# Understanding Technical Barriers to Agricultural Trade

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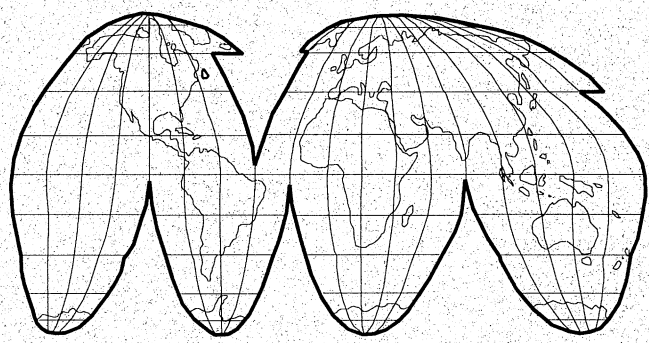

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# End-Use Certificates for Wheat: Trade-Distorting Administrative Barriers?*

Richard Gray and Donald E. Buckingham

Administrative trade barriers [ATBs] will play an increasing role in trade protection in the future. As non-administrative trade barriers such as tariffs and quotas decline, the relative importance of administrative trade barriers will increase. As new World Trade Organization [WTO] rules[1] prohibit other forms of protection such as quotas and tariff increases there will be some propensity for governments captured by interest groups to resort to the less transparent ATBs. Understanding the effects of alternative forms of ATBs and how these barriers are erected within the existing political and legal system should become an increasingly important aspect of international trade analysis.

End-use certificates [EUCs] are used to track commodities from the farm gate until they are transformed, consumed, or shipped out of a particular jurisdiction. Both Canada and the United States [US] use EUCs for wheat. They do so in order to restrict benefits accruing from domestic agricultural programs to domestically produced grain, to protect the integrity of the grading process, and to statistically track domestic and foreign wheat flows and their use in each country.[2]

Authorization for the use of EUCs is established through domestic law in each country with the enactment of various pieces of primary and delegated legislation (i.e., statutes and regulations), the specifics of which are reviewed below. From an international perspective, EUCs are quantitative restrictions contrary to the basic notion of global free trade. However, exceptions under the General Agreement on Tariffs and Trade [GATT][3], the Canada-United States Free Trade Agreement [CUSTA][4], and later the North American Free Trade

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[1]The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts (Geneva: GATT, 1994).

[2]The US Statement of Administrative Action, part of the package approved by Congress to implement the North American Free Trade Agreement, states for example, that the purpose of the US EUC scheme is to ensure that foreign produced agricultural commodities do not benefit from US government-assisted export programs.

[3]*Basic Instruments and Selected Documents of the Contracting Parties to the General Agreement on Tariffs and Trade,* Vol. 4 - Text of the General Agreement, Art. XI. (Geneva: GATT, 1964).

[4](1988) 27 I.L.M. 281, Article 705(1).

Agreement [NAFTA][5] permit their use. Thus each shipment of Canadian wheat into the United States and of American wheat destined for processing to Canada must be accompanied by an EUC. The table below sets out annual flows of wheat and durum between the two countries in the last two crop years affected by EUC requirements.[6]

**Table 1. North American wheat flows, 1993-1995**

| | | 1993/94 | | 1994/95 | |
|---|---|---|---|---|---|
| | | M. Bushels | M. Tonnes | M. Bushels | M. Tonnes |
| **From Canada to the US** | Wheat | 79.73 | 2.17 | 44.46 | 1.21 |
| | Durum | 16.90 | .46 | 10.66 | .29 |
| | Total | 96.63 | 2.63 | 55.12 | 1.50 |
| **From the US to Canada** | Wheat | 1.10 | .03 | .04 | * |
| | Durum | -- | -- | -- | -- |
| | Total | 1.10 | .03 | .04 | .001 |

Source: Canadian Grain Commission, *Grain Statistics Weekly*
* 662 Tonnes

In this paper we examine ATBs created by the requirements for EUCs for wheat imports into Canada and the US. On the surface these particular ATBs should have very little effect on trade. There is little economic incentive to import wheat into Canada and the US requirements should add only a small transaction cost for the import of Canadian wheat into the US. Thus EUCs could be seen as a gesture to satisfy local US political demands to restrict the imports of Canadian wheat. A far less obvious effect is that this requirement has allowed the Canadian Wheat Board [CWB] to effectively maintain monopoly control over shipments into the US milling wheat market by separating the feed and milling use markets

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[5](1993) 33 I.L.M. 289, Article 702(1) and Annex 702.1.
[6]EUCs have been required for American imports of wheat to Canada since 1991 but EUCs for Canadian wheat entering the US were not required before February 27, 1995. See *infra*, section 3.

at the point of end-use. Given this separation of markets, the US scheme may be enhancing Canadian producer revenue. If this hypothesis is true, the EUCs may not create any more than a token opposition from Canadian officials.

## The Canada-US Wheat Trade Disputes

For many years there were significant trade barriers for the trade of wheat between Canada and the US. Canada protected its domestic market with the use of import licenses administered by CWB. This protection allowed the CWB to operate a "two price wheat policy" where CWB domestic sales were generally maintained well above the world prices. During this same period, the US had an import tariff of $0.21 per bushel ($8/t). This tariff virtually eliminated profitable arbitrage opportunities for the export of Canadian wheat to the US.

The CUSTA, which came into effect in 1989, contained a formula to allow for removal of the Canadian import licenses and the US import tariff on wheat. As a result of the agreement coming into effect, the US has imported significant amounts of wheat and durum from Canada. As shown in Figure 1 imports rose steadily to peak at approximately 90 million bushels in 1993/94.

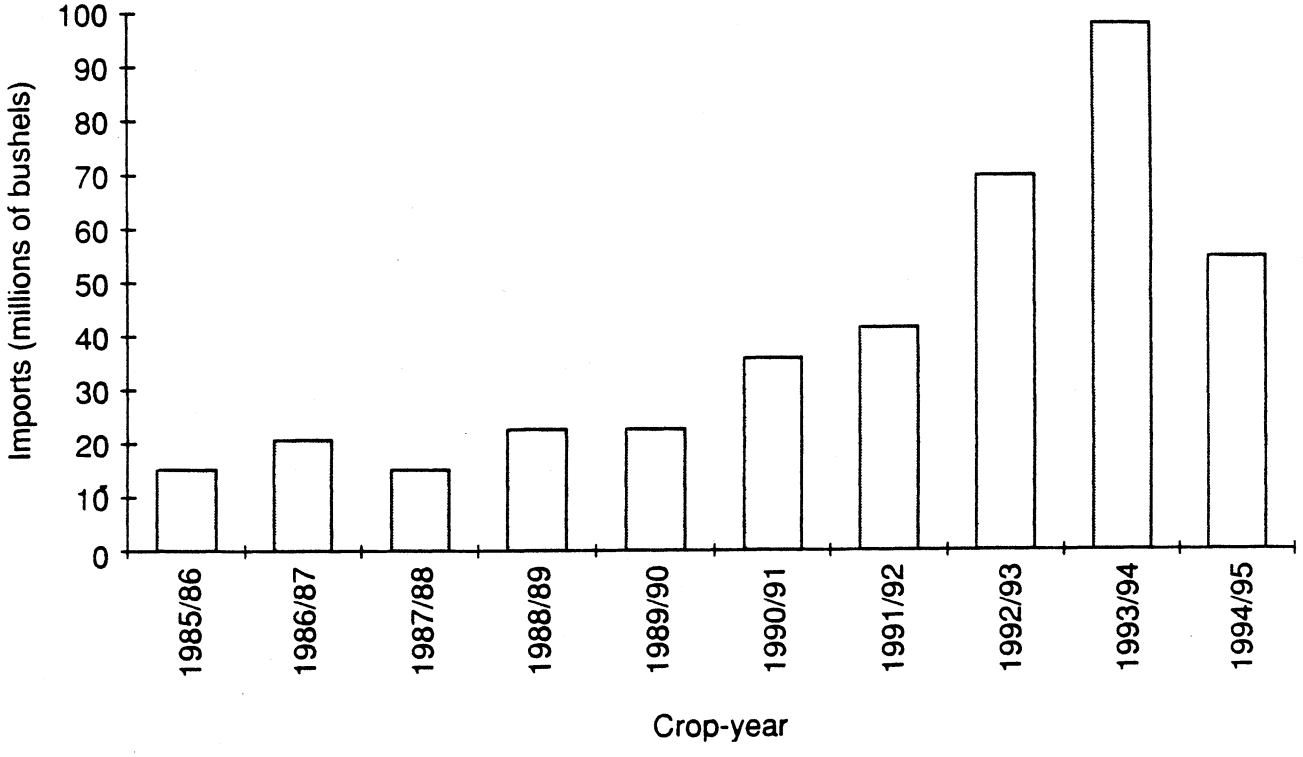


**Figure 1. US wheat imports from Canada.**
Source: *USDA Wheat Situation and Outlook*, various issues

The shipments of wheat from Canada became a major trade irritant to the US with legal disputes concerning the commodity beginning almost immediately after the CUSTA was implemented. Since 1989, there were four significant legal challenges attempting to restrict Canadian wheat imports into the US.

First, starting in 1989, North Dakota durum wheat producers argued that Canadian freight subsidies constituted an export subsidy, in violation of CUSTA Article 701.2. Second, after the US Trade Representative determined that Canada had not violated this article (because the freight subsidy under the Western Grains Transportation Act applied to all shipments to Thunder Bay, whether destined for export or domestic use), the US Congress instructed the ITC to examine the "conditions of competition" between the US and Canadian durum industries. The ITC rejected the argument that the CWB had been "dumping" durum into the US (i.e., selling into the US below acquisition price). The third legal challenge was the case of Canadian durum wheat sales heard before the bi-national panel in 1992 under Chapter 18 of the CUSTA. The bi-national panel made its unanimous final ruling in early 1993[7], finding there was no compelling evidence that the CWB was selling below its acquisition cost. Finally, a fourth case started in late October 1993, when the critical vote on NAFTA was before the US House of Representatives. President Clinton wrote formally to key Congressmen (who had tied their support for NAFTA to the wheat industry) pledging to investigate and possibly apply a Section 22 Agricultural Adjustment Act [AAA] action[8] against Canadian wheat. After the successful NAFTA vote in late 1993, the US administration resisted initial pressure to make an emergency Section 22 declaration and tried to ignore the issue altogether. However, in January 1994, the US administration initiated a full International Trade Commission [ITC] investigation under Section 22. President Clinton directed the ITC to investigate whether wheat, flour and semolina imports

> " . . . are being, or are practically certain to be, imported into the United States under such conditions or in such quantities as to render or tend to render ineffective, or materially interfere with, the price support, payment and production adjustment program conducted by the Department of Agriculture for wheat . . . ."

In the ITC decision there were three separate reports to the President each of which had distinct findings and recommendations. In one report, three of the six commissioners (including the Chair and Vice Chair) reported, as a group, that they determined that there was no "material interference" with the US wheat program by imports. These commissioners, however, did provide the President with recommended import restraints should he determine, contrary to their findings, that there was grounds for restricting imports. A fourth commissioner determined that there was sufficient evidence to find material interference, but recommended only a ten percent additional duty be applied after imports reached 500,000

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[7]CUSTA Bi-national Panel Report, "The Interpretation of and Canada's Compliance with Article 701.3 with Respect to Durum Wheat Sales," CDA-92-1807-01 dated 8 February 1993.

[8]Title I 1-21, 48 Stat. 31.

tons for durum and 800,000 tons for other wheat. Such a policy would not likely have had any significant impact on imports. The last two commissioners also found material interference and recommended relatively tight tariff rate quotas be applied.

Before the President took any action relative to the Section 22 of the AAA case, the wheat trade dispute between Canada and the US came to a negotiated resolution for the 1994/95 crop year. At the end of July, 1994, the government of Canada agreed to limit wheat exports to the US and the US agreed to drop its efforts to secure an Article XXIII action under the GATT to restrict wheat imports. In an effort to find long term solutions, the two states agreed that a bi-national commission of six to ten non government experts be appointed to examine all aspects of Canadian and US marketing and support systems and on competition in third markets for wheat. The Commission filed an interim report in June 1995 but at the time of this presentation had yet to file its final report.

Under the wheat peace agreement, Canada was allowed to export 300,000 tonnes of durum and 1,050,000 tonnes of "other wheat" from the CWB region to the US during the Canadian 1994/95 crop year at the existing NAFTA tariff rates. Shipments of durum between 300,000 and 450,000 tonnes were subject to $23 per tonne tariff. Shipments over 450,000 tonnes of durum and 1,050,000 of other wheat were subject to a more prohibitive $50 per tonne tariff. Shipments of soft winter wheat from Ontario and shipments of flour and semolina were exempt from any quantitative restrictions or additional tariffs.

The agreement lasted for 12 months ending in September 1995. No new agreement has been put in its place. During the one year agreement, Canada exported 295,000 tonnes of durum and 950,000 tonnes of other wheat but many speculate that these restraints had little influence on Canada - US trade.

On April 15, 1994, the US and Canadian governments signed the new WTO/GATT Agreement. Thus, as of January 1995, both states agreed to new tariff schedules for agriculture. Perhaps more significantly for the Canada-US wheat trade, the US gave up its AAA Section 22 rights and any existing quotas initiated under that Act, all of which had been grandfathered under previous GATT agreements.

**The Legal Basis for End-Use Certificates in Canada and the US**

Citizens on both sides of the US-Canada border have several reasons to be interested in obtaining the other's wheat for specific purposes. These include re-exportation or in-transit storage and shipping to a third state, importation for direct animal consumption, importation of seed stocks for domestic use, or importation for milling, manufacturing, brewing, distilling or other forms of processing.

Since the GATT 1947 and its coming into force in 1948, international trading rules have generally prohibited the use of quantitative restrictions on the import or export of goods.[9] The GATT 1947, however, provided for myriad exceptions to this general rule, including for example, exceptions which permitted quantitative restrictions to implement grading systems[10] or to otherwise protect the operation of domestic farm programs.[11]

Taking advantage of GATT exceptions, Canadian legislation makes it generally illegal for anyone to import wheat into Canada. The "grain trade matrix" of Canadian federal legislation[12] does however, in very limited circumstances, permit imports. Prior to 1989, the importer of foreign wheat was required to obtain an import permit or license for a fee, the granting of which was at the discretion of the CWB.

As part of the Canada-US Free Trade negotiations in the 1980s, Canada agreed to eliminate any import permit requirements for American wheat coming into Canada when levels of support for wheat became equal to or less than the level of government support for wheat in Canada.[13] If and when import permit requirements were lifted, Canada reserved the right instead to require EUCs for American wheat imports destined for processing in Canada.[14]

*The Legal Basis in Canada*

In 1991, Canada discontinued the requirement of import permits for American wheat coming into Canada. Instead, it instituted a legal regime that had been agreed to under CUSTA Article 705(1). Since that time American wheat destined for processing in Canada

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[9]GATT, Article XI.

[10]Article XI(2)(b).

[11]Article XI(2)(c). Other non-conforming GATT measures protecting the operation of domestic farm program were either grandfathered by the Protocol of Provisional Application that brought the GATT 1947 into force, or legitimized by waivers from GATT obligations permitted under Article XXV of the GATT.

[12]The Canadian Wheat Board Act, R.S.C. 1985, c. C-24; The Canada Grain Act R.S.C. 1985, c. G-10; The Seeds Act R.S.C. 1985, c. S-8; The Customs Act R.S.C. 1985, c. C-52.6; and regulations made pursuant to these Acts.

[13]CUSTA, Article 705 and incorporated into the NAFTA by NAFTA Article 702 and Annex 702.1.

[14]CUSTA, Article 705(1)(a). Subparagraph (b) further permitted Canada to require that imports destined for livestock feed be denatured and in subparagraph c) that seed stock be accompanied by a seed certificate issued by Agriculture Canada.

must be accompanied by an EUC.[15]

At a domestic level, the EUC permits otherwise illegal imports of American grain into Canada. The Canadian Wheat Board Act has been amended to allow the Federal cabinet to make regulations permitting

> ...the importation into Canada of wheat or wheat products that are entitled to the benefit of the United States Tariff of Schedule I to the Customs Tariff and that are owned by a person other than the [Canadian Wheat] Board...[provided]... that the wheat be accompanied by an end-use certificate referred to in subsection 87.1(1) of the Canada Grain Act, completed by the person importing the wheat, declaring that the wheat is imported for consumption in Canada and is consigned directly to a milling, manufacturing, brewing, distilling or other processing facility for consumption at that facility....[16]

Section 15.1 of the Canadian Wheat Board Regulations[17], enacted by the Federal cabinet in 1991, thus formally permits any person to import American wheat for processing into Canada provided they obtain, complete and distribute an EUC to the proper authorities.

The form of the EUC that must be used is set out in the regulations to the Canada Grain Act as Form 1 of Schedule XV.[18] Canadian processors importing American wheat must request the EUC from the Canadian Grain Commission. The Canadian Grain Commission must make EUCs easily available and at no charge. An EUC is required for each shipment of American wheat into Canada. The EUC must be completed in triplicate and accompany the shipped commodity when it crosses into Canada. When the shipment arrives at the border,

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[15]American wheat imported for direct animal consumption requires no EUC or import licence but must be denatured by red dye (CWB Reg. 15.1(b)). Since August 1995, American wheat imported and then re-exported requires in bond treatment under the Customs Act. Before 1995, the CWB required (CWB Reg. 14) in-transit import/export licences. American wheat imported into Canada as seed must be accompanied by a certificate issued pursuant to section 4.1 of the Seeds Act. (CWB reg. 15.1(c)).

Since 1995 import licence requirements have been eliminated on imports of wheat from foreign states. Instead, wheat originating from non-NAFTA countries for any purpose is subject to the tariffication rules of the WTO/GATT. Imports of wheat and durum to Canada are subject to a tariff of 4.4 percent up to a volume of 136,130 tonnes, or 3 percent of 1986-88 domestic consumption. Imports over this volume will be assessed an over-quota tariff of 57.7 percent for durum and 90 percent for other wheat. See H. Brooks and D. Kraft, "The Uruguay Round agreement and the Canadian grains and oilseeds industry" in World Agriculture in a Post-GATT Environment: New Rules, New Strategies (Saskatoon: University Extension Press, 1995) at pp. 205-206.

[16]Canadian Wheat Board Act, s. 46(b.1).

[17]SOR/91-302, s. 15.1, 1991 Canada Gazette Part II, p. 1649.

[18]Canada Grain Regulations, SOR/93-24, 1993, Canada Gazette Part II, p.213.

the Canada Grain Act[19] requires that the EUC be presented to the Customs officer, who keeps one copy to remit to the Canada Grain Commission. The remaining two copies of the EUC remain with the shipper/importer and the consignee or final processor.

To continue the tracing of the American wheat, the importer and the processor are required to prove through supplementary documentation filed with the Canadian Grain Commission that the American wheat has not been diverted from the stated use or facility. The importer must, within 10 days after the delivery of the grain to the processor, provide the Canadian Grain Commission with a copy of the bill of lading on which the processor has acknowledged receipt of the grain covered by the EUC.[20] The processor must, every three months after the receipt of American wheat described in an EUC, report[21] whether the wheat which is the subject of the EUC, has been fully consumed and if not, how long before it will be used. This reporting requirement continues until the processor can report that all of the wheat under the EUC has been consumed.[22] Thus all wheat imported by one Canadian processor must be used by that processor and cannot be otherwise traded or sold.[23] A schematic of the Canadian EUC process is shown in Appendix 1a.

Penalties for non-compliance with the EUC obligations are set out in the Canada Grain Act[24] and are of two types. There is a general penalty provision contained in section 107(2) which states that anyone contravening a provision of the Canada Grain Act, including the provisions for failing to obtain or fraudulently completing an EUC, is guilty of an offence and liable:

a) if an individual, on summary conviction to a fine not exceeding $2,000 or one year imprisonment or both; or, by indictment, to a fine not exceeding $4,000 or two years imprisonment or both;
b) if a corporation, on summary conviction to a fine not exceeding $3,000; or, by indictment, to a fine not exceeding $6,000.

A second penalty provision specific to the use of EUCs is also provided in section 105.1 and 107(1.1) of the Act. These sections create a special penalty for the unauthorized re-direction of grain covered by an EUC. Section 105.1 states that a person cannot knowingly use grain imported into Canada under an EUC for any use other than consumption at the facility referred to in the EUC. If a person does so, that person is liable:

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[19]Section 87.1(2).
[20]Canadian Grain Regulations, SOR/93-197, s.87(3).
[21]End-Use Certification Consignee Quarterly Report.
[22]Canada Grain Regulations, SOR/93-197, s.87(4).
[23]Section 105.1 of the Canada Grain Regulations prohibits anyone from using grain imported under a EUC from being consumed in any facility other than the one indicated in the EUC.
[24]Canada Grain Act, as amended by S.C. 1988, c.65, ss. 102-110.

a) if an individual, on summary conviction to a fine not exceeding $9,000 or two years imprisonment or both; or, by indictment, to a fine at the discretion of the court, or four years imprisonment or both;
b) if a corporation, on summary conviction to a fine of $30,000; or, by indictment, to a fine at the discretion of the court.

To date there have been no prosecutions under either of the penalty provisions.

*The Legal Basis in The US*

Effective February 27, 1995, all Canadian wheat entering the US for whatever purpose required an EUC. The Consolidated Farm Service Agency of the United States Department of Agriculture [USDA] is responsible for the administration of its EUC program. The program, as in Canada, only applies to wheat. American legislation mandating the use of end-use certificates, Section 321(f) of the North American Free Trade Implementation Act,[25] only requires the use of EUCs on commodities when Canada requires them of American products. Pursuant to section 321(f)(4), the Secretary of Agriculture must suspend the EUC requirement beginning 30 days after suspension of the EUC requirement by the Canadian government for American wheat.

Section 321(f) provides that the process for obtaining EUCs be set out in the regulations.[26] These regulations set out two forms which must be completed by importers, subsequent buyers, end-users or re-exporters of Canadian wheat. Form ASCS-750, "End-Use Certificate for Wheat,"[27] must be completed by all importers of Canadian wheat into the US. This form starts the tracing process. The form must be submitted to the Kansas City Commodity Office within 10 working days[28] from the date that the Canadian wheat enters the US. On the form, importers must state the quantity and type of the wheat imported. The wheat covered by an EUC must not be commingled or blended with US wheat until such time as the Canadian wheat is either delivered to an end-user or loaded on a conveyance for direct delivery to an end-user.

When the importer is not the end-user and must sell to a subsequent buyer or to the ultimate end-user, the importer must report the sale, within 10 working days[29], on a second

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[25]Public Law 103-182 [H.R. 3450]; December 8,1993 - Title III - 107 Stat. 2111-2112.
[26]7 CFR Part 782.
[27]Under proposed changes to the Regulations, this form will be renumbered to CFSA-750. For proposed changes to Regulations under 7 CFR Part 782, see Quick Federal Register (text) 60 FR 57219, 3 November 1995.
[28]Under proposed changes to the Regulations, this reporting period will be lengthen to 15 days. For proposed changes, see supra, note 31. Furthermore, reporting under the new Regulations would be permitted by mail, fax or electronic transmission.
[29]Under proposed changes to the Regulations, this reporting period will be lengthen to 15 days as well. For proposed changes, see supra, note 31.

form ASCS-751, "Wheat Consumption and Resale Report,"[30] as well as providing the buyer or the end-user with a copy of the ASCS-750 EUC covering the sale quantity. This must be done for each individual sale of wheat. When the end-user finally obtains ownership of Canadian wheat subject to an EUC, it must report its holdings in an ASCS-751 and continue to do so quarterly until the wheat is fully consumed. As well, any subsequent buyer must state the end-use of the Canadian wheat.[31]

The American legislation appears to makes no distinction between Canadian wheat imported for seed, livestock use, processing or re-export. All uses require completion of an ASCS-750 EUC. However, the American legislation does seem to permit a reallocation of wheat from, say processing to re-export, if the importer or subsequent buyer so wishes. All that any re-exporter of Canadian wheat is required to do is to complete an ASCS-751 when the grain is exported and to undertake not to commingle Canadian wheat with American wheat until the wheat is loaded onto a conveyance for delivery to a foreign country. In this way the tracing is complete. A schematic of the US EUC process is shown in Appendix 1b.

Penalties for non-compliance fall under section 782.19 of the regulations which states that it shall be a violation of 18 USC s. 1001 for any entity to engage in fraud with respect to, or to knowingly violate the provisions [of the regulations]. 18 USC s. 1001 is a general penal provision employable where persons make false statements or conceal information when required to report information to the government of the US. Penalties include fines to a maximum of $10,000 or imprisonment for not more than 5 years or both.

*EUCs as Trade-Distorting Non-Tariff Barriers?*

The use of the EUCs by both Canada and the US is trade-distorting as EUCs increase transaction costs through additional administration and separate transport and storage for at least part of the journey from exporter to end-user. Even in their least trade encumbering manifestation, that is, when they are used simply for tracking foreign wheat flows, EUCs must be completed either by the exporter or the importer prior to the commodity's introduction into the trade of the other state. The end-use certificate system undeniably increases handling and reporting requirements on imported wheat. They may also restrict the way in which imported wheat can be used.

Arguably, the Canadian treatment of American wheat coming into Canada is more trade-distorting than the American regime for Canadian wheat for five reasons. First, there exists four different regimes depending on the use of the American wheat under Canadian law. Under American legislation, there is only one instrument, the EUC. In Canada, wheat for seed needs a seed certificate, wheat for re-export requires in bond treatment under the Customs Act, wheat for direct animal consumption must be denatured by red dye, and wheat for

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[30]Under proposed changes to the Regulations, this form will be renumbered to CFSA-751. For proposed changes, see supra, note 31.

[31]Options listed include milling for animal feed, milling for human consumption, manufacturing, brewing or malting, distilling, export or other.

processing requires an EUC. Second, under the Canadian regime, it is almost impossible to redesignate the end-use of imported wheat. If the wheat enters to be milled it cannot be re-exported. In fact, the penalties for redesignation are so draconian, that one would not even contemplate re-exporting the wheat into the US. Once the use and the facility are named, there appears to be no turning back under the Canadian scheme. Third, while feed wheat flows from Canada to the US require more paper work (EUC) than from the US to Canada, more expense will likely be incurred in US-to-Canada feed wheat flows because of the cost of denaturing even though no EUC is required. Fourth, under Canadian law, there is a high possibility that the EUC could act as a border barrier because the EUC must be presented to a Customs Officer rather than simply being sent to a government agency within 15 days of the importation of the wheat as is the case under US Law. Finally, Canada's regulatory framework establishing the EUC regime is less transparent and more complex, legislatively speaking, with at least three separate Acts and three sets of regulations in play, than that setting up the US regime. It also appears that in the very near future, reporting under the American system will be more efficient than under the Canadian one, given that the American scheme will permit reporting by mail, fax or electronic transmission.[32]

Are there legislative alternatives? EUCs would not be necessary if the Canada-US trading area was a true free trade area. This would mean, of course, that grading schemes would have to be harmonized and farm support not be based on production or export quantities. International trading rules, such as those under the GATT 1994, are inching towards this reality. But prospects of a harmonious integration of two radically different grading systems, marketing schemes, and underlying philosophies in the two countries makes the prospect of the disappearance of EUCs and free trade in grains unlikely in the near future.

For the moment it appears that EUCs for wheat are here to stay. However, improvements could be made to make EUCs less trade-distorting. Canada needs to streamline and simplify its system. One instrument should be adopted for all American wheat imports no matter what the intended use. That instrument (probably the EUC works as well as any) should require the importer to designate the end-use of the wheat but should permit the redirection of such wheat on application to the Canadian Wheat Board. If flows from the US through Canada became significant, the CWB could refuse such redirection. Until that situation occurs, a subsequent buyer or end user could change the intended end use to allow for a more optimal, market-driven end use.

On a more radical note, perhaps Canada and the US should consider the elimination of the EUC and simply require importers to file a copy of the bill of lading with an appropriate government authority. Such a scheme would be cheaper, more efficient, and less trade-distorting while still permitting the two countries to monitor volumes and end-use destinations of the neighbor's wheat in each domestic market. As we explore in the next sections, maybe there are other reasons why the two countries are not yet ready to move to this radical option.

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[32]For proposed changes, see supra, note 31.

**The Effects of EUCs on Market Arbitrage**

The rationale for the Canadian use of EUCs appears quite straight forward. In Canada, wheat is graded by visual inspection. Wheat varieties grown in Canada are selected for the characteristics that allow visual grading. For example Canadian Western Red Spring Wheat varieties can be distinguished from soft varieties by visual inspection. In addition, with these varieties, the bread making properties can be largely be determined by visual characteristics; i.e., a sample of these varieties that have "good" visual characteristics will also have corresponding milling characteristics. Allowing US varieties in the marketing channel that do not have visual distinguishability would require either a complete change in the Canadian grading system or would result in a reduction in the reliability of the existing grading system. Given the reputation Canada has earned for consistent product quality, preventing the potential introduction of US wheat varieties in the marketing system may be a legitimate use of an ATB that requires the use of EUCs.

Although clearly more legally restrictive than the US requirements, Canadian EUCs probably have very little impact on trade because of natural arbitrage opportunities for wheat flows from the US to Canada rather than in the other direction.[33] The CWB has an explicit policy to sell to domestic millers at a price equal to or less than the landed price of equivalent US grain. As a result, wheat imports from the US have been limited to very small volumes, and restricted to times when there is a shortage of specific qualities of Canadian wheat. The effects of EUCs would be limited to these circumstances.

The imposition of US EUCs has a far greater impact on trade given that profitable arbitrage opportunities have existed. First, the requirement creates a paper trail that allows easy enforcement of the US laws that restrict the re-export of Canadian wheat. This effectively eliminates the possibility that Canadian wheat is re-exported under the Export Enhancement Program [EEP]. Given that such re-export would involve significant cost, there is an economic justification for such a move. Second, the EUCs are clearly a form of an ATB that increases the transaction cost of importing Canadian wheat into the US for the purposes of domestic consumption. This impact will be differential depending on the size and the frequency of transaction. For large, repetitive transactions this provision will be almost costless. For smaller volume transactions that would utilize the US grain handling system, the requirement for separate storage and transport may increase the cost per tonne considerably. From a political point of view, this could be considered a gesture to placate those seeking protection for US producers in the domestic market. Third, EUCs allow Canadian authorities to determine whether Canadian wheat is being sold into the feed or the milling wheat market.

This third result, a most interesting effect, is almost surely unintentional. Producers wishing to sell export milling wheat to the US can do so only after taking their grain to a primary elevator to have it weighed. The producer would, in effect, deliver the grain to the

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[33]Furtan, Hartley, Richard Gray and Alvin Ulrich, "Canadian Wheat Board Value Added Enhancement Study," prepared for the CWB, June 1994.

CWB and receive the initial payment and would have to buy it back from the CWB at the "buy-back" price. The buy-back price is set by formula by the CWB and is equal to the Minneapolis price minus transport. Thus a producer can only profit from the transaction if he/she can receive a price greater than the US commercial price. As a result, few producers were taking advantage of this provision. However, "feed" grains (or milling wheat graded as feed) can be sold outside of the CWB pooling. As such, feed grades of wheat are exempt from the buy-back requirement. Canadian producers could evade the CWB buy-back provisions for milling wheat by having the grain assigned a grade of feed.[34] In this case they could capture any premiums that exist in the US market. The EUC requirement makes it easier to determine whether the grain is destined for the milling or feed market. This information could potentially identify those Canadian producers and elevator agents that engage in the activity of avoiding CWB buy-back provisions by declaring the grain as feed grade.

In a competitive framework, introducing ATBs will reduce welfare by restricting arbitrage opportunities. The same does not necessarily follow when the market is distorted. In terms of the Canada-US wheat trade, two polices that clearly distort trade are the EEP and the CWB monopoly powers. The presence of these distortions could affect the welfare implications of the EUCs.

Preventing the re-export of Canadian wheat from the US under the EEP program is essential for the program's effective operation. The US government uses an export bonus to drive a wedge between the price in the commercial markets, which includes the US domestic market, and the non-commercial or "dumping" markets. This allows the US producers to capture some benefit from the export subsidy plus some additional benefit from the price discrimination. The ability of the US to maintain a higher domestic price than the average price received on the world markets is dependent upon imperfect substitution between Canadian and US wheat in the domestic market. In addition, it is dependent on the ability of the US to block the re-export of Canadian grain to world markets. Otherwise, it would be in the best interest of the CWB to ship to dumping markets via US markets where the product would receive the dumping price for Canadian wheat plus the EEP bonus. Clearly, this would be to the advantage of the CWB and to the disadvantage of US taxpayers.

Limiting the non CWB sales to the US will also have effects on the market. Consider first the case where only the CWB may sell wheat into the US. The CWB may choose to restrict supplies to the US to maintain a price in the US market above the Canadian price in order to maximize the return for Canadian producers. If milling wheat and durum producers could arbitrage the price difference freely this would reduce the monopoly power of the CWB, thereby reducing the aggregate returns to Canadian producers. There is also a possibility that this arbitrage could work against the interest of US producers and taxpayers as more wheat gets sold into the US market.

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[34]In the Canadian grading system the grade of the grain is arrived at by mutual agreement of the primary elevator operator and the producer. It is only in the case of an agreed dispute that the sample is sent to the Canadian grain Commission for an official and binding grade.

The EUCs alter market conditions and trade. In order to evaluate the economic impacts to the EUCs, we utilize the model developed by Alston, Gray and Sumner [AGS].[35] This model is sophisticated enough to capture the effect of third country trade while being simple enough to examine the effects of interest to us.

The AGS model has three regions: Canada, the US, and an aggregate representing the rest of the world [ROW]. The supply and demand equations are represented by functions that are linear in prices and quantities over the range of the changes being analyzed. Wheat is a heterogeneous group of commodities which must be treated as distinct. The wheats of different classes are segregated according to their end-use characteristics into three types: Durum, other Milling and Feed. Supply is linked among types within a region, but there is no appreciable substitution in consumption among these three categories.

In any region, the supply of each type of wheat depends on the producer prices of milling, durum, and feed wheat. Feed wheat supply is treated as an after-the-fact result from the production of durum or milling wheat. The ROW price of feed wheat is exogenous. On the demand side, different types of wheat (i.e., durum, milling and feed) are consumed independently, regardless of their regional source. Wheats of the same type from different regions are treated as differentiated goods due to differences in wheat quality *per se* among regions, or discrimination by buyers among source regions on other grounds. Armington assumptions[36] are used to define the matrix of own- and cross-price elasticities of demand in each of the three regions in the model. Canada exports all three types of wheat to the ROW and to the US; the US exports milling and durum (but not feed) wheat to the ROW; the ROW exports durum, in the form of pasta, to the US; and, the US exports nothing to Canada.

For simplicity, we treat the US EEP policy as a pure average per unit export subsidy of $40 per tonne for each wheat type (durum or milling wheat) to the ROW. In the results here, the export subsidy is fixed exogenously and does not respond when alternative import quantities are derived in the model. The US farm program for wheat operates over the horizon considered as essentially a de-coupled payment, the amount of which depends on the US weighted average price for wheat across types relative to the overall target price applied to the product of program yield and eligible program acreage. Deficiency payments are based on program acreage and program yields that do not depend on actual production. However, the overall cost does depend on the overall average market price relative to the target price, the difference between which becomes the per unit deficiency payment which applies effectively to the fixed program quantity.

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[35]Alston, Julian M., Richard Gray, and Daniel A. Sumner, "The Wheat War of 1994," *Canadian Journal of Agricultural Economics* 42: pp. 231-251.

[36]Armington assumptions imply that product from different countries are substituted for one another with a common elasticity of substitution.
Armington, P.S. (1969). "A Theory of Product Differentiation for Products Distinguished by Place of Production," IMF Staff Papers.

Finally, we treat the CWB as exercising monopoly control over the allocation of Canadian wheat to produce the maximum revenue for producers. The market clearing conditions reflect total utilization of the product, US price policy rules, and arbitrage conditions. For a given type of wheat from a given source, differences in prices among consuming regions, and between producers and consumers in the region where it is produced, are wedges due to pricing policies. For a given type of wheat (e.g., durum), differences in prices for the same type from different producing regions might be due to quality differences as well as price wedges.

*Simulating the Constrained Arbitrage*

Base Case: The Status Quo

As a point of comparison, we use the AGS model to simulate the market with restricted arbitrage. The 1994-95 crop year is used as the basis of simulation. It is assumed in this case that Canadian wheat is not re-exported under the EEP and that the CWB controls the export of all wheat. In this situation, we assume the CWB is not restricted in the level of export to the US and sells an amount of milling wheat, durum wheat and feed wheat into each market which maximizes Canadian producer revenue. As can be seen in Table 2, Canada exports 0.795 Mt of durum and 1.684 Mt of milling wheat to the US with $3.34 billion in wheat revenue. The US government spends $1.60 billion on deficiency payments and $1.31 billion on EEP bonus assumed to be $40 per tonne exported.

**Table 2. Simulation results for Canadian-US wheat trade, 1995-95**

| Quantity or Price | BASE[1] | Case 1[2] | Case 2[3] | Case 3[4] |
|---|---|---|---|---|
| **US Imports** | ('000 tons) | ('000 tons) | ('000 tons) | ('000 tons) |
| Feed Wheat | 0.00 | 0.00 | 0.00 | 0.00 |
| Milling Wheat | 1684.96 | 2717.28 | 1704.07 | 2585.26 |
| Durum Wheat | 794.89 | 1286.32 | 805.76 | 1304.02 |
| Durum Pasta | 117.97 | 40.94 | 151.16 | 40.79 |
| **US Production** | ('000 tons) | ('000 tons) | ('000 tons) | ('000 tons) |
| Feed Wheat | 6525.56 | 6513.34 | 6531.84 | 6514.29 |
| Milling Wheat | 57158.89 | 57101.70 | 57191.95 | 57111.67 |
| Durum Wheat | 2142.17 | 2088.26 | 2166.13 | 2086.93 |
| **US Exports** | ('000 tons) | ('000 tons) | ('000 tons) | ('000 tons) |
| Feed Wheat | 0.00 | 0.00 | 0.00 | 0.00 |
| Milling Wheat | 31231.38 | 32184.90 | 31294.69 | 32062.34 |
| Durum Wheat | 1495.70 | 1842.51 | 1569.62 | 1858.70 |

**Table 2 continued**

| | | | | |
|---|---|---|---|---|
| **US Mkt. Price** | ($/ton) | ($/ton) | ($/ton) | ($/ton) |
| Feed Wheat | 103.05 | 103.06 | 103.05 | 103.06 |
| Milling Wheat | $132.162 | $131.949 | $132.276 | $131.972 |
| Durum Wheat | $145.590 | $143.466 | $146.545 | $143.430 |
| Average Wheat Price | $3.146 | $3.139 | $3.150 | $3.140 |
| Deficiency Pay/bu. | $0.854 | $0.861 | $0.850 | $0.860 |
| **US Gov't Outlays** | millions | millions | millions | millions |
| Wheat Def. Payments | $1,601 | $1,615 | $1,595 | $1,614 |
| Chg. Def. Payments | $0 | $13 | ($7) | $12 |
| EEP | $1,309 | $1,361 | $1,315 | $1,357 |
| Change in EEP | $0 | $52 | $5 | $48 |
| **Total Change in Government Outlay** | **$0.00** | **$65.39** | **($1.36)** | **$60.19** |
| **Canadian Production** | ('000 tons) | ('000 tons) | ('000 tons) | ('000 tons) |
| Durum Wheat | 3554.28 | 3494.19 | 3564.84 | 3511.91 |
| Milling Wheat | 23155.73 | 23098.21 | 23174.44 | 22966.12 |
| Feed Wheat | 2879.52 | 2866.84 | 2882.67 | 2854.51 |
| **Canadian-US Exports** | ('000 tons) | ('000 tons) | ('000 tons) | ('000 tons) |
| Durum Wheat | 794.89 | 1286.32 | 586.50 | 1284.69 |
| Milling Wheat | 1684.96 | 2717.28 | 1159.58 | 2788.77 |
| Feed Wheat | 0.00 | 0.00 | 0.00 | 0.00 |
| **Canadian-ROW Exports** | ('000 tons) | ('000 tons) | ('000 tons) | ('000 tons) |
| Durum Wheat | 2433.94 | 1881.71 | 2653.20 | 1901.05 |
| Milling Wheat | 15543.23 | 14452.64 | 16087.73 | 14249.14 |
| Feed Wheat | 645.61 | 632.98 | 648.75 | 620.64 |
| **Canadian Pooled Price** | ($/t) | ($/t) | ($/t) | ($/t) |
| Durum Wheat | $116.91 | $114.10 | $117.45 | $114.13 |
| Milling Wheat | $113.66 | $112.75 | $113.91 | $111.48 |
| Feed Wheat | $103.92 | $103.93 | $103.92 | $103.93 |
| Average wheat price | $113.10 | $112.05 | $113.36 | $111.06 |
| **Producer Revenue** | millions | millions | millions | millions |
| Gross Revenue | $3,346.65 | $3,300.93 | $3,358.03 | $3,257.80 |
| **Change in producer surplus** | **$0.00** | **($30.95)** | **$7.68** | **($60.01)** |

[1]CWB controls exports, no re-export of Canadian wheat under EEP.
[2]Canadian producers have direct access to US markets.
[3]CWB controls exports, re-exports of Canadian wheat under EEP are allowed.
[4]Canadian producers have direct access to US markets, re-exports of Canadian wheat under EEP are allowed.

Case 1: Allowing Export of Canadian Wheat to the US beyond CWB Control

The second column of Table 2 represents the results of the simulation under the assumption that Canadian milling wheat producers and durum producers have direct access to the US market and would export to the US as long as the US price was above the Canadian pooled price for these wheats. In this case, it was assumed that the equilibrium f.o.b. price for Canadian wheat in the US was no greater than the pooled price for producers in Canada. In this situation, exports to the US increased well beyond the revenue maximizing level to 1.29 Mt for durum and 2.72 Mt for milling wheat. As could be expected, this surge in exports resulted in an increase in deficiency payments by $13.4 million and an increase in EEP costs by $52 million. More surprisingly, if removal of the EUC resulted in free flow of grain to the US, Canadian producer surplus would be reduced by $31.0 million. Thus the EUC clearly acts in Canadian producer interests.

Case 2: Allowing Re-Export of Canadian Wheat

In this simulation, we assume the only effect of removal of the EUC would be the re-export of Canadian grain under the EEP program. Specifically, the simulation allows additional Canadian wheat to be re-exported to the ROW via the US and to receive the $40 per tonne EEP bonus in the process. Of the $40 per tonne bonus, it is assumed the CWB can net $20 per tonne because of the more circuitous route it must follow. Canadian producer surplus increases by $7.68 million over the base scenario. What is surprising is that, despite the gain of Canadian producers, the US government (and US producers) are virtually in the same position. The EEP cost increases by $5.4 million and deficiency cost are reduced by $6.8 million. This result is produced because the re-export of additional tonnage increases the amount of price discrimination in the market. For instance, the price spread between Canadian durum in the US and in the ROW market increases from $27 per tonne to $36 per tonne, which is closer to the US spread the EEP bonus of $40 per tonne. Thus, if the CWB believed removal of EUCs would allow them to continue to act as a monopoly into the US market but would also allow the re-export of Canadian wheat, they would be in favor of removing EUCs.

Case 3: Combined Effect

In this simulation, we allow the direct shipment of wheat to the US and the re-export of Canadian wheat to the ROW. However, both the US government and Canadian producers are worse off. Canadian exports to the US increase to 1.3 Mt and 2.8 Mt for durum and milling wheat respectively. However, lower prices in all markets result in a reduction in Canadian producer surplus by $60 million. The US government costs increase by $12 million for deficiency payments and $47 million for EEP bonuses. Thus it is clear that both countries may have an interest in preventing these forms of arbitrage given the EEP and the CWB monopoly.

Simulations for Case 1 and Case 3 suggest that if the US EUCs allow the CWB to maintain monopoly control over Canadian wheat exports, a substantial benefit for Canadian producers would result. These same simulations indicate that enforcement of the CWB

monopoly also reduces US government costs. Somewhat ironically, as shown in Case 2, if the only effect of the certificates is to prevent the re-export of Canadian wheat, this is of no benefit for the US taxpayer. Thus gains for the US taxpayer from EUCs will only occur if they facilitate the enforcement of the CWB monopoly, which happens to be consistent with Canadian producer interests.

## Summary and Conclusions

Recently, both Canada and the US have introduced EUCs after a long history of trade disputes in wheat. While the Canadian requirements are more stringent and commercially more difficult to meet, the US requirements have a larger impact on trade. In the recent past, there has been an incentive to export from Canada to the US, either to capture US markets not filled by US wheat, or to take advantage of EEP bonuses with the re-export of Canadian wheat from the US to the ROW. With respect to the latter, the US EUCs affect this arbitrage opportunity by enforcing the CWB monopoly on wheat exports and by preventing the re-export of Canadian wheat. The results of the simulation show that enforcement of the CWB monopoly has a positive impact on both the pooled revenue of producers and the US government's costs. Ironically, if the only effect of the certificates is to prevent re-export, the EUCs cause a slight increase in farm program costs.

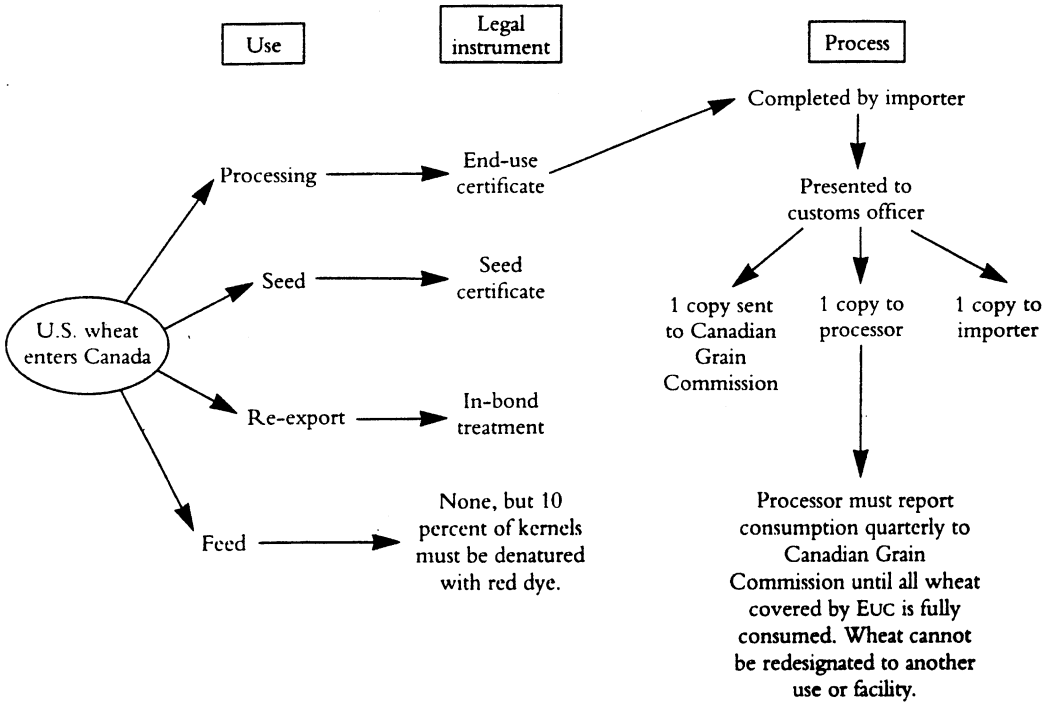
A review of the legal regime instituting EUCs indicates that the Canadian requirements are more complex and commercially difficult to meet than those in the US. Simple modifications of the existing legislative framework would expedite trade while maintaining product separation.

The results of the simulations indicate that, in distorted markets, ATBs in the form of EUCs can improve welfare. In particular, the existence of the EEP means the US may benefit from this form of protectionism. The results also indicate that the US can benefit from maintaining the CWB monopoly over grain exports. This is particularly interesting given US groups are lobbing very hard to reduce CWB powers in the US and other markets.

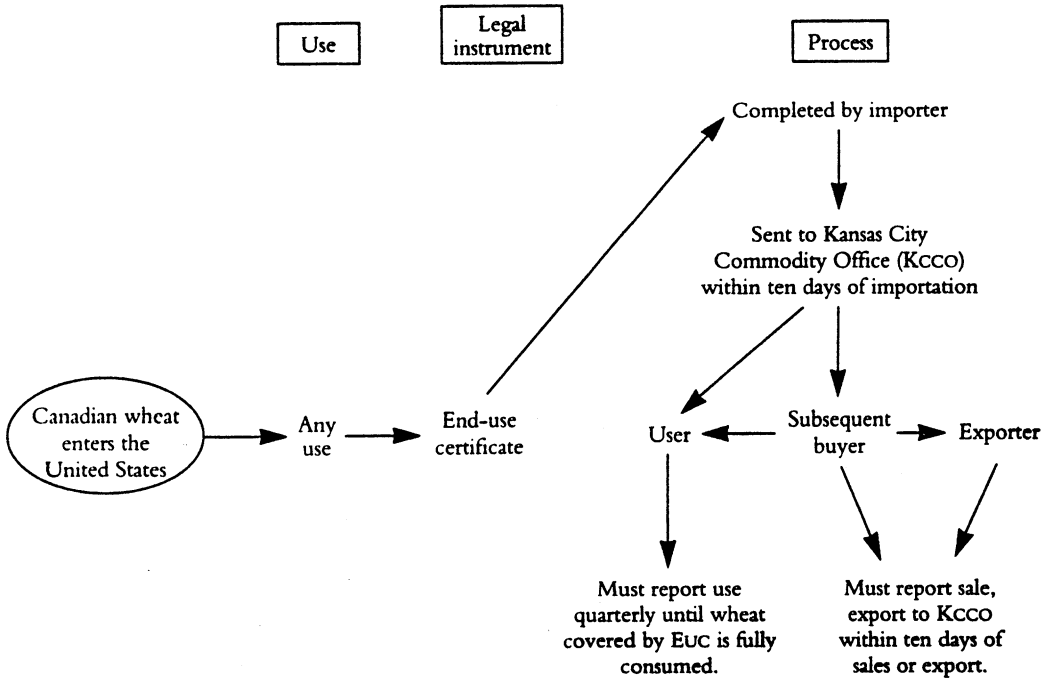
### *Further Research*

In a general sense the effects of ATBs may be very difficult to predict when markets are distorted. From our case study, it is clearly in the interest of the CWB to have the EUCs enforce their monopoly. This may also hold true for large multinational corporations that wish to practice price discrimination internationally. For instance, it may be in the interest of herbicide companies or pharmaceutical companies to have ATBs put in place to prevent arbitrage between countries at anything beyond the active ingredient level. In these situations where sectors of the exporting country are not opposed to ATBs, then they may be far more likely to exist. More work is needed to study the effects of ATBs with multinational production of differentiated products.

## Appendix 1. Candian and US EUC Processes.




a. Canadian EUC Process




b. US EUC Process