immediate action. Senator Byron Dorgan (D-ND) said, "We should welcome an opportunity to watch Canada defend the maintenance of a state-run monopoly in the middle of a free-trade zone" U.S. Wheat Associates, 2002, p. 1). Other players including the North American Millers Association chairman Bernard J. Rothwell III, indicated that "they would look forward to working with the Administration and growers toward the mutual goal of eliminating monopoly powers of STEs" (U.S. Wheat Associates, 2002, p. 1).

ASSESSMENT AND DISCUSSION OF POSITIONS IN THE ACTION

Given that this case is ongoing at the time of preparing this paper and that documents and evidence are not all publicly accessible, the discussion below is somewhat limited. The ruling is being discounted by some as just another finding without teeth or solid evidence. It is important that the findings were affirmative in terms of the allegations and that the CWB is an arm of the government. These findings differ from previous proceedings. They further illustrate the problems of market integration with disparately organized marketing systems and the resulting difficulties of harmonization of policies and business practices.

There are several potential paths that could ensue, such as a negotiated agreement, the Trade Representative pursuing remedies inclusive of the WTO resolution, or simply allowing the issues to pass away with an undignified death. The claims that NAFTA precludes the imposition of tariff rate quotas are apparently debatable. Nevertheless, for our purposes there are a number of major issues that will no doubt be revisited by economists, industry and policy analysis.

The major theme or logic to this paper is intended to coincide with what appears to be the economic logic of the case. There are three points to that logic:

- there are special rights and privileges enjoyed by the CWB that are not easily replicated by competitive rivals;

- these special rights and privileges facilitate greater discretion in pricing, strategy and positioning than could be enjoyed by commercial rivals;
- these powers result in an unfair competitive advantage relative to rival suppliers..

While these comprise a general proposition, it is normally reflected in the claim that the CWB uses extensive price discrimination in off-shore marketing. The CWB and its proponents are on record many times making this very point (see on p15). The notion is that these special rights and privileges facilitate a greater extent of price discrimination than would evolve in a more competitive marketing system.

These aspects of CWB operation are discussed in the remainder of this paper.

Special (Exclusive) Rights and Privileges of the CWB

STEs can influence numerous regulations and policies to their advantage which are much more difficult to implement in a competitive commercial marketing system. Exporter STEs have advantages in sales arrangements, quality regulations, to name two. For these reasons, anything that undermines the powers of STEs (both import and export) would reduce disadvantages of competitive rivals because it is extremely difficult (costly and/or risky) to replicate these advantages within a commercial marketing system.

The WTO defines an STE as, “Government and non-government enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in the exercise of which they influence through purchases or sales the level or direction of imports or exports” (U.S. GAO, 1995; p. 16). The CWB conforms to every definition of an STE and is acknowledged as an STE through past submissions to the GATT/WTO. Most important are the

numerous exclusive rights and privileges bestowed on the CWB that are not available to rivals.[2]

In the case of the CWB there appear to be numerous rights and privileges. We include three of greatest importance, as examples only:

- guarantees on initial payments made to producers- -the Government of Canada guarantees the CWB (as a selling organization) for these payments, not individual producers;
- monopoly on procurement; and
- monopoly on selling wheat and barley from Canada to domestic and off-shore buyers.

In addition to these, the CWB maintains other exclusive rights and privileges, not normally acknowledged, but which could likely be interpreted similarly:

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[2] Canada's position is that Canada should maintain the ability to choose how to market its products. Agriculture Minister Vanclief has said that, "If other countries have concerns regarding alleged trade effects of orderly marketing systems, Canada is prepared to discuss factual concerns. But Canada will not engage in sterile debates over alternative marketing philosophies." Also, it is Canada's position that it was willing to discuss practical trade concerns. However, "Canada will seek to ensure that any new disciplines proposed to deal with the perceived market power of such enterprises apply equally to all entities, public or private, with similar market power" (Agriculture and Agri-Food Canada 1999).

The CWB's stance is to reinforce STEs as legitimate commercial enterprises. They have been advocates for further reductions in support programs, and "future agreements must continue to ensure that Canada has the right to establish its own approach to marketing, including the CWB." (CWB, July 1999). In the case of the Australian Wheat Board, Chairman Trevor Flugge said, "We also expect that the issue of state trading enterprises will be considered during the course of negotiations. The issue should not be STEs per se, but rather whether the entity concerned contravenes any established world trade rules. In light of this, we believe each STE should be examined on a case by case basis and we would strongly refute the claims made by the United State in relation to so-called trade distorting practices of AWB Limited as an STE" (Australian Wheat Board, May 31, 1999).

- rail car ownership by governments and allocation authority for CWB grains;[3]
- special legislated rates on rail grains (i.e. for grains grown in western Canada there are separate regulations);[4] and
- non-reporting of prices (facilitating non-transparency).[5]

While there are many issues related to the integration of STE types of functions into more commercially competitive industries, there are three areas of particular importance in
grain trading which warrant special attention: the competitive effects of guaranteed initial payments and procurement monopoly, price discrimination and price transparency.

Guaranteed Initial Payments

One of the important features of some STEs is the guarantee by government of initial payments paid to producers. This is a fundamental tool of the CWB. This mechanism, along with the purchasing monopoly provides advantages to these selling organizations. While there are numerous impacts of these mechanisms, two are particularly apparent in a reasonably competitive market place. One impact is that the initial payment is typically a sharp discount relative to market prices. In recent years, the spread between initials and market price appears to have widened and does not accurately reflect

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[3] Rail car allocation authority is granted to the CWB for specified movements and provides several benefits, including making adjustments to grain transportation plans, ensuring farmer access, fostering (foisting) competition among handlers via tendering systems, etc.

[4] In 1996 the Canada Transportation Act replaced the National Transportation Act with competitive provisions. Concurrently, it created Div VI rates with the maximum rates on grains, which by now were based on 1992 frozen costs, indexed upward. These were for statutory movements defined as grain and grain products with origins in the Prairies, to specific export ports. Exclusions were made for grains not grown in the Prairies (e.g. the United States) and grains exported to the United States. This resulted in two regimes of rates—one subject to normal regulatory processes and the other for statutory grain movements. The latter regime of rates was more favorable and has since been assigned a revenue cap.

[5] Elsewhere in Canada and the United States, government entities are active in price reporting for purposes of facilitating more symmetric information among rivals.

price differentials associated with quality differences. For an exporter STE the initial represents an element of marginal cost for transactions, which could be argued to be the lower bound of marginal cost. This situation contrasts to a private-firm rival for whom a major component of the marginal cost of selling is the current market value. The effect of this differential provides greater pricing flexibility to the extent it can be pursued by the STE.

The other impact of these mechanisms in competitive selling is that it provides a greater ability for making fixed price deferred delivery contracts, an important issue in competition among selling organizations and firms. Wilson et al. (1999) first described this relationship. In concept, large export firms could provide similar terms but they would be more costly to execute. Wilson et al. indicated that the policy regime in Canada (identity preservation along with a procurement monopoly) is fundamentally similar to the Canadian government providing a free put option to the CWB. Using typical values at the time of their analysis, the value of the free put option was about 8 cents per bushel.

This interpretation is important. If a competitive firm were to provide similar sales terms (i.e. fixed price for distant deferred delivery), that firm would have to assume a position of long-cash/long option (put). Of course, that position presumes there are perfectly efficient futures and options markets for these grains and grades, which of course is not the case even though it is commonly alleged. Hedging costs (i.e. execution costs) and transaction costs are non-zero, basis risks would still be assumed by the seller, and for most of the grains and grain types in questions, futures and options do not exist. Thus, these risks are not easily hedgeable, nor cost-free to assume.

These claims have been challenged by several authors. Veeman et al. (1999) argue that risks in procurement costs can be hedged and costs for search of supplies can be offset by contracting between producers and traders. They indicate that since contracting for supplies is not a widespread practice in the United States, traders do not face significant problems of grain acquisition. Further, they argue that because initial prices are known, U.S. traders know the CWB's acquisition cost whereas, the CWB does not know what those prices are for U.S. firms. Finally, they argue that

the practice of initial pricing results in less flexibility in the procurement pricing for the CWB.

Schmitz, Furtan and Baylis (1999, p. 31) indicate that government guaranteed initial prices are a soft-price discrimination policy that "may" violate WTO rules when payments are made because taxpayer revenue is transferred directly to producers. This is one of the core arguments of the ITC which indicates there is a tendency for the CWB to have greater pricing flexibility and advantages in deferred transactions versus competitive rivals.

Price Discrimination

Price discrimination is defined as "the same commodity being sold to different customers for different prices" (Phlips 1985, p. 5). Price discrimination may also occur when or if different quality products are sold to different customers for the same price, or if terms of trade are not reflected in prices. In economic terms, price discrimination is said to exist if:

$$P_i / MC_i \ldots P_j / MC_j$$

where P is price, MC is marginal cost and i and j represent two different customers.

Price discrimination is generally considered an acceptable trade practice and in some cases, a desirable business practice, subject to limits (Phlips) It is a very common practice, particularly among industries with high fixed costs but requires market power to effectuate and ability to separate markets. Examples abound including pricing by railroads, airlines, universities, movie theaters, etc. Generally, price discrimination is optimal for any selling organization if it has some monopoly power, if there are differences in demand elasticities among different customer groups, and/or if there are cost differences in serving different customers. Because of its appeal, and irrespective of its innocuous effects, it is frequently difficult to detect (according to the definition above). It is virtually impossible to prevent or to regulate selling firms/organizations from practicing price discrimination. This is generally true in domestic economies,

and no doubt would be excessively difficult or impossible in international trade. Indeed, that is what confronted investigators and consultants in this case.

There is much debate in this action about whether price discrimination occurs or not, how extensive is it, is it good or bad, and its impact prospectively on U.S. prices. However, both parties probably missed the important points. These arguments get bogged down in terms of market definition, class substitutability, elasticities and the inevitable problem of market
elasticities for products versus purchase probabilities for individual suppliers, all of which are elusive considerations without transaction prices. Despite these problems, there are numerous observations by U.S. Wheat Associates that suggest that the CWB (and the Australian Wheat Board) actively pursue discriminatory pricing practices (USTR 2002). Some of their examples would technically conform to the definitions of price discrimination as above. Irrespective of these anecdotal observations, it is common knowledge that price discrimination is a commonly practiced and the CWB admits an advantage they enjoy is the ability "to price differentially," particularly among importing countries and in some cases between companies in the same markets.

Kraft et al. (1996) purport to illustrate that the CWB has been able to price discriminate and as such to increase the revenue paid to their producers. Wilson and Dahl however qualify some of these observations. Many of the blatant examples of price discrimination generally coincided with the Export Enhancement Program (EEP) period in the United States. The EEP provided greater incentives for STEs to exploit price discriminating strategies- -the EEP simply exacerbated the demand heterogeneity confronting STE sellers and, itself, separated some markets. It is likely that price discrimination has been practiced for many years prior to and since

EEP, but during the period in which EEP was active, its use was likely facilitated.[6]

The WTO has specific provisions about price discrimination. STE's are subject to the WTO constraints that export subsidies do not exceed the allowable subsidies in the WTO Schedules, and a general constraint that they must behave commercially. Therefore, STEs can price discriminate as long as it is for "commercial" (as opposed to subsidization) reasons. Targeted price discrimination is allowed for STEs only as long as the amount of subsidy is less than the limits established in their respective country's WTO commitments.

For purposes of this action there are three important issues in relation to price discrimination:

- some of the claims and evidence are that the CWB offers wheat at a fixed differential relative to U.S. offers in specific markets. This belief irritates many U.S. parties. However, this does not necessarily imply price discrimination (as defined above), nor is it a case of non-transparency (as discussed below). It may simply be more symptomatic of brutal competition (i.e. reducing prices for market entry).
- under the definition provided above, it is virtually impossible to make credible claims about price discrimination without concurrent and detailed information about marginal costs inclusive of handling, shipping, as well as price adjustments for different grades, classes and specifications; notwithstanding the interpretation of what marginal cost means to the CWB.

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[6] Goodwin and Smith (1995) indicate that price discrimination is analogous to an implicit subsidy on exports if the seller is able to limit imports into the higher priced markets. Skully (1992) indicates that the CCC uses its export policies (the combination of EEP, PL480 and credit guarantees) to price discriminate. Paddock (1998) indicates that while the practice of price discrimination by STEs is a concern, he argues that alleged premiums could be extracted from any market with an inelastic demand without arbitrage opportunities. In contrast to Paddock, who suggested that price discrimination may be limited, Veeman et al. (1999) indicate that it was a common practice among private trading organizations and would continue to be even without STEs.

- certainly, the claims of over-delivering quality (if overt, which is questionable), would qualify as price discrimination, as would providing preferred terms for deferred shipments.

Taken together, the effect of several of the marketing policies in Canada (notably pooled pricing commensurate with lower initial prices, rail rate differentials, and others) is to make a larger component of costs as fixed, thereby lowering the relevant marginal cost of marketing. The effect of this is to facilitate a greater latitude in pricing than would be the case if the marginal cost represented a larger share of the total cost. Hence, these marketing policies likely have the impact of facilitating price discrimination to a greater extent than otherwise would be the case.

Price Transparency

There is a range of definitions for price transparency. Klassen indicates that a lack of price transparency is "a lack of full price disclosure" (Sosland, 1994 p. 29). Furtan describes it as "the extent that details of transactions made by purchasing or selling agents are available to the public" (Furtan, p. 4). Glickman defines it as "people knowing the market prices and volumes, and producers know on a fairly instantaneous basis what is happening and who's getting what for what dollars" Wilson, 1999 (p. 4). Wilson et al. define it as firms in bidding competition having symmetric information about each other, thus no bidders have a strategic advantage. If information is asymmetric, then bidders with superior information would have a strategic advantage (Wilson et al.).

Many of the aspects of the U.S. marketing system are highly transparent to competitors. These include public reporting of prices, export tenders, sales and inspections (weekly), and public tariffs for transportation and handling. In addition, results of all sales made under export assistance including PL480 and EEP are publicly reported. These mechanisms do not have counterparts (e.g., price reporting, reporting or export sales/shipments in a timely manner) in either Canada or Australia.

Factors affecting price transparency include a lack of futures markets and/or highly decentralized cash markets that may be subject to large

premiums and discounts for quality and the cessation of EEP activity has reduced the transparency of U.S. firms. Further, there are aspects of the Canadian marketing systems that both exacerbate and mitigate the transparency problem. These include price pooling, disclosure of daily CWB offers in the North American market, and the initial payment guarantee. Schmitz et al. (1999) summarize earlier works on transparency, and argue that price transparency was not trade distorting. They argue that if the CWB were replaced by multinationals, transparency would not increase. They argue that, in the world grain market, price discovery occurs in U.S. futures markets that are linked to cash markets throughout the world and these relationships are followed and known by both STEs and traders. As such, the bidding/asking prices of multinationals are as confidential as the CWB's offer prices.

Wilson et al. (1999) examined transparency and bidding competition in the international wheat trade. Stylized cases were developed to estimate the advantage of less transparent players in bidding games. Results indicate that as the number of bidders increase, informational advantages of less transparent bidders decline with most of advantages being lost when there are six or more bidders. Further, firms that both act as agents in some auctions and compete with STEs in others can defeat informational advantages of STEs. Finally, in their stylized game, the value of the likely informational advantages of STEs were estimated to be within the range one to two dollars per metric ton.

There is a fundamental difference between price transparency and transparency of operations. The CWB (as described by Paddock) alleges they are transparent due to the fact that they publish an annual report. However, this does not negate the issues associated with non-transparency in transactions. The annual report simply is an average of all pooled transactions over the crop year, available a year after the fact, and is virtually meaningless in mitigating the adverse impacts of transparency. Further, it is important now that the vast majority of the international grain traders have much greater public transparency than their predecessors of the 1970s. As examples, the largest exporters today include Cargill which has to report their financial performance routinely due to having an Em-

ployee Stock Option Program (ESOP); ConAgra and ADM, among others, which are publicly held stock companies and report their financials routinely; and the larger co-operatives which also report to the public and their shareholders. Thus, notwithstanding the irrelevancy of any of these to the real issues of price transparency, the CWB is no more or less transparent than other exporting firms in their public reporting of financial returns and operations.

Traditionally, marketing boards and STEs have not released information on export sales. As such, it is difficult to monitor transactions. This matter is further complicated by compliance issues with notification. The current questionnaire for STE notification to the WTO does not require information that would allow for verification of circumvention of commitments. That would require information on volumes of individual transactions, their level of subsidies and sales prices (Incgo and Ng, 1998). Nevertheless, under current WTO rules, countries are required to report their STEs. In the past, few countries reported them. For those that have reported their STEs, reports have been sporadic and the amount of information reported has been limited. This occurred due to STEs largely trading agricultural goods which were generally not controlled by trade rules. Potential changes in WTO rules have been advanced in prior negotiations to increase transparency. However, those countries with STEs have argued that transparency issues are covered in the notification system.

The issue of lack of transparency is highlighted in the ITC case. However, it is not clear whether the concern is lack of price transparency (or similarly, transparency about export sales, credit terms or other terms of transactions), or transparency of operations. Irrespective, it is important that greater transparency about prices is desirable. Certainly, individual rivals will strive very hard to be non-transparent to gain some asymmetric advantages. Nevertheless, hallmarks of market efficiency and effective economic policy is that greater transparency is desirable, which requires price and export sales reporting. Given the non-synchronous treatment of this issue regarding CWB marketing versus marketing elsewhere in Canada and throughout the United States, there is no doubt that this will be a continual challenge to reconcile.

FUTURE CHALLENGING ISSUES

The affirmative findings of the ITC on the NDWC claims regarding the CWB require that the Trade Representative seek resolution. How that resolution will ensue and its likely alternatives are not at all clear. It is not clear that the Government of Canada has left any room for a negotiated solution. And, it is not clear if the will of the current U.S. administration is to push for a resolution with any great zeal. Each party would likely prefer that the problem would just go away, as opposed to reaching, or forcing, a mutually acceptable resolution to the problem.

In light of these proceedings, policy analysts will have to deal with several issues in the coming years. Four of these are mentioned briefly. First is the issue of price discrimination and the extent that marketing policies (due to special rights and privileges) are the enabling mechanism is important. The WTO does not preclude price discrimination, probably due to the difficulty of monitoring, measuring and interpreting the results. Nevertheless, extensive price discrimination is likely not a favorable outcome for competition in the trading and vertically aligned industries.

Second, is the extent that non-transparency of prices affects rival's behavior and conduct in an industry. Third, operationally, NAFTA has relied on a loosely defined concept of "acquisition cost" to facilitate interpreting the prospect of anti-competitive behavior within North America. This should almost certainly be revisited looking for a more defendable definition.

Finally, independent of the specific claims in this action, some of the results are again a reminder of difficulties of integrating competitive rivals with entities subject to lesser competitive pressures, as well as inconsistent policy mechanisms. A few of these differences would include: 1) policies in the United States reducing acres (e.g. Conservation Reserve Program) in an open border market and income subsidies; 2) U.S. policies favoring storing (i.e. non-selling) versus Canadian pooling mechanisms favoring selling within a marketing year; 3) the salesmanship for Canadian grains in an environment where there has been reduced marketing efforts

by multinational trading firms; and 4) recent consolidations in Canadian grain marketing has likely allowed even more microscopic rights and privileges to be exploited by the CWB. These issues are all examples of the fodder for research and probably more trade actions in the coming years.

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U.S. SECTION 301 INVESTIGATION OF CANADIAN WHEAT TRADING PRACTICES

Terry Norman

Wilson and Dahl did an excellent job of presenting the history of the various U.S. investigations into the Canadian Wheat Board (CWB) and, in particular, the most recent Section 301 investigation of CWB trading practices. Given that this is the ninth investigation of this subject by the United States since 1990, I find it amazing that there can continue to be so much misinformation and misunderstanding about how the CWB operates and what it does.

As part of this recent investigation, the United States Trade Representative (USTR) requested the United States International Trade Commission (USITC) to carry out an investigation of the competitive conditions between U.S. and Canadian wheat. The public version of this report was released December 21, 2001.

FINDINGS

The USITC report refuted the two most serious allegations made by the North Dakota Wheat Commission, namely that the CWB engaged in price discounting and over-delivery of protein. Contrary to previous investigations, some of which had only concluded that CWB prices were an unsolved mystery, this investigation actually involved talking to the importers and purchasers of Canadian and U.S. wheat to obtain comparable price information. This resulted in the finding that the prices for Canadian wheat were normally higher than prices for the most comparable quality U.S. wheat.

In addition, the USITC report concluded that the over-delivery of protein occurs for both U.S. and Canadian wheat, but that this over-delivery is so small that it is not commercially significant. In fact, protein over-

delivery occurred to a slightly greater degree for U.S. wheat than for Canadian wheat. Wheat delivery contracts which specify a minimum protein level normally have a price penalty clause for any under-delivery of the specified protein content. As a practical matter, given the vagaries of sampling, wheat shippers normally try to provide slightly more than the agreed protein level to avoid having any specific sample trigger the penalty clause.

While these most important allegations were refuted based on the factual information obtained from the importers and purchasers, regretfully the USITC report also contained some factual errors and unsubstantiated conclusions. For example, the USITC concluded that, since imports of U.S. wheat into Canada are quite limited, there must be some barrier in place limiting such imports. This is a completely unsubstantiated conclusion which is factually wrong. There are no commercially significant impediments to imports of U.S. wheat into Canada.

Canada and the United States operate end use certificate systems for imports of wheat from the other country. The purpose of Canada's system is to ensure that imported wheat, which may be of varieties not registered for production in Canada, is not commingled with Canadian wheat in the commercial wheat handling system. This purpose is necessary to maintain the integrity of Canada's wheat quality control system which is based to a considerable extent on allowing production of only those varieties that meet minimum disease and performance requirements. These end use certificates are freely available and do not restrict imports of any variety or quality of wheat. In addition, the USITC seemed to think in error that Canada's wheat varietal registration system itself constitutes a barrier to trade. This system restricts the varieties that may be planted in western Canada, but has no influence on the importation of any variety for any purpose other than seeding. Wheat varieties not registered for seeding can still be imported freely for milling or feeding or any use other than planting. Most countries other than the United States have similar varietal registration systems.

The USITC report stated, again in error, that the Wheat Facilitation Program had been cancelled. This program, which allows sales of wheat by U.S. producers to elevators in western Canada, is still in effect.

The USITC also concluded that Canada's transportation policy favours the movement of CWB wheat and barley over other grains and oilseeds, but this is not the case. The railways must operate within a government established revenue cap, but within this cap, they are free to charge different rates for different commodities. So far, they have chosen not to do so. The revenue cap applies only to shipments to Thunder Bay or west coast ports and has no relevance for shipments to the United States. The USITC report overlooked the fact that CWB owned railway cars were paid for by prairie wheat and barley producers, not by the Canadian government, and that CWB- and government-owned railway cars are both provided at commercial lease rates for shipments to the United States.

The USITC accuses the CWB of being "an arm of the Government of Canada." While we are not quite certain what this is supposed to mean, by any reasonable interpretation of this phrase it would appear to be quite clear that the CWB is not "an arm of the Government of Canada." The CWB is financed and controlled by western Canadian wheat and barley growers. It is governed by a 15-member Board of Directors, 10 of whom are elected directly by wheat and barley growers and 5 are appointed by the Canadian Government. The USITC also indicated that the Canadian Government receives "profits" from the CWB. This is clearly not the case, since CWB revenues, less operating expenses, are distributed to western Canadian wheat and barley growers in the form of final payments for their grain.

U.S. GOVERNMENT RESPONSE

On February, 15, 2002, USTR Zoellick announced the conclusion of the Section 301 investigation and a four-pronged approach to dealing with the issues raised:

- to explore a potential WTO challenge.

While the grounds for such a challenge are far from clear, we await developments.

- to explore possible countervailing duty or anti-dumping duty investigations.

I can only assume that if reasonable grounds for such investigations existed, then the North Dakota Wheat Commission would have taken this step long ago.

- to assess the extent of real access to the Canadian market for U.S. wheat.

As I have already noted, there are no barriers to the entry of U.S. wheat to Canada. Canadian importers and milling companies have in the past and will continue in the future to import U.S. wheat when market conditions favour such shipments. Canada is always prepared to discuss ways to improve market access for wheat in both directions.

- to seek more stringent disciplines on state trading enterprises (STEs) in the WTO negotiations.

This search was already an element of the U.S. WTO negotiating position. The WTO already has disciplines and notification requirements for STEs and Canada has always been willing to discuss improvements to these disciplines in the context of concrete trade problems or issues which may arise from the activities of STEs, but we are not interested in a sterile debate on the "religious issue" of whether STEs are a "good thing" or not.

Finally, what are the prospects for the future? Will this issue ever be resolved? In my view, this issue is not likely to go away, not even if the CWB were to disappear one day. I expect that there will be continuing concern by some U.S. wheat growers so long as there are any significant imports of wheat into the United States from Canada. Canadian wheat ex-

ports to the United States currently move by the trainload directly to U.S. milling and processing facilities. In the absence of the CWB monopoly control of exports, individual growers in Canada would be more likely to deliver to U.S. elevators. The June/July 1999 issue of *Agricultural Outlook* published by the Economic Research Service of the United States Department of Agriculture contains an article discussing the economic and geographic factors influencing U.S./Canadian trade of wheat.

THE UNDERLYING PROBLEM

In my view, there is a real underlying problem in grain trade between Canada and the United States, but it is not the existence or activities of the CWB. The real underlying problem is the increasing divergence in the levels of support being provided to grain growers in Canada and in the United States. The much higher and ever increasing level of support being provided to U.S. grain growers is causing significant market distortions to the long-term detriment of U.S. grain growers. These higher levels of support are capitalized into land and other assets, driving up their prices, and making U.S. grain growers less internationally competitive than they could be. The November 2001 issue of *Agricultural Outlook* contains a series of articles dealing with the impacts of U.S. government payments. I expect that this situation will continue to get worse until the United States finds some way to get off the "treadmill" of ever higher levels of support to offset higher asset values which translate into higher costs of production.

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TRADE REMEDY LAWS AND NAFTA AGRICULTURAL TRADE

Colin A. Carter and Caroline Gunning-Trant

INTRODUCTION

In 2001, the World Trade Organization (WTO) initiated a new round of global trade talks with a high profile ministerial conference in Doha, Qatar. At the conference, the Ministerial Declaration was signed, establishing the negotiating agenda on agriculture, trade remedy laws, and other trade issues. Around the world the meetings were viewed as successful, especially from the perspective of developing countries. One reason for the positive response by developing nations was the agreement by U.S. negotiators to include trade remedy laws on the negotiating agenda. Although U.S. trade remedy laws have been found to be in full compliance with WTO laws, many U.S. trading partners (especially the developing nations) view trade remedy laws in the U.S. and other developed nations as hidden protection because they are viewed as being biased toward anti-dumping (AD) and countervailing (CV) findings.

In the United States, Congress was not pleased with the Doha outcome, as many in Congress are inclined to keep U.S. trade remedy laws off the WTO negotiating table. In fact, just prior to the Doha meetings, the U.S. House of Representatives voted 410 to 4 on a resolution instructing

the U.S. Trade Representative, Robert Zoellick, to keep U.S. trade remedy laws from being included in the Declaration. Mr. Zoellick declined to comply, and the laws were placed in the Declaration. The subsequent congressional reaction (in the form of a threat to deny the Administration Trade Promotion Authority, formerly known as the "fast-track" authority) indicates that trade remedy laws will be a contentious issue in the new round of trade negotiations.

The trade remedy laws applied by the United States that are at the center of the controversy are anti-dumping (AD) and countervailing duty (CV) laws, and include to some extent, import relief (safeguard) laws. The purpose of this paper is to discuss the use of this set of three trade remedy laws with respect to agriculture in North America. Their use and historical application in agriculture are analyzed with the intent of clarifying why these laws are so controversial.

U.S. TRADE REMEDY LAWS

U.S. trade remedy laws and their principal features are outlined in Table 1. The stated purpose of trade remedy laws is to offset "unfair" trade that injures domestic producers as a result of either foreign sales that are "dumped" into the United States at less than fair value (LTFV)[1] or that are influenced by foreign government subsidies (Table 1).[2] Import relief laws, commonly known as "safeguards," are intended to provide a period of relief and adjustment for an industry that is being seriously injured by increased competition from imports (Table 1).

The AD statute comes under Section 731 of the *U.S. Tariff Act* of 1930, as amended. A related statute is Section 701, which applies to subsi-

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[1] Sales at LTFV are considered "dumped" when the goods are sold in the United States at either below the exporting country's cost of production, or below the price of comparable goods sold in the exporter's home market or its other export markets.

[2] A "subsidy" is defined as a financial contribution made by a government or any pubic body, or any form of price support which confers a benefit and results in lower prices for exports.

dized exports from foreign suppliers. Under Section 701, if a foreign subsidy is found to injure U.S. producers, then a CV import tariff is applied. In addition, Section 201 of the *Tariff Act*, provides for temporary restrictions on imports -- such as high tariffs or import quotas -- which are deemed to be causing injury to a domestic industry (Table 1).

The trade remedy laws are collectively known as "administered" protection. The U.S. Department of Commerce (DOC) and the U.S. International Trade Commission (ITC) jointly administer AD and CVD law (Sections 731 and 701). The DOC first determines whether a commodity is being dumped or subsidized and then the ITC decides whether or not the U.S. industry has been injured as a result of the trade action. DOC procedure is much less transparent than ITC procedure, and normally the DOC rules in favor of the U.S. industry. The safeguard law (Section 201) is jointly administered by the ITC and by the President, in that the ITC determines whether injury has resulted to the domestic industry and then issues a recommendation to the President for no relief or for a specific method of relief. The President then decides whether or not to heed the recommendation of the ITC or to choose an alternative method or no method for relief.

Many other countries such as Canada and Mexico have trade remedy laws that are very similar to those in the United States including AD, CVD and safeguard provisions. Traditionally, the United States, the European Union (EU), Australia and Canada have filed the most AD and CV cases against foreign suppliers but more recently, developing countries (such as Mexico, Brazil, Argentina, India, Turkey and South Africa) have filed a growing number of cases. In fact, in the past few years, developing countries have filed about 50 percent of the total number of AD and CV cases world wide.

There is an upward trend globally in the filing of trade remedy cases (Stevenson, 2002). According to the literature, the growing number of trade disputes is due to liberalization of traditional trade barriers, unsatisfactory safeguard provisions, increasingly weak AD standards, and retaliation. However, many academic economists generally view AD and

Table 1: Selected U.S. Trade Remedy Laws.

Source: 107th Congress, Committee on Ways and Means, U.S. House of Representatives, *Overview and Compilation of U.S. Trade Statutes, 2001 Edition*, June 2001.

CV laws as little more than disguised protectionism used to protect domestic industries from foreign competition (Stiglitz,1997).

USE OF TRADE REMEDY LAWS IN NAFTA'S AGRICULTURE

The main reason that developing countries have criticized the use of AD and CV laws in developed countries is their growing frustration with the protectionist use of these laws by developed countries. In addition, there is a perception that these laws have been amended over time to make it easier for domestic industries to receive protection. For instance, the Uruguay Round of GATT negotiations endorsed the "cumulation process," whereby imports of all like- products are aggregated across the exporting countries for injury determination.

The use of trade remedy laws often conflicts with free trade agreements. For example, Brazil refused to fully engage itself in discussions on the Free Trade Area of the Americas (FTAA) because of the continued application of U.S. AD duties on products such as orange juice. In 2001, the filing of AD cases on Brazil's exports of raspberries and spring table grapes to the United States troubled Chile. It was no surprise that the U.S. grape and raspberry industries filed their cases while the negotiations for the FTA with Chile were in full swing. More recently, U.S. honey producers also received AD protection from competition from Argentina and China as well as CV protection from Argentina, which came at an inopportune time for Argentine producers in light of the economic crisis in that country at the time.

Over the January 1984 to June 2001 period, 761 AD and CV cases were filed in the United States (Young, Wainio and Meilke, 2003), of which approximately 71 (9.3 percent)[3] were agricultural cases. This number means that agriculture has a disproportionate share of cases, because agriculture's

[3] There are a number of different ways to count trade remedy cases with the result that summary statistics will vary. For instance, while the United States assigns a case number for each of the countries targeted in any investigation, Canada assigns a case number to each product involved in any investigation, regardless of the number of countries mentioned in the case.

share of the value of U.S. total imports is only about four percent.[4] U.S. import relief law was used less often; only 30 such total cases were filed from 1980 to 2000. However, U.S. agriculture filed 8 of these 30 cases, and thus accounted for a rather large share.

During the 1984 to 2001 period, Canada filed 22 agricultural AD and CV cases out of a total of 334 cases in Canada, or 6.6 percent.[5] Mexico filed 23 agricultural AD and CV cases (10.5 percent) out of a total of 219 cases. So all three NAFTA countries are extensive users of trade remedy law in agricultural trade.

The outcomes of both U.S. and Canadian AD and CV agricultural cases since 1980 are reported in Tables 2 and 3.[6] U.S. trade remedy laws and their principal features are outlined in Table 1. The stated purpose of trade remedy laws is to offset "unfair" trade that injures domestic producers as a result of either foreign sales that are "dumped" into the United States at less than fair value (LTFV)[1] or that are influenced by foreign government subsidies (Table 1).[2] Import relief laws, commonly known as "safeguards", are intended to provide a period of relief and adjustment for an industry that is being seriously injured by increased competition from imports (Table 1).

The AD statute comes under Section 731 of the *U.S. Tariff Act* of 1930, as amended. A related statute is Section 701, which applies to subsidized exports from foreign suppliers. Under Section 701, if a foreign subsidy is found to injure U.S. producers, then a CV import tariff is applied. In addition, Section 201 of the *Tariff Act*, provides for temporary restrictions on imports -- such as high tariffs or import quotas -- which are deemed to be causing injury to a domestic industry (Table 1).

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[4] Worldwide, AD cases involving agriculture account for about 4 percent of all cases filed by all countries (Stevenson, 2002).

[5] These figures for Canada and Mexico were obtained from Young, Wainio and Meilke (2003).

[6] We did not have a complete data set for Mexico at the time of writing this paper.

The trade remedy laws are collectively known as "administered" protection. The U.S. Department of Commerce (DOC) and the U.S. International Trade Commission (ITC) jointly administer AD and CVD law (Sections 731 and 701). The DOC first determines whether a commodity is being dumped or subsidized and then the ITC decides whether or not the U.S. industry has been injured as a result of the trade action. DOC procedure is much less transparent than ITC procedure, and normally the DOC rules in favor of the U.S. industry. The safeguard law (Section 201) is jointly administered by the ITC and by the President, in that the ITC determines whether injury has resulted to the domestic industry and then issues a recommendation to the President for no relief or for a specific method of relief. The President then decides whether or not to heed the recommendation of the ITC or to choose an alternative method or no method for relief. It is clear from the summary statistics in the tables that AD cases are more popular than CV cases. In the United States, 62 percent of the agricultural cases were AD and in Canada, 68 percent of the agricultural cases were AD. Stevenson (2002) offers an explanation as to why AD cases are typically more popular that CV cases. He argues that CV cases are more politically sensitive than AD cases because a foreign government is being investigated, while in an AD case it is only the foreign firm that is under investigation. In addition, Stevenson notes that the methodologies for CV calculations are less established than for AD calculations and therefore CVD cases may be more difficult to win.

In Tables 2 and 3 we report that 33 of the 69 total U.S. agricultural cases, and 27 of the 31 Canadian cases resulted in an affirmative ruling in favor of the domestic industry. Consequently, the "success" rate of Canadian agricultural cases was 87 percent over the 1984 to 2001 period, compared to 48 percent in the United States. This difference is striking and there are a number of alternative explanations for the higher success rate in Canada. Perhaps the Canadian Customs and Revenue Agency is better at stopping "non-starter" cases than is the U.S. DOC. Alternatively, the Canadian International Trade Tribunal (CITT) may be more sympathetic to domestic producers than the ITC, making it somewhat easier for domestic industries in Canada to win their cases.

Table 2: Outcome of U.S. Agricultural AD/CV Cases filed 1980 to 2000.

	AD	*CV*	*Total*
Affirmative	23	10	33
Negative	8	9	17
Suspended or Terminated	12	7	19
Total agricultural AD/CV cases filed	43	26	69

Source: Compiled from U.S. International Trade Commission, "Case Statistics," Memorandum, Public Version, November 8, 2001.

Table 3: Outcome of Canadian Agricultural AD/CV Cases Filed 1980 to 2000.

	AD	*CV*	*Total*
Affirmative	18	9	27
Negative	3	0	3
Suspended or Terminated	—	1	1
Unknown ruling prior to 1988			4
Total agricultural AD/CV cases filed	21	10	31

Source: Compiled from Canadian International Trade Tribunal, www.citt.gc.ca.

The previous literature has found that the initial filing of an AD or CV case often disrupts trade, irrespective of the final legal determination. Research has determined that imports typically fall about 20 percent even if no tariff is imposed (Prusa, 1992; Staiger and Wolak, 1994). This result is interesting but it was not separately measured for agricultural trade.

AD and CV laws are typically targeted at specific countries. Non-named third countries may benefit from the use of AD and CV law through a phenomenon known as *trade diversion*. Trade diversion occurs when a trade remedy action diverts trade away from a more efficient supplier targeted by the AD or CV action, toward a less efficient supplier that is not named in the trade action. Prusa (1997) studied all U.S. AD actions between 1980 and 1988 and found that trade diversion was a significant by-product of AD cases. He arrived at the surprising result that, due to trade diversion, both Canada and Mexico gained (on net) from U.S. AD duties. Over the time period covered in his study, Prusa estimated that both Canada and Mexico enjoyed a net gain of over $21 billion as a result of U.S. duties being levied on other third countries. Does this finding also apply to agricultural trade within NAFTA?

Table 4: Percentage Change in Value of Imports from Targeted Countries versus Rest of World: U.S. Affirmative and Negative Agricultural AD and CV Cases (1980- 2000).

	t-2	*t-1*	*t*	*t+1*	*t+2*
Affirmative:					
Targeted countries	21.97%	22.83%	-3.41%	8.19%	17.62%
Rest of World	2.78%	14.93%	0.94%	17.75%	4.11%
Negative:					
Targeted countries	21.78%	10.43%	5.49%	5.82%	-2.00%
Rest of World	8.68%	-0.53%	-1.43%	18.45%	7.95%

Source: Estimated from the US Department of Commerce and Foreign Agricultural Service trade data.

To begin to understand the impact of U.S. cases on both targeted and non-targeted countries, Table 4 provides summary statistics based on the 69 U.S. agricultural AD and CV cases filed from 1980 to 2000. The column in Table 4 labelled *t* represents the year that any particular investigation was filed. The other columns labelled *t-1, t+1*, and so on, represent years immediately before and after the filing. For each year that a case is initiated, a (weighted) average change in the annual value of imports of the named commodity or product is calculated. The weights are the target commodity's share of the value of U.S. imports of all targeted agricultural commodities with the same (affirmative or negative) ruling in that year. To arrive at a single percentage change as reported in Table 4, a simple average of the percentage changes for each ruling year is calculated.

Table 4 indicates that for those 33 cases with an affirmative outcome (i.e. in favour of the U.S. domestic industry), targeted imports decreased 3.4 percent in value, on average, during the year of investigation (year *t*) and increased 8 percent the following year (year *t+1*). We also found that targeted imports grew rapidly in the two years prior to the launching of the investigation (at about 22 percent).

For non-targeted countries in affirmative cases, the value of imports in year *t-1, t and t+1,* increased by 15 percent, 0.9 percent and 17.7 percent, respectively. This finding is consistent with the presence of trade diversion. If the outcome of the case were negative, targeted imports increased by 5 percent during the year of investigation, suggesting that trade

flows are disrupted even when the ruling is negative. The value of imports from non-targeted countries actually decreased by 1.4 percent during the year of investigation.

Figures 1 and 2 present the information from Table 4 in a different form. Figures 1 and 2 display percentage changes in targeted imports for affirmative and negative cases, respectively. The graphs demonstrate that trade cases with affirmative rulings were initiated after a period of high import growth[7] by both the targeted country as well as the non-targeted countries. Import growth by countries not named in the investigation increased by 15 percent in the period prior to the case, indicating the existence of significant opportunity in the growing market. The year the case is initiated, import growth by the targeted country (or countries) is a negative 3.4 percent while the rest of the world takes advantage of the gap in the market left by the targeted country and continues to export to the United States (0.9 percent)[8] in year *t* and 18 percent in year *t-1*.

For cases whose rulings were negative, there is distinct growth in imports in the period prior to the case being launched. As shown in Figure 2, the average annual growth in import value from targeted countries increases 22 percent two years prior to the case and a further 10 percent the year immediately before the case is initiated. Over the same period, the rate of growth of U.S. imports from non-targeted countries is lower, with 8.6 percent growth two years before the case is initiated and a decrease of 0.5 percent the year before the investigation. The year the case is launched, imports by the named countries continue to increase but at a reduced rate of 5.5 percent. Perhaps this trend is not surprising given the negative rulings that ensued; exporting countries may have felt confident that they were not engaging in unfair trade practices and therefore continued selling

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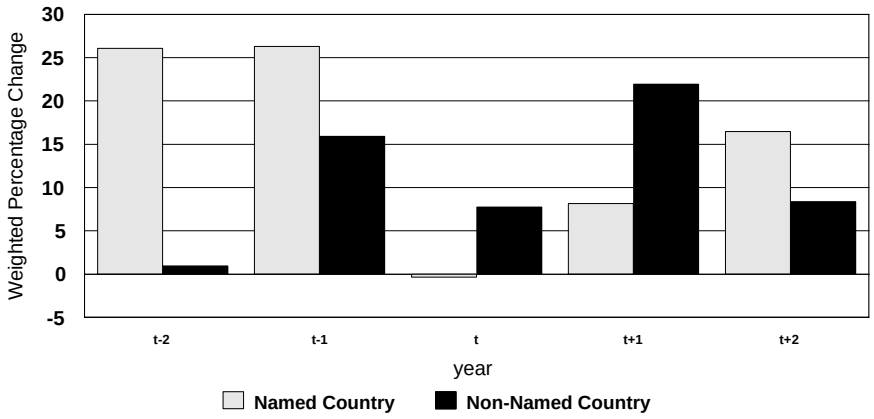
[7] Between 1980 and 2000, U.S. annual agricultural import value grew on average 4.3 percent (estimated from data provided by Agricultural Outlook, USDA-ERS, 1986, 1990, 1995 and 1998).

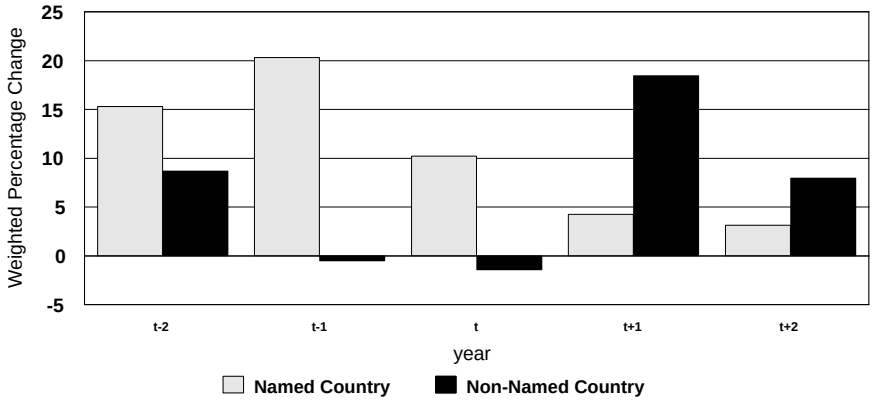
[8] These findings are preliminary because the reported percentage changes do not control for other factors such as the magnitude of the duty, the number of countries named in the case or import growth without dumping duties. Future regression analysis will take these issues into consideration in the same manner as in Prusa (1997).

Figure 1: Summary of Weighted Percentage Change in US Imports for AD/CV cases with Affirmative Rulings.



Source: Estimated from Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics.

Figure 2: Summary of Weighted Percentage Change in US Imports for AD/CVD cases with Negative Rulings.



Source: Estimated from Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics.

to the United States. Prusa (1997) notes that if a targeted country raises its U.S. market price by the full amount of the duty when a case is initiated, the value of imports may indeed go up. "The AD duty serves to create a price floor for the named country's products." What is interesting to note

is the significant jump in exports by the rest of the world in the year following the case (Figure 2), while the value of import growth by the named countries remains virtually stable (5.8 percent). The negative ruling clearly sends a signal to the rest of the world that prompts a surge in imports from the non-targeted commodities.

SELECTED EXAMPLES

As explained above, there are two interesting results in the literature. First, the mere initiation of an unfair trade investigation has an unsettling effect on targeted country exports, which Prusa (1992) and Staiger and Wolak (1994) refer to as an "investigation effect." Second, trade remedy protection involves substantial trade diversion; so domestic producers are not the only ones who gain (Prusa 1997). Our analysis of these effects on U.S. agricultural trade (reported in Table 4, and Figures 1 and 2) is preliminary and therefore in this section we supplement those summary statistics with a discussion of a few selected cases.

In a recent AD case, in October 2001, the United States government made a preliminary ruling that Canadian growers were dumping greenhouse tomatoes into the United States at prices below the Canadian cost of production. As a result of this finding, Canadian sales into the United States were assessed an average tariff of 32 percent. A few weeks later, the legal tables turned as the Canadian government initiated an anti-dumping investigation against the U.S. fresh tomato industry (Barichello, 2003). The Canadian counterclaim may not have been a coincidence. Rather, it could have been a tit-for-tat reaction to the steep U.S. duties that were imposed on Canadian greenhouse tomato sales to the United States. By July 2002, both cases were resolved with the identical ruling of no material injury.[9] While U.S. exports of fresh tomatoes to Canada declined 10 percent over the previous year during the period of investigation, Canadian imports of greenhouse tomatoes to the United States actually continued to increase

[9] On April 10, 2002, the ITC ruled that imports of Canadian greenhouse tomatoes did not materially injure the domestic market and the case was closed. On July 26, 2002 the CITT pronounced the same ruling with regard to imports of U.S. fresh tomatoes.

17 percent over the previous year.[10] It appears there was a weak investigation effect associated with the tomato cases.

Three specific recent examples of trade diversion arose as a result of U.S. anti-dumping cases against imports of frozen concentrated apple juice from China in 1999,[11] against imports of preserved mushrooms from Chile, China, India and Indonesia in 1998[12] and against imports of garlic from China in 1994.

The annual value of imports of non-frozen, concentrated apple juice from China jumped by 212 percent[13] in 1997, from US$8.1 million to US$25.4 million,[14] with continued but more moderate growth in 1998. This large increase displaced imports from Argentina, Brazil and Chile, which historically had been the three largest exporters of the product to the U.S. market. Not surprisingly, the large increase in the value of imports from China triggered the trade action taken by the United States in 1999, causing imports from China to decrease 20 percent in that year. Argentina, Brazil and Chile seized the opportunity provided by the anti-dumping suit and increased the value of their exports to the United States by an average of 74 percent in the same year. It should be noted that the total value of U.S. imports of non-frozen concentrated apple juice from all countries never declined over the period of investigation but actually increased 12 percent the year the case was initiated and a further 24 percent the following year. This result is consistent with Prusa (1997, p. 207) who determined that "import diversion mitigates most, if not all, of the effect of anti-dumping actions on the value of imports."

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[10] The percentage change in imports was calculated over the duration of the trade investigations. For Canada, the investigation lasted from October '01 to June '02 and was compared to the same period a year earlier. For the United States, the investigation lasted from March '01 to April '02.

[11] Case number 731-841.

[12] Case numbers 731-776, -777, -778, -779

[13] For the following specific, commodity examples, the percentage changes are all unweighted.

[14] Department of Commerce, U.S. Census Bureau, Foreign Trade Statistics the CITT pronounced the same ruling with regard to imports of U.S. fresh tomatoes.

A similar pattern of trade was experienced in the U.S. AD case targeted at imports of preserved mushrooms from Chile, China, India and Indonesia in 1998. Despite an average decrease in import value of 26 percent in 1996, the 10 percent increase in 1997 prompted the United States to take action against the four countries in 1998, causing the average value of imports from the four countries to decrease nearly 18 percent. This decline provided an opening in the U.S. market that was seized by two other large exporters of preserved mushrooms, Taiwan and Mexico, which increased their sales of preserved mushrooms to the U.S. by 38 percent. Two smaller exporters, Spain and Canada, also increased the value of their exports of preserved mushrooms about 125 percent. The following year imports by the four, targeted countries continued to decrease by 19 percent while imports from Taiwan, Mexico, Spain and Canada increased by an average of 70 percent. Total U.S. imports of preserved mushrooms from all countries actually decreased the year the AD case was initiated, however the following year they jumped 62 percent, again supporting Prusa's finding that AD cases do little to curb imports of a given commodity due to trade diversion.

Garlic is another example of a case that gave rise to trade diversion. It was an AD case against Chinese imports of fresh garlic initiated in January 1994, and resolved that November. Two years before the case (in 1992), 60 percent of U.S. fresh garlic imports came from Mexico, with Argentina and China making up a further 26 percent. In fact, at that time China was already displacing about 40 percent of Argentina's exports to the United States The year before the case (1993), the value of U.S. imports from China increased rapidly, by 453 percent, overtaking Mexico and suddenly making China the number one supplier to the United States. In 1994 when the case was initiated, the value of U.S. imports of garlic from China decreased from $11.9 million to $4.1 million, a drop of 65.5 percent. Mexico's imports took a 6 percent drop as well, while Argentina finally regained some ground, increasing the value of its exports to the United States from $2.4 million to $3.2 million (33 percent). China never regained its market share after the case. China's value of exports to the United States fell to $250,000 in 1995 while Mexico's exports nearly dou-

Table 5: U.S. Imports of Wheat Gluten from the European Union, Australia and Canada, $US.

	EU	*Australia*	*Canada*
1997	$32,707 (-18%)	$22,302 (-38%)	$8,683 (-19%)
1998	$50,511 (+54%)	$31,422 (41%)	$10,811 (25%)
1999	$24,082 (-52%)	$37,475 (19%)	$19,192 (77%)
2000	$33,377 (39%)	$36,775 (-2%)	$18,030 (-6%)
2001	$26,260 (-21%)	$23,703 (-35%)	$16,785 (-7%)

Source: Department of Commerce, US Census Bureau, Foreign Trade Statistics. http://www.fas.usda.gov/ustrdscripts/USReport.exe.

bled in value to $20 million and Argentina's exports increased by a further 19 percent to $3.9 million.

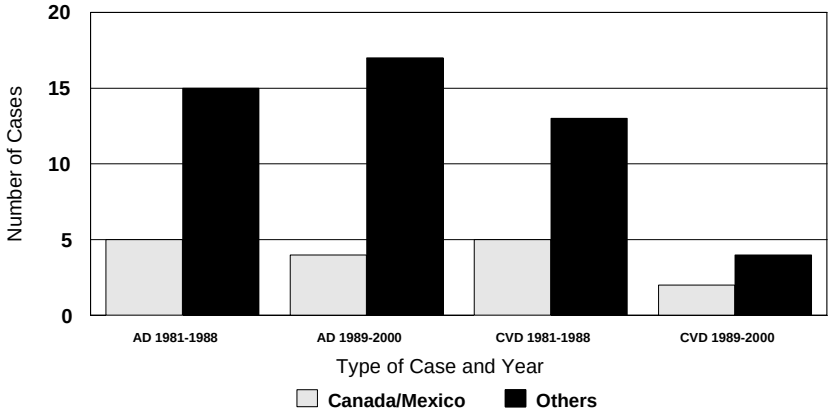
As an example of a safeguard action, the United States brought a wheat gluten case against Australia and the EU in 1997. In June 1998 a safeguard measure was imposed in the form of an import quota that was maintained for three years. Canada and Mexico (among other countries) were excluded from the quota. Only the Canadian exclusion was relevant since none of the other countries were actually exporting wheat gluten to the United States. The reason given for Canada's exclusion (according to the ITC) was that Canadian exports of wheat gluten were stable or even decreasing over the period under consideration (1993-97) and therefore did not cause injury to the U.S. industry. In contrast, over the same period, EU exports of wheat gluten to the United States increased by 38 percent.

Table 5 shows the value of wheat gluten imports from the EU and Canada to the United States from 1998 (the year the quota was imposed) until 2001. The percentage change from the previous year is reported in brackets to the right of the dollar value.

NAFTA'S CHAPTER 19

There has been little research on the impact of NAFTA on the use of AD and CV laws. One hypothesis is that as traditional trade barriers (such as tariffs and quotas) are lowered within NAFTA, the use of AD and CV cases has risen. An alternative hypothesis is that NAFTA's Chapter 19

Figure 3: U.S. AD/CVD Cases in Agriculture -- Pre and Post NAFTA Chapter 19.



Source: US International Trade Commission.

has contributed to greater discipline of the use of AD and CV, and served to lower the number of cases within NAFTA. Chapter 19 established a binational panel review of final AD and CV determinations involving goods of NAFTA. Each panel acts as an appellate body, but must apply the domestic law of the country in which the original decision was made.

Jones (2000) studied U.S. and Canadian Chapter 19 panel decisions over the 1989 to 1998 period. He examined 62 panel reviews, 33 of which challenged U.S. AD or CV decisions, and 29 that challenged Canadian trade remedy decisions. Jones found some (weak) evidence that Chapter 19 might have actually changed incentives in the United States and discouraged the filing of AD and CV cases against Canada. His results showed that Chapter 19 panels have tended to criticize U.S. decisions more than Canadian decisions and nine panels (from 1989 to 1998) significantly altered unfair trade case outcomes. Jones therefore argued that Chapter 19 might have reduced the likelihood of an affirmative finding of injurious unfair trade.

In Figure 3 we show AD and CV agricultural cases in the United States brought against NAFTA partners and against other countries. We divide the data into pre- and post-Chapter 19. The share of the number of U.S. AD cases directed at either Canada or Mexico was 33 percent from 1981 to 1988 and decreased to 23 percent from 1989 to 2000, suggesting a NAFTA effect. For CV cases, there was a slight increase in the share directed at NAFTA partners, increasing from 61 percent before Chapter 19, to 67 percent after Chapter 19.

CONCLUSION

Over the past two decades, NAFTA members have been large users of AD and CV trade law in agricultural trade. A large number of the cases have involved targeting other NAFTA countries. As traditional forms of agricultural trade protection are reduced through WTO and other trade agreements like NAFTA, there will most likely be a growing number of trade remedy cases filed by the United States, Canada and Mexico. These actions will not only obstruct agricultural trade but will also encourage retaliation and increased protectionism in other countries.

We analyzed trade patterns before and after AD and CV agricultural cases brought by U.S. industries over the 1980 to 2000 period. We found evidence that is supportive of the existence of trade diversion for those cases that were affirmative. For negative rulings, our results are consistent with the presence of an investigation effect. This is all the more reason to keep trade remedy laws on the negotiating table.

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Section 5

Overall Assessment and Conclusions

The section summarizes the contributions of this workshop and offers recommendations for action.

A POLICY LEADERSHIP COMMISSION FOR NAFTA

Ronald D. Knutson and R.M.A. Loyns

> *If there are to be positive and progressive next steps in the NAFTA process, there must be a Secretariat that is continuously pushing and monitoring progress. This Secretariat must have ways of concretely measuring progress—scoring the gains and losses. Economists have an important role to play in developing this scoring process. Such a Secretariat could have a series of special working groups to provide advice, facilitate dialog, and ease the transition.* (Knutson and Ochoa, February 2001).

INTRODUCTION

The above conclusion, reached in discussions at the Seventh Agricultural and Food Policy Information Workshop, forms the basis for this paper. The idea of a Secretariat arose from the frustration and realization that the root causes of the conflicts that have developed under NAFTA are not being addressed in a manner that takes policy to the next level of harmonization.

Throughout the previous seven workshops, the contributions of NAFTA have been identified and analyzed. In general terms, trading rela-

tions, terms of trade, and trade itself have all benefitted as a consequence of the arrangements first negotiated between the United States and Canada in 1989, and later by signing the agreements known as NAFTA in 1995. However, these workshops have also determined that the agreements, the processes they established for resolving disputes and, particularly, for moving forward in the achievement of freer trade indicate that much work remains to be done. Terms of trade in selected areas, differential subsidization (particularly in the crops area), data availability and analysis, market structure evolution and competition, and increasing incidence of trade disputes indicate that the present process of NAFTA has significant weak links.

Our purpose is to expand on the NAFTA Secretariat idea, to discuss the roles it might play, how it might operate, the problems it might solve, and the issues it would raise. This paper accepts the conclusion and charge of the Seventh Workshop to finish a task initiated by Knutson, Loyns, and Ochoa (2002) that compared and discussed policy and program compatibility across agriculture in the three NAFTA countries. In that paper, and in the general discussion that followed, there were a number of issues identified which led to the group conclusion that there is a need for a leadership body or agency within NAFTA with authority to become a focal point for dispute settlement; to provide data, analysis, and policy planning; and to exercise leadership that is reflective of NAFTA objectives. No such institution was built into NAFTA. The rubric used for this NAFTA Secretariat is the Policy Leadership Commission (PLC). What we hope to come from this paper and the discussion that follows is an articulation of the needs and role for a PLC as another contribution of the Policy Disputes Information Consortium exercise.

Illustrative of the institutional framework that impedes NAFTA performance are trade disputes that are dominated by domestic trade remedy laws (TRLs). The comments of Françoy Raynauld earlier in this publication indicate that the role of the NAFTA Secretariats in each country is not proactive and is limited to trade dispute referrals after the relevant TRLs have taken their course.

PREVIOUS WORKSHOPS

It is not possible to cover all of the instances identified in previous workshops where authoritative leadership is was needed to move NAFTA forward in the achievement of freer trade. The following, however, reflect some of the We offer six major conclusions that clearly indicate this need:

- The overwhelming issue coming from the workshops is the increase in frequency and the cost of full-blown trade disputes among the NAFTA partners. These disputes are most frequently administered outside the NAFTA in the sense that they are brought and processed under domestic TRLs.
- A serious NAFTA flaw is that individual countries can pursue their domestic subsidies without consideration of the effects on other countries. The ultimate irony is that these subsidies are contributing factors to TRL actions that also undermine NAFTA. The result is significant trade distortions in major field crops with spin-off effects on the livestock, dairy, and poultry sectors because of the feed grain connection.

Fulton and Furtan (2000) argue that harmonization means equivalent levels of support to producers in all three countries irrespective of the particular programs, determined jointly by periodic consultation.

- Closely related to the second point there is a need for analyses, proposals and leadership for integrating the excluded commodities from the original agreements into the NAFTA framework which includes tobacco, sugar, dairy, poultry, wheat and barley.

These excluded commodities are serious constraints on progress toward harmonizing trade among the three partners and on reducing trade and resource distortions.

- There is a lack of analysis of the distributional consequences of trade agreements.

As a result, charges and countercharges are not properly sorted out in the arena of objective research and education. This lack of information is a contributor to misconceptions about the impacts of NAFTA and thereby contributes to policy and trade stress. These workshops were conceived to contribute to objective analysis and information flows, but we are a drop in a veritable sea of charges, countercharges and misinformation.

- Data and analyses are scarce regarding the evolution of market structures and competition as business and trading relations react to more open trading conditions.

The papers on structure and competition in the Sixth Workshop (2002 publication) were far from definitive in their conclusions, but they certainly pointed to data problems, the need for more analysis and most importantly, to the inability of competition/antitrust policies in their present form to deal with evolving structure and competition issues.

- On the positive side, Knutson, Loyns, and Ochoa (2002) identified a number of opportunities for increased harmony and freer trade among the NAFTA partners that should not encounter serious conflict.

These opportunities include leveling the playing field in education, extension, research, economic information, grading systems, plant and animal protection, environmental regulation, disaster assistance, agricultural credit, food programs, and infrastructure. Taking advantage of these opportunities requires the initiative of a leadership body and varying degrees of cost sharing. In the case of Mexico, they are keys to encouraging capital investments by the agribusiness community, which, in turn, creates job opportunities for the rural poor and reduces pressures for immigration.

FUNCTIONS OF THE POLICY LEADERSHIP COMMISSION

What follows is designed to be a starting point for a discussion of the functions that the PLC might perform. In a sense, it is a wish list based on the experience of the authors in the agriculture and agri-food indus-

tries. This list does not consider the needs of other industries covered by NAFTA, although it is recognized that they may have comparable as well as unique needs. With these constraints in mind, we propose for consideration the following four PLC functions.

Data and Analysis. The PLC would be a clearing-house for information, data, analysis, and performance assessment. The output from this function would feed into other PLC functions such as policy planning and provide an objective source of information for mediation/
dispute settlement processes. In carrying out this function, The PLC would procure, compile and manage a database; manage, and distribute primary and secondary data on NAFTA issues; and be a clearing-house for research and information related to NAFTA operation.

Dispute Settlement. The PLC would be the first referral for dispute settlements instead of the appeal process from TRL decisions as now exists. Its powers would include analysis, negotiation, mediation and dispute settlement recommendations, all under carefully prepared guidelines that are designed to promote the objectives of NAFTA that reflect reasonable business and economic protocols, and that reduce the current state of trade dispute idiocy. Consideration should be given to prohibiting TRL actions within NAFTA. If this function is unacceptable because of sovereignty considerations, the PLC should have safeguards and penalties to protect against groundless interest group actions.

Planning and Evaluation. The PLC would conduct policy/program assessments and performance analyses related to NAFTA operations, its successes, and its limitations. The PLC would have policy planning capabilities and the authority to pursue needed initiatives within NAFTA and by the member countries to achieve harmonization. The PLC would provide proposals for the next steps in NAFTA development as well as for expansion considerations such as a Free Trade Agreement of the Americas.

Competition policy. The PLC would include a competition unit to assemble and to distribute structure/conduct data and information. This

unit would serve as a co-ordinator of country-competition/antitrust activities in matters related to NAFTA competition issues and would advise on policy development on competition issues.

In general, the PLC would be the catalyst for change within NAFTA and by its member countries to achieve freer trade. It would be an active contributor to the process of dispute settlement. It would be an open source of information on NAFTA and its progress. In this way, the PLC would contribute to overall improvement of public understanding of the role and contribution of NAFTA in a North American context.

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A POLICY LEADERSHIP COMMISSION FOR NAFTA?

Françoy Raynauld

Following are some comments on the proposal by Knutson and Loyns for a "Policy Leadership Commission" (PLC). Rethinking the role and/or mandate of the Secretariat as described early in this publication is one thing, and the three governments may want to look into this. Intervening to change the way trade disputes are handled is something else.

The first difficulty is that trade remedy laws (TRL) are domestic laws that differ from one country to the next. During each dispute, the pane's mandate is to look at whether or not the law of the country whose final determination is under review, has been applied properly *and nothing else*; it cannot judge *de novo*. Then, if a change is introduced, for example that the PLC could make "dispute settlement recommendations," the basic sovereignty of TRLs would be compromised, not to mention the basic integrity of the dispute settlement process agreed upon in the NAFTA. So, each country would have to accept the intervention of the PLC *prior* to the proverbial long arm of the law. To me, this looks like a non-starter to any discussion among the three governments.

There is a second difficulty. The PLC would have to have its own legal department to handle such things as:

- disclosure of confidential information has to be handled in a secure fashion when mediators attached to the PLC, instead of lawyers, are reviewing the issues raised during a trade dispute;
- antitrust issues would have to be dealt with. At the end of the day, a mediation requires finding a compromise between two disputing parties *in the same industry*. It would take no time at all for antitrust authorities to raise serious questions about the process and its outcome.

The issue is that legal content would have to be involved in the PLC even though that is what is sought to be avoided. The legal department within the PLC would also be called upon to react if, as Knutson and Loyns wrote, "there should be safeguards and penalties to protect against groundless interest group actions". The question here is, other than lawyers (representing at least two sides), who could arbitrate whether a complaint is "groundless" or not?

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This is the eighth in a series of annual workshop proceedings designed to produce economic information on NAFTA trade and policy issues in relation to the agricultural and agri-food industries. The workshops are conducted with the objective of contributing to reduction of trade and policy disputes among the NAFTA partners.

This workshop was conceived in an environment of crisis conditions in the European animal sector following outbreaks of BSE and Hoof and Mouth disease in England, and the resulting border closures within Europe and around the world. Animal agriculture and meat trade are major components of trade within NAFTA. An outbreak of a major animal or plant disease could have catastrophic consequences for trade within NAFTA if border closure occurred. In addition, trade actions, or threats of trade actions, in wheat, corn, tomatoes and sugar within North America continued to create the potential for border closures from disagreement based on policy differences.

This publication, *Keeping the Borders Open,* considers each of these potential sources of trade disruption within North America. It provides description and analysis of the existing policy and regulatory framework within NAFTA to deal with plant and animal disease problems, and to deal with trade actions that produce countervailing and dumping duties.

The workshop was held in March, 2002, and like earlier programs, was attended by academic and government economists, and industry and interest group representatives. The publication is intended for readers with a general interest in the North American agricultural and food sector, in the effects of trade agreements on markets and trade, and the nature of agricultural trade disputes among Canada, Mexico and the United States. The material is also intended to be relevant to decision makers at all levels of the food chain to inform on economic relationships and market reality as a means to reducing trade and policy stress.

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