PROCEEDINGS OF THE EIGHTH INTERNATIONAL CONFERENCE OF AGRICULTURAL ECONOMISTS

HELD AT

KELLOGG CENTER

MICHIGAN STATE COLLEGE

U.S.A.

15–22 AUGUST 1952

GEOFFREY CUMBERLEGE

OXFORD UNIVERSITY PRESS

LONDON NEW YORK TORONTO

1953

INTERNATIONAL TRADE IN AGRICULTURAL PRODUCTS

A. P. JACOBSEN

Statskonsulent, Denmark

IT is appropriate to recall that the international exchange of goods is a function of national production and consumption, and particularly to emphasize that disturbances of this function have repercussions upon the production and thus on the supply of foodstuffs and other agricultural products. I hope therefore that you will agree that it is necessary to consider some aspects of production, as this of course forms the basis of, and the reasons for, the exchange of goods.

Every farmer tries to operate his farm with a view to the greatest possible economic gain. To achieve this he chooses the crops and livestock which are most suitable for his conditions, and decides how much of each crop it pays him to cultivate and the numbers of livestock that he should keep. In other words, he plans the kind and extent of each particular branch so that he may derive the greatest possible profit from his holding as a whole. This is done by increasing or decreasing the different branches in accordance with the ruling and anticipated prices and price relationships in order to obtain the most satisfactory combination. It may happen that the best result is achieved when he devotes himself to one particular culture or project, but this does not alter the principle by which he selects his particular scheme of operation.

This adaptation to prices and price relations determines the quantities of the various products of each particular holding, and depending upon the farmer's own consumption, the size of the surplus or deficiency of the individual products. This in turn determines the aggregate production of the whole country and consequently the aggregate production of the whole world. Every country, then, has a surplus of some goods and a deficit of others so that exchange becomes imperative both with a view to supply and to demand.

At our meeting on Saturday it was suggested that the number of animals should be controlled. The question is of enormous importance, as the right number of livestock is essential in determining whether there can be sufficient food for human beings. This big problem is more or less satisfactorily solved by the farmers' adaptation of production in accordance with the prevailing price relations.

Relatively low prices for grain, potatoes, and other plant products lead to the increase of livestock numbers and of animal production, while relatively high prices for plant products cause a reduction of the livestock population, and so provide more food for direct consumption by humans.

To demonstrate how surely the farmers react to price relations, I should like to mention a recent example. For two years or more the prices received by farmers in Denmark have been comparatively higher for meat than for milk. Consequently the farmers have reduced the number of milk cows, have increased the population of pigs and have laid more stress on beef production. Corresponding shifts have taken place in several other European countries, and probably also in other parts of the world. The economic dynamics in farm management explains and gives the answer to several important questions often discussed in connexion with agrarian policy, such as division of production, specialization, and high- and low-cost production.

The liberalistic doctrine that production shifts to the place where conditions are most favourable is often interpreted as an absolute division which has contributed to weaken confidence in free-trade doctrine. Increasing expenses per unit of product and falling commodity prices set an economic limit to the size of production, but this limit varies from one holding to another and from one country to another and brings about the international division of production. More favourable conditions of production for any product only mean that its production may assume comparatively large proportions in the country concerned; the appropriate extent of its production depends just as much on the other trading and production possibilities of the country as it does on foreign competition. Division of production is relative and does not mean in the least that production under less favourable conditions must be given up even if competition is free. It is therefore limited by how far it pays to specialize production.

In mixed farming it is impossible for well-known reasons to find the cost of production of individual products, and it is futile to state a definite cost which the farmer must have reimbursed. The problem has to be looked at from another angle, viz.: How much does it pay to produce under the different conditions at existing price relations? A uniform world price, i.e. a price with variations caused only by transport charges, will lead to a natural distribution of production between individual farmers and countries.

There is no excuse, therefore, for speaking of high- and low-cost production. We could no doubt grow bananas in Greenland; it might be called a high-cost production. But if we look at the choice of production from a proper economic angle, the question will never arise.

I come now to the factors which more directly interfere with international trade.

Free trade. Entirely free trade which would allow the economic forces that I have indicated to develop freely, has never existed in practice, and individual national communities have developed to a stage that makes it almost hopeless to contemplate the establishment of perfectly free trade. It has to be admitted that the comparatively free trade conditions of 1860–1914 and 1920–9 could not be maintained when the great slump occurred in 1929, i.e. when the general price-level fell. Industry endeavoured to evade the slump by restricting production, which led to an additional large fall in the prices of agricultural products, and as agricultural expenses remained almost stationary, agriculture faced a particularly severe crisis. All Governments endeavoured to assist agriculture, the importing countries resorting to import restrictions which aggravated the crisis in the exporting countries. The object lesson is that there is no possibility of maintaining even reasonably free trade between countries unless a fairly constant, actually slightly rising, general price level can be maintained.

Customs protection. It is not possible to deal here in detail with the effects of customs duties on the different categories of agricultural goods. Every customs duty exerts an influence on price relations both in the exporting and in the importing countries, thereby causing changes and shifts in the production of the countries concerned, and always tending to reduce total production. Trade restrictions may lead to an increased production of a certain commodity in the country concerned, but they have a still higher decreasing effect in other countries.

It must be admitted that producers possess an astonishing capacity for adapting themselves to changed price relations, so that low customs rates need not cause serious harm, if only they remain unchanged for a number of years as was the case with the long-term tariff agreements of the period before 1914. That kind of agreement, however, does not satisfy producers in the importing countries, who indeed prefer frequent increases, either in the form of customs quotas or in other forms, or as general tariff increases. Finally, if as often happens even very high customs rates do not have the desired effect, they resort to quantitative restrictions.

Quantitative restrictions. These interfere directly with international trade and therefore have great effect, and as they are always directed at a limitation of imports, they generally represent the most dangerous and harmful form of protectionism.

Quantitative import restrictions are carried out either in the form of quantity quotas, which as a rule are apportioned on the basis of the imports from the different countries during a certain preceding period, or in the form of value quotas, which are frequently global quotas apportioned to the importers according to their previous business. The distribution of the national quotas is often affected by quite accidental factors in the period which is selected as the basis. Global quotas have a similar effect on importers, but afford, within the framework of a quota, more flexibility in the actual import from different countries.

Long-term contracts. In order to stimulate production and provide for regularity of supply it has been customary in some fields to conclude 'delivery contracts' between exporters and importers in different countries. Such contracts have been used mainly in the international seed trade, particularly garden seed, but also field seeds, in many cases combined with the delivery of foundation seed, and they are then termed cultivation and delivery contracts. This form of contract is used extensively among firms or co-operative societies and producers in different countries.

Recently this system has been brought into use also for some of the larger agricultural products, under the name of long-term contracts. These may be bilateral like the agreements made between the United Kingdom and Canada, Australia, New Zealand, and Denmark, or they may be multilateral as, for example, the International Wheat Agreement. In the nature of things bilateral agreements are much easier to negotiate than are multilateral agreements, but which of the two forms should be preferred depends, of course, upon the circumstances of any particular case. Up to now, however, the agreements whether bilateral or multilateral have been similar in principle.

The two cardinal questions in connexion with the conclusion of long-term agreements are quantity and price. The quantity is fundamental. A long-term contract, providing for a certain quantity, shows in the first place that the partners concerned intend to carry through the exchanges of goods provided for in the agreement, and this in fact is the most important condition if the agreement is to be advantageous to both or all contracting parties. When this condition has been fulfilled it should always be possible to accomplish the rest of the agreement satisfactorily.

As nobody can know prices in advance, it is hazardous to agree upon fixed prices several years ahead, and there is a danger that the agreed price may turn out, at some future time, to be so unreasonable that the fulfilment of the agreement would create dissatisfaction in seller or purchaser. This is only partly eliminated by affording possibilities for limited flexibility or by inserting a larger or smaller margin. Furthermore, if an artificial or unreasonable price is forced through, it will affect production in directions which are out of harmony with the actual market, as artificially high prices give higher, and artificially low prices give lower, production than is actually required. This is only the case, however, when the contract price is allowed to be expressed in the producer's prices.

If the Government takes over the risk in connexion with price fixations, the fluctuations have no influence on production; price agreements in that case are only a matter of speculation between the Governments concerned. Whether all Governments can, and would embark upon such a transaction is quite another matter. As regards Denmark, agreements for delivery to the United Kingdom of butter, bacon, and eggs were concluded with producers' organizations, while the purchase of wheat under the wheat agreement was undertaken by a central bureau.

All these factors are out of line with agreements for fixed prices ranging over several years. On the other hand, an agreement about quantity without any provision about price would hardly be satisfactory. It is only natural to have in mind a price which is regulated on the basis of the general price-level. The agreements would in that case mainly be quantity agreements in support of producers and for the security of consumers.

Here the question arises of the stabilizing influence of long-term agreements on production and prices. As an example, it is generally considered beyond doubt that the Anglo-Danish bacon agreement has had a stimulating and stabilizing influence on pig production in Denmark. This observation does not apply in the same degree to the butter agreement. This is due to the fact that the price has been comparatively more favourable for bacon than for butter, doubtless because the demand for bacon was, and is, greater than the demand for butter. Although sceptics may assert that nothing else has happened than what would have happened in any case without long-term agreements, I believe that the agreements have had a stimulating effect, and particularly that they have created greater confidence and a stronger sense of security in the Danish producers. They are in a better position to arrange their production on a longer view than if they only had the market prospects as a guide. Whether the same may be said about the multilateral wheat agreement seems doubtful to me, partly because it comprises a smaller proportion of the exports and partly because prices have not been allowed to affect the producers.

It is the part of the export outside the agreements which is decisive for the market in the long run; this part may undergo accentuated price fluctuations and may be made the subject of all kinds of interferences by trade politics just as easily as if there were no long-term agreements. I have already mentioned some of these, but I feel inclined to mention still another, namely dumping. Dumping is sometimes defined as sale below the cost of production in the exporting country or as an offer below the production price in the importing country. This is obviously quite wrong. The only tenable definition is that dumping means export at lower prices than the prices on the domestic market. Export at prices below those of the home market is unfair competition in any case when the goods are put on the ordinary markets, and causes disturbances when they are sold, and a deterioration of the aggregate economy and supply.

Seasonal fluctuations in production afford a good example of the connexion between production and prices. The fixing of the same price for the whole year would accentuate the seasonal fluctuations and make production still more irregular, causing increased difficulties in regard to supply both on the market and for export. In considering measures to mitigate some of the natural fluctuations in production, supply and prices there should always be taken into account what effects the measures may have in the long run, internal as well as external.

The Extent and Directions of International Trade

In order to form an idea of the extent of international trade in agricultural products and the channels it follows, it is necessary, of course, to resort to the trade statistics. Many countries are, however, both exporters and importers of the same goods. To look at net exports or net imports gives a more succinct picture which shows distinctly where there is a surplus and where there is a market.

In 1928, assisted by my secretary at the time, E. Biermann in Berlin, I prepared and published surveys of the net exports and net imports of the most important agricultural products in 1925. It was done mainly on the basis of statistics from the International Agricultural Institute in Rome, and the tables were set up as follows for butter.

Of an aggregate excess exports amounting to well over 400,000 tons of butter, Denmark accounted for 30·3 per cent., New Zealand 15·7 per cent., and of the surplus imports no less than 68·0 per cent. went to the United Kingdom and 23·6 per cent. to Germany.

In the same manner the net imports and net exports for the individual cereals and for the more important animal products were found and computed. The most astonishing feature was the United

Butter, 1925 (131 countries)

	Net exports			Net imports	
	000 tons	*per cent.*		*000 tons*	*per cent.*
1. Denmark	122	30·3	1. United Kingdom	277	68·0
2. New Zealand	63	15·7	2. Germany	96	23·6
3. Australia	58	14·4	3. Switzerland	8	2·1
4. Holland	37	9·2	4. Belgium	4	0·9
5. Argentina	27	6·6	5. Dutch Indies	4	0·9
6. Russia	25	6·2	6. Other countries	19	4·5
7. Ireland	16	4·0			
8. Finland	13	3·2			
9. Canada	12	3·0			
10. Sweden	9	2·2			
11. Latvia	7	1·7			
12. Estonia	7	1·6			
13. Italy	4	0·9			
14. Other countries	4	1·0			
Total	404	100·0	Total	408	100·0

Kingdom's predominant position as an importer, in that she took the following share of the total net import of the world: wheat 28 per cent.; barley 29·9 per cent.; oats 23·3 per cent.; maize 20·6 per cent.; beef, including live cattle, 57·3 per cent.; mutton, including live sheep, 82·1 per cent.; pork, including living pigs, 63·3 per cent.; butter 68·0 per cent.; cheese 51·4 per cent.; condensed milk 48·9 per cent.; and eggs 46·6 per cent. Germany was the world's second largest market for agricultural products, frequently with from 10 to 20 per cent. of the total net imports. In fact, there was only one great market for agricultural products, namely, western Europe—in particular the United Kingdom, followed by Germany.

With the assistance of Mr. Aage Schmidt-Mortensen I have obtained corresponding data for the most important agricultural products in 1938 and 1950, the latter on the basis of the F.A.O. year-books. Here again butter is used as an example.

The total net turnover was considerably greater in 1938 than in 1925—about 600,000 tons against about 400,000 tons—and the distribution of the countries shows some changes. New Zealand's and Australia's shares in the net exports had risen, and the same applies to the share of the United Kingdom in the net imports, which had become 80 per cent., instead of 68 per cent. In 1950 the net trade amounted to about 480,000 tons. Denmark now ranked first with 32·2 per cent. of the net exports, New Zealand followed with 28·9 per cent., the United Kingdom took 72·4 per cent. of the total net imports, and Western Germany 9·6 per cent.

Butter, 1938 (121 countries)

	Net exports			*Net imports*	
	000 tons	*per cent.*		*000 tons*	*per cent.*
1. Denmark	158	26·3	1. United Kingdom	478	80·0
2. New Zealand	133	22·1	2. Germany	92	15·4
3. Australia	103	17·2	3. Dutch Indies	5	0·8
4. Holland	51	8·5	4. British Malaya	2	0·4
5. Sweden	29	4·8	5. Algeria	2	0·3
6. Latvia	23	3·9	6. Tunis	2	0·3
7. Eire	19	3·1	7. Hawaii	2	0·3
8. Lithuania	17	2·9	8. Belgium & Luxembourg	1	0·2
9. Finland	17	2·8			
10. Estonia	15	2·4	9. Burma	1	0·2
11. Poland & Danzig	13	2·2	10. French Morocco	0·9	0·1
12. Argentina	7	1·2	11. Guernsey & Jersey	0·8	0·1
13. South Africa	4	0·6	12. Trinidad & Tobago	0·8	0·1
14. Hungary	4	0·6	13. Alaska	0·8	0·1
15. France	2	0·4	14. The Philippines	0·7	0·1
16. Norway	0·8	0·1	15. Canada	0·6	0·1
17. Tanganyika	0·7	0·1	16. Greece	0·5	0·1
18. Austria	0·7	0·1	17. Other countries	8·3	1·4
19. Italy	0·6	0·1			
20. Sudan	0·5	0·1			
21. Japan	0·5	0·1			
22. Kenya & Uganda	0·5	0·1			
23. Other countries	1·5	0·3			
Total	601	100·0	Total	598	100·0

Although some changes have taken place, the main features for butter are the same as in 1925 and 1938, which shows that the fundamental presumptions and conditions are making themselves felt in spite of the changed economic and political circumstances. The same may be said of the international trade in other agricultural products, though very considerable changes have taken place with regard to several of them, particularly the enormous increase in North America's export of grain and several other products, the diminution of the maize and meat exports from Argentina, the failing supplies of grain from eastern Europe, and large changes in Asia's imports and exports of rice, wheat, and oilseed.

One of the most important factors in the trade of a country is whether the country is a net importer or a net exporter of grains. It is less important what kind of grain it exports or imports. Distinguishing between bread grain and coarse grain in some publications has caused a lot of confusion, as any kind of grain can be used for human

Butter, 1950

	Net exports			Net imports	
	000 tons	per cent.		000 tons	per cent.
1. Denmark	156	32·2	1. England	340	72·4
2. New Zealand	140	28·9	2. Western Germany	45	9·6
3. Australia	86	17·7	3. Belgium & Luxembourg	21	4·5
4. Holland	65	13·4			
5. Sweden	14	2·9	4. France	17	3·6
6. Argentina	9	1·9	5. Switzerland	9	1·9
7. South-West Africa	4	0·8	6. Italy	4	0·8
8. Norway	4	0·8	7. South African Union	4	0·8
9. Eire	3	0·6	8. Venezuela	4	0·8
10. U.S.A.	2	0·4	9. Algeria	3	0·6
11. Canada	1	0·2	10. Malaya-Singapore	2	0·4
12. Other countries	1	0·2	11. Finland	2	0·4
			12. India	1	0·2
			13. Morocco	1	0·2
			14. Trinidad & Tobago	1	0·2
			15. Israel	1	0·2
			16. Holland W. Indies	1	0·2
			17. Iran	1	0·2
			18. Hong Kong	1	0·2
			19. Ceylon	1	0·2
			20. Other countries	12	2·6
Total	485	100·0	Total	471	100·0

nutrition or be used for feeding purposes, although it must be admitted that rice occupies a special position. I have therefore combined the tables of the different kinds of grain, except rice, into one table (Table 1, p. 476). The total net export of all countries has not changed very much. It amounted to 29 million tons in 1925; 26·7 million in 1938, and 25·9 million in 1950. The net export from individual countries has, of course, varied considerably more. In 1925 the United States ranked third, with 17·5 per cent.; in 1938 it was number one, with 26·6 per cent.; and in 1950 number one, with 32·5 per cent. Argentina went the other way, with 22·3 per cent. in 1925, 19·7 per cent. in 1938, and 16·3 per cent. in 1950, and this movement has, as you know, continued in 1951. Canada's net export changed from 8·24 million tons in 1925 to 3·4 in 1938 and 5·87 in 1950. Somewhat surprising, the net export from Australia has been rather constant at 3·14, 3·25, and 3·62 million tons.

The biggest net importers of grain we find to be the western European countries; in the first line the United Kingdom, but also Germany, Italy, Holland, and Belgium. Before the war, the western European area imported about 25 million tons of grain annually. Now the quantum is considerably smaller,—around 20 million—but the area is still the biggest importer of grain and also the biggest market for sugar, fats, and oils, as well as for livestock products and feeding-stuffs.

Similarly the tables of the different kinds of meat and animals for slaughter have been computed into net export or net import of all meat (Table 2, page 477). The total net export in 1925 amounted to 2·7 million tons, and fell to 2·4 in 1938 and 1·9 million in 1950. In 1925 Argentina had a net export of 907,000 tons; in 1938 it was down to 622,000 and in 1950 to 361,000, but Argentina was still the biggest net exporter. Denmark ranked second in 1925 with 247,000 tons net export and reached 281,000 in 1950, but was that year surpassed by New Zealand (334,000 tons). The U.S.A. was a net exporter in 1925 (216,000 tons), but became a small net importer in 1938 (97,000 tons) and a bigger net importer in 1950 (184,000 tons). The biggest net importer was England with 1·6 million tons before the war and 1·28 million in 1950. These quantities amounted roughly to 65 per cent. of the total net import. Germany came next with about 10 per cent.

The agricultural products go from the thinly populated to the densely populated and highly industrialized areas. Density of population means, here, the number of persons per hectare of agricultural area or farmland. Western Europe has about 2 persons per hectare agricultural area, excluding rough grazing; countries such as Belgium, Holland, the United Kingdom, Germany, and Norway have as many as from 5 to 3. Overseas countries have scarcely one-third of a person per hectare. It is therefore quite natural that the supplies to Europe consist mainly of grain and meat, the production of which requires comparatively large areas. Many countries in Asia are just as densely, or even more densely, populated as western Europe, but as they are not sufficiently industrialized—often 70 per cent. or more of the total population are engaged in agriculture—they have only a very small production *per capita* and consequently a rather low purchasing power. In countries with high standards of living, less than

20 per cent. or thereabouts of the population are engaged in agriculture.

It appears, then, that international trade in agricultural products is dependent on a corresponding international trade of raw material and industrial products, and such trade is only possible, of course, when production is sufficiently large for the country concerned to have something to give in exchange. Further, it must be presumed that the countries exporting agricultural products will allow industrial goods to enter and in this way contribute to raising the standard of living there. Actually, there can never be a surplus of industrial goods—the demand is unlimited. With the population of the earth and the economic and technical conditions of production under which agriculture is working there could hardly be any surplus of foodstuffs either, if plant production were distributed in an appropriate way for direct consumption and as feed for domestic animals so that the surpluses of grain would be converted into animal products. It goes without saying that industry and, on the whole, all persons except the farmers, are interested in the supply of cheap foodstuffs. It is imposing that farmers, in spite of their limited number in industrial countries, are able to prevent the importation of food, and thereby lower the standard of living of the rest of the population.

We are here looking into the gap between the interests and points of view of the community and those of the interested groups. It is astonishing that these groups not only secure a hearing with their special economic arguments, but also that they can make their mark on the mentality of the nations so strongly that exports are considered to be something highly meritorious nationally, while imports are rather looked upon as harmful. In point of fact, it should rather be the other way about, namely that export is a necessary evil undertaken in order to obtain possession of other goods which are more urgently needed.

Tasks for the International Conference of Agricultural Economists

Even if I dare not expect that all of you will agree with me on the points offered, I feel convinced that none of you considers the present condition of international trade as ideal, and the question arises, then, what the members of this conference can do at this meeting, and outside it, to contribute to a more satisfactory state of affairs.

There are few members of this organization either here or elsewhere who have executive power, yet I feel convinced that it is just the members of this organization who can exert a decisive influence

TABLE I. *Cereals. Wheat and wheat flour + rye and rye flour + barley + oats + maize.*

1925 — Net exports

No.	Country	000 t.	%
1	Canada	8,243	28·5
2	Argentina	6,561	22·3
3	U.S.A.	5,057	17·5
4	Australia	3,137	10·8
5	Yugoslavia	1,168	4·1
6	Rumania	789	2·7
7	Hungary	778	2·7
8	India	768	0·1
9	Union of S. Africa	697	2·4
10	U.S.S.R.	615	2·1
11	Chile	224	0·8
12	Algeria	205	0·7
13	Bulgaria	152	0·5
14	Fr. Morocco	129	0·5
15	Tunisia	104	0·4
16	Iraq (1924)	81	0·3
17	Uruguay	63	0·2
18	Kenya	58	0·2
19	Indochina	39	0·2
20	Netherlands Indies	31	0·1
21	S. Rhodesia	29	0·1
22	Angola	23	0·1
23	Madagascar	14	0·1
24	Mozambique	8	0·0
25	Dom. Rep.	0	0·0
	Total	28,973	100·0

1925 — Net imports

No.	Country	000 t.	%
1	U.K.	7,449	25·6
2	Germany	3,693	12·7
3	Italy	2,468	8·5
4	Netherlands	2,008	6·9
5	Belgium	1,935	6·6
6	France	1,883	6·5
7	Czecho-slovakia	993	3·4
8	Denmark	865	3·0
9	Switzerland	760	2·6
10	Austria	725	2·5
11	Brazil	700	2·4
12	Eire	669	2·3
13	Greece	516	1·8
14	Norway	468	1·6
15	Spain	467	1·6
16	Sweden	420	1·5
17	Japan	408	1·4
18	Finland	295	1·0
19	Egypt	268	0·9
20	Cuba	230	0·8
21	Portugal	226	0·8
22	China	163	0·6
23	Mexico	131	0·5
24	Latvia	125	0·4
25	Poland	99	0·3
26	Peru	86	0·3
27	Syria and Lebanon	83	0·3
28	Estonia	79	0·3
29	N.Z.	76	0·3
30	Philippines	71	0·2
31	Malta	41	0·1
32	Puerto Rico	40	0·1
33	Newfound-land	40	0·1
34	Libya	39	0·1
35	Iran	33	0·1
36	Israel	32	0·1
37	Hawaii	30	0·1
38	Jamaica	28	0·1
39	Taiwan	26	0·1
40	Haiti	26	0·1
41	Trinidad & Tobago	26	0·1
42	Other countries	387	1·3
	Total	29,107	100·0

1938 — Net exports

No.	Country	000 t.	%
1	U.S.A.	7,080	26·6
2	Argentina	5,263	19·7
3	Canada	3,437	12·9
4	Australia	3,252	12·2
5	U.S.S.R.	2,001	7·5
6	Rumania	1,319	4·9
7	Hungary	647	2·4
8	Yugoslavia	589	2·2
9	Indochina	524	2·0
10	Poland & Danzig	404	1·5
11	India	319	1·2
12	Turkey	266	1·0
13	Iraq	219	0·8
14	Bulgaria	174	0·7
15	Union of S. Africa	134	0·5
16	Angola	128	0·5
17	Lithuania	127	0·5
18	Uruguay	114	0·4
19	Chile	103	0·4
20	Fr. Morocco	103	0·4
21	Tunisia	95	0·4
22	Kenya & Uganda	61	0·2
23	Algeria	55	0·2
24	Madagascar	50	0·2
25	S. Rhodesia	37	0·1
26	Trans-jordania	37	0·1
27	Fr. W. Africa	22	0·1
28	Belg. Congo	21	0·1
29	Togoland	21	0·1
30	Netherlands Indies	16	0·1
31	Syria & Lebanon	14	0·1
32	Japan	11	0·0
33	Korea	9	0·0
34	Dom. Rep.	7	0·0
35	Egypt	3	0·0
	Total	26,662	100·0

1938 — Net imports

No.	Country	000 t.	%
1	U.K.	9,270	35·1
2	Germany	3,922	14·9
3	Belgium–Luxem-bourg	2,136	8·1
4	Netherlands	1,842	7·0
5	France	1,153	4·4
6	Brazil	955	3·6
7	Switzerland	935	3·5
8	Eire	793	3·0
9	Austria	687	2·6
10	Denmark	543	2·1
11	Greece	541	2·1
12	Norway	497	1·9
13	Italy	340	1·3
14	China	288	1·1
15	Sweden	204	0·8
16	Finland	188	0·7
17	Czecho-slovakia	188	0·7
18	Portugal	177	0·7
19	It. E. Africa	130	0·5
20	Peru	126	0·5
21	Mexico	120	0·5
22	N.Z.	104	0·4
23	Cuba	93	0·4
24	Philippines	92	0·3
25	Israel	83	0·3
26	Br. Malaya	60	0·2
27	Malta	56	0·2
28	Bolivia	49	0·2
29	Spanish Morocco	49	0·2
30	Newfound-land	44	0·2
31	Taiwan	39	0·1
32	Puerto Rico	38	0·1
33	Jamaica	37	0·1
34	Trinidad & Tobago	33	0·1
35	Latvia	32	0·1
36	Albania	31	0·1
37	Paraguay	31	0·1
38	Burma	22	0·1
39	Mozam-bique	19	0·1
40	Manchuria	4	0·0
41	Other countries	433	1·6
	Total	26,384	100·0

1950 — Net exports

No.	Country	000 t.	%
1	U.S.A.	8,410	32·5
2	Canada	5,874	22·7
3	Argentina	4,225	16·3
4	Australia	3,617	14·0
5	U.S.S.R.	1,250	4·8
6	Iraq	528	2·0
7	Fr. Morocco	360	1·4
8	Tunisia	334	1·3
9	Syria & Lebanon	244	0·9
10	Yugoslavia	217	0·8
11	Algeria	202	0·8
12	Angola	182	0·7
13	Pakistan	136	0·5
14	Poland	120	0·5
15	Czecho-slovakia	40	0·2
16	Hungary	40	0·2
17	Kenya	38	0·1
18	Sweden	28	0·1
19	Libya	24	0·1
20	Ethiopia	15	0·1
21	Dom. Rep.	10	0·0
22	Indochina	9	0·0
23	Belg. Congo	6	0·0
24	Burma	4	0·0
	Total	25,913	100·0

1950 — Net imports

No.	Country	000 t.	%
1	U.K.	5,564	21·7
2	W. Ger-many	2,568	10·0
3	Japan	1.843	7·2
4	Netherlands	1,630	6·4
5	Belgium-Luxem-bourg	1,537	6·0
6	India	1,437	5·6
7	Italy	1,234	4·8
8	Brazil	1,227	4·8
9	Switzerland	758	3·0
10	Egypt	686	2·7
11	Norway	632	2·5
12	Austria	623	2·4
13	Eire	594	2·3
14	Portugal	441	1·7
15	Mexico	421	1·6
16	Greece	383	1·5
17	Spain	290	1·1
18	Denmark	274	1·1
19	Union of S. Africa	269	1·1
20	Peru	243	1·0
21	Finland	232	0·9
22	Turkey	223	0·9
23	Israel	215	0·8
24	Philippines	183	0·7
25	Ceylon	168	0·7
26	Malaya—Singapore	160	0·6
27	N.Z.	156	0·6
28	Venezuela	154	0·6
29	Cuba	141	0·5
30	Iran	112	0·4
31	Canary Is.	105	0·4
32	Chile	63	0·3
33	Malta	62	0·2
34	Colombia	61	0·2
35	Puerto Rico	57	0·2
36	S. Rhodesia	56	0·2
37	Jamaica	54	0·2
38	Bolivia	51	0·2
39	French W. Africa	50	0·2
40	Trinidad & Tobago	49	0·2
41	France	35	0·1
42	Other countries	620	2·4
	Total	25,661	100·0

TABLE 2. *Meat: Cattle and beef + mutton and lamb + pigs, pork, and processed meat.*

1925 — Net exports

No.	Country	000 t.	%
1	Argentina	907	33·7
2	Denmark	247	9·1
3	U.S.A.	216	8·0
4	Uruguay	187	6·9
5	N.Z.	168	6·2
6	Eire	163	6·1
7	Canada	156	5·8
8	Australia	145	5·4
9	Poland	143	5·3
10	Netherlands	93	3·5
11	Brazil	58	2·1
12	Rumania	51	1·9
13	Yugoslavia	50	1·9
14	Hungary	45	1·7
15	Bulgaria	16	0·6
16	Lithuania	13	0·5
17	Union of S. Africa	10	0·4
18	U.S.S.R.	8	0·3
19	India	6	0·2
20	Algeria	5	0·2
21	Estonia	3	0·1
22	Sweden	2	0·1
	Total	2,692	100·0

1925 — Net imports

No.	Country	000 t.	%
1	U.K.	1,556	62·9
2	Germany	276	11·2
3	Austria	151	6·1
4	France	144	5·8
5	Czechoslovakia	117	4·7
6	Italy	110	4·5
7	Belgium	67	2·7
8	Egypt	16	0·7
9	Japan	13	0·5
10	Switzerland	10	0·4
11	Chile	9	0·4
12	Spain	2	0·1
13	Finland	1	0·0
	Total	2,472	100·0

1938 — Net exports

No.	Country	000 t.	%
1	Argentina	622	25·5
2	N.Z.	267	11·0
3	Australia	246	10·1
4	Denmark	244	10·0
5	Eire	210	8·6
6	Canada	114	4·7
7	Uruguay	113	4·6
8	Poland & Danzig	97	4·0
9	Mexico	73	3·0
10	Brazil	51	2·1
11	Hungary	44	1·8
12	China	44	1·8
13	Yugoslavia	43	1·8
14	Rumania	37	1·5
15	Lithuania	33	1·3
16	Netherlands	27	1·1
17	Korea	21	0·9
18	Sweden	15	0·6
19	Latvia	14	0·6
20	Fr. W. Africa	13	0·5
21	Madagascar	13	0·5
22	S.W. Africa	11	0·5
23	Fr. Morocco	11	0·5
24	Estonia	11	0·4
25	Turkey	9	0·4
26	S. Rhodesia	8	0·3
27	Bulgaria	7	0·3
28	Netherlands Indies	7	0·3
29	Iraq	6	0·2
30	Fr. Equat. Africa	5	0·2
31	Paraguay	5	0·2
32	Honduras	4	0·2
33	Indochina	4	0·2
34	Finland	4	0·2
35	Anglo-Egypt—Sudan	2	0·1
36	Manchuria	1	0·0
	Total	2,436	100·0

1938 — Net imports

No.	Country	1,000 t.	%
1	U.K.	1,620	69·0
2	Germany	210	9·0
3	U.S.A.	97	4·1
4	Austria	64	2·7
5	Hong Kong	43	1·8
6	U.S.S.R. (1947)	36	1·5
7	Italy	32	1·4
8	France	24	1·0
9	Japan	24	1·0
10	Czechoslovakia	17	0·7
11	Br. Malaya	17	0·7
12	Greece	16	0·7
13	Belgium–Luxembourg	15	0·6
14	Union of S. Africa	13	0·6
15	Newfoundland	10	0·4
16	Israel	9	0·4
17	Hawaii	9	0·4
18	Puerto Rico	9	0·4
19	Algeria	6	0·3
20	Trinidad & Tobago	6	0·3
21	Guernsey & Jersey	5	0·2
22	Malta	5	0·2
23	Gold Coast	4	0·2
24	Libya	4	0·2
25	Philippines	4	0·2
26	Bolivia	3	0·1
27	Egypt	3	0·1
28	Chile	3	0·1
29	Alaska	3	0·1
30	Switzerland	2	0·1
31	Cuba	2	0·1
32	Colombia	2	0·1
33	Other countries	31	1·3
	Total	2,348	100·0

1950 — Net exports

No.	Country	000 t.	%
1	Argentina	361	18·7
2	N.Z.	334	17·3
3	Denmark	281	14·5
4	Australia	191	9·9
5	Canada	179	9·2
6	Eire	147	7·6
7	Uruguay	98	5·1
8	France	68	3·5
9	Poland	61	3·1
10	S.W. Africa	31	1·6
11	Fr. W. Africa	25	1·3
12	Netherlands	20	1·0
13	Hungary	17	0·9
14	Mexico	16	0·8
15	Yugoslavia	15	0·8
16	Honduras	13	0·7
17	Fr. Equat. Africa	11	0·6
18	Turkey	10	0·5
19	Anglo-Egypt—Sudan	8	0·4
20	Brazil	8	0·4
21	Paraguay	8	0·4
22	Czechoslovakia	6	0·3
23	Dom. Rep.	5	0·3
24	Colombia	3	0·2
25	Algeria	3	0·2
26	S. Rhodesia	3	0·2
27	Eritrea	2	0·1
28	Madagascar	2	0·1
29	Belgium–Luxembourg	2	0·1
30	Japan	2	0·1
31	Fr. Morocco	2	0·1
32	Iraq	1	0·0
33	Spain	1	0·0
34	Rumania	1	0·0
35	Finland	1	0·0
	Total	1,936	100·0

1950 — Net imports

No.	Country	000 t.	%
1	U.K.	1,282	64·3
2	W. Germany	206	10·3
3	U.S.A.	184	9·2
4	Hong Kong	34	1·7
5	Italy	31	1·5
6	Sweden	23	1·2
7	Greece	19	1·0
8	Gold Coast	19	1·0
9	Switzerland	17	0·9
10	Union of S. Africa	16	0·8
11	Israel	16	0·8
12	Venezuela	15	0·7
13	Chile	15	0·7
14	Malaya—Singapore	13	0·6
15	Egypt	11	0·6
16	Peru	11	0·6
17	N. Rhodesia	11	0·5
18	British W. Indies	11	0·5
19	Austria	10	0·5
20	Netherlands Indies	8	0·4
21	Guatemala	6	0·3
22	Belg. Congo	5	0·3
23	Malta	4	0·2
24	Philippines	2	0·1
25	New Guinea	2	0·1
26	Other countries	24	1·2
	Total	1,995	100·0

on the future forms of international trade by elucidating the problems and explaining the real consequence of different measures, and perhaps also by pointing to new solutions.

It must surely be admitted that arguments at the negotiations on trade agreements are not always marked by factual economic considerations, and it cannot be alleged that the discussions at meetings of international organizations always give evidence of deep agricultural economic insight. Agricultural economists should take a firmer stand against these shortcomings, both individually and by joint statements. It would be natural, and surely very valuable, also, if international organizations would ask this conference to answer important agricultural economic questions.

Untenable statements of costs of production in individual countries are among the most harmful adverse growths in the arguments for protectionism. The demands for fixed or constant prices for particular products are allied to this question. The main point is that prices and price relations should be such as to make it possible for the farmer to obtain a reasonable profit out of his whole holding. The frequent demands for an increase of the production of foodstuffs are often obscure and somewhat unreasonable. Which kind of foodstuff is to be increased? Is the farmer to exceed the economic limit for the quantities he produces, and will somebody take on the risk, if the goods cannot be sold? There is also some reason to look a little closer at the methods for computing the amount of agricultural production, particularly the balance between plant production and animal production. Here is a great task for the members of the international conference of agricultural economists, to prepare scientific accounts of the factors and forces which are decisive for production and international trade and thereby of the supply of foodstuffs.

If agricultural economists cannot point to a solution they can at least give information about the effects of the various measures taken, and more particularly of the effects which they will have on production, a fact which is overlooked too often at trade political decisions. The importance of international collaboration is emphasized on many occasions, but it is often forgotten that if economic collaboration is to be carried into practice, it must take place first and foremost through the international exchange of goods.

P. F. CRAIG-MARTIN, *International Bank for Reconstruction and Development, Washington, D.C., U.S.A.*

I propose to confine myself to two issues only. First, Mr. Richards has suggested that the price under the wheat agreement should be maintained within a minimum and maximum of, say, 15 per cent. of the average price for the preceding year. Since what I wish to say applies equally to recent research into this price problem conducted by the F.A.O. Committee on Commodity Problems, I shall outline their proposals for you. First, they suggest maximum and minimum prices expressed as simple percentage additions to, or reductions from, a mean price which is defined as the moving average of market-prices over a 6- to 10-year period. Second, since this would not be sufficient to insure over any given period an equitable price, as it would steadily lag behind the current price, it may be necessary to supplement it with the adoption of a parity formula to secure further adjustments in accordance with any major movement in the general level of world prices.

Now, on both Mr. Richards's proposal and that of F.A.O., I suggest that we must think again. An examination of long-term movements in prices shows inevitably that the ratio of each commodity to an index of agricultural commodities varies differently in time. Further, the price of wheat does not have the same relationship to the price of alternative commodities which can be produced in different countries at the same time. This means, therefore, that none of the proposed methods of price fixing would necessarily insure the purposes of the wheat agreement which are not only to provide fair and stable prices to both parties, but also correctives to the supply position. If this is right, there are interesting implications also regarding the effect of a pegged wheat price on the production of an alternative commodity. This might take a modified form of our recent experience that high world wool prices reduced wheat production in Australia even though wheat prices were at the ceiling under the wheat agreement. This whole field of the interrelationship of commodity prices has such wide implications that it deserves our greater attention. Before the war the Commonwealth Economic Committee did some work in this field. I believe the Dutch have much unpublished work based on trade in Javanese products. We in the Bank are much concerned with this problem because of its implications for the credit worthiness of our members.

My second point is somewhat controversial. Is there an international trade policy? I suggest to you that international trade policy today is so closely linked with the policy of the rapid development of productivity all over the world that the whole must soon be recognized as the first deliberate world policy of progress. When international trade policy is taken out of this context, much national action is and some appears to be in violation of the spirit of the

Charter. It is worth contemplating for a moment the magnificent action of the United States, the world's leading cotton exporter, in helping to develop cotton production in the Middle East. At the same time, the Middle East, a market for United States textiles, is developing protected cotton-processing industries. Contrast these actions taken together with the United States' barrier against imports of dairy products. But, you cannot stop determined progress or time. The composition of future international trade need not be the same as today. Dr. Jacobsen has very clearly demonstrated that each country's pattern of production will change. Look around you today for justification. Britain is throwing off her great dependence on imported feedstuffs. So is the Netherlands. Today Argentina, normally one of the world's chief exporters of wheat, is importing wheat. Zanzibar, which before the war exported cloves and imported food, today exports clove oil, feeds herself, and has increased imports. Professor Norton has told you that cotton and paper bags have been replacing jute. But the handling of goods in bulk has been replacing all three and, for instance, jute competes with rice for the land in Pakistan. Turkish-type tobacco is finding it very hard to get a market today, but there is a fundamental change inducing that. It is a change in taste towards the blended cigarette. Meanwhile, as a component for blended cigarettes, Rhodesian tobacco has developed very fast. You may call this a result of currency problems but I think it goes deeper. Is it possible that the export of butter from New Zealand may dwindle? May she find new markets in which to sell processed milk? What happens then to her pig products industry? Might not orlon, or some similar substance displacing wool, make the sheep a museum piece and release large areas for other uses? Great progress is being made in the techniques of pulping mixed hardwood forests. There is a tremendous resource here. In Chile a million acres of *insignis* pine have sprung up in under ten years; and the rate of expansion at present is 25,000 acres a year. When sugar was the chief product of the Americas, *quelques arpents de neige*—now Canada—were once traded by France for a strip in the Caribbean. Who can foresee which countries that are poor today will not be as rich as their neighbours tomorrow, in this atomic age. All this is affecting international trade in agricultural products and the rate of change is accelerating. Professor Norton pointed out that economic theory did not stop with Keynes. It would be a rash man who would put a limit to the resourcefulness of man.

S. Sinclair, *University of Manitoba, Winnipeg, Canada*

It is appropriate that in the order of the discussions here, the question of international trade in agricultural products should receive prominent attention. And we are indeed grateful to Dr. Jacobsen for his presentation of some of the fundamental factors involved in some of the problems associated with such trade. He deals with this question mainly from two angles. First, he discusses the influence of trade on production under different conditions and practices in operation. Secondly, he indicates the pattern of flow of international trade in agricultural products as illustrated by specific trade statistics. He analyses the effect of the different trade restrictions and regulations upon production. Under free trade, he points out, there would be a tendency for production to fall in line with comparative advantage and for production thus to be maximized. But tariffs, embargoes, quotas, and such-like disturb this natural distribution of production, resulting in a reduced output of agricultural products. To overcome some of these disturbances in a world that is not prepared or able to accept complete free trade, nations have swung to the use of long-term contracts either on a bilateral or multilateral basis. Because of the importance of long-term contracts in agricultural trade, I want to deal with one or two points which seem to me to be important particularly from the point of view of the exporters.

First of all, I would like to agree that from the viewpoint of the farmer, as our Canadian experience seems to indicate, long-term commodity agreements have had a beneficial effect. They give the farmer a strong sense of security through confidence in his ability to dispose of those products covered by the contract. I am not suggesting here that this is in terms of the most profitable disposal of those products, but the fear of surpluses that was built up during the depression is still strong enough among our farmers for them to be prepared to support long-term contracts even at prices below what seem to be current market prices. On this point I refer to a referendum held in the Province of Manitoba a year ago in which the Manitoba Government put the question to our farmers, whether or not they were satisfied with the current methods of marketing grain. I should say, of course, this was in connexion with the marketing of coarse grain. However, the way the question was worded implied—and many believe that our farmers in voting on the question interpreted it that way—that it referred to the over-all system of marketing grain as far as western Canada is concerned, namely, government control on the domestic level and the International Wheat Agreement at the international level. The result was about 90 per cent. in favour of that method, and many of the farmers with whom I spoke indicated that they liked that system because it gave them a certain feeling of security against the recurrence of big surpluses. Inasmuch as long-term contracts reduce uncertainty, they give the farmers a certain sense of economic security and thus should lead to greater stability and greater productivity. On the other hand, however, there is some doubt whether the price received is a proper one in terms of best allocation of resources and maximum output.

Under long-term contract the price is an important factor. This poses two very important considerations. First, the question of what is a correct or true price. If the agreement is multilateral and covers a considerable portion of the product in international trade, as in the case of wheat, how should the price be arrived at? In the case of wheat, since the agreements have been drawn, the United States has been the only country where there has been an open market for the determination of the price of wheat. All the other countries had no open market. It is quite likely that the American price, the open market price, was used as a guide by the negotiators, but can we say that this price was a representative price? I would be inclined to suggest that it is more logical to conclude that the contract price arrived at by the negotiators was more of a political price than a market price. If such is the case, and I think there is evidence pointing that way, then it will adversely affect production. This is due in part to the shift in the relative position of the price of the particular product as compared with other products which are not under contracts. Reference has been made to the situation in Australia as between wool and wheat. I think that we can detect a somewhat similar situation in western Canada as between the production of wheat and coarse grains, particularly barley which has been in considerable demand and for which the price has been freer than for wheat. Barley production has increased. Wheat production has stayed pretty stable in spite of the Agreement.

The second consideration concerns the maximum price set. Experience shows that we could not negotiate any long-term contracts during the depression years. There are probably many reasons, but one which I think is important is that such a contract would mean setting a minimum price considerably higher than prevailing prices and we just do not operate that way. Our contract was negotiated when prices were relatively high, but the current year's price under the contract was set below the free market price. The argument for this, of course, is that a lower than free market maximum price now will permit a higher than free price should the free price drop. This sounds logical except that the seller is giving up something definite in the present and will likely continue to do so every year of the contract as long as the free price is within the maximum and minimum range. He is giving up this present income for something that he *may* gain in the future. Unless the price drops rapidly and drastically the odds pretty well all the time are against his recovering the losses he sustains currently. Under these conditions the long-term contract can be injurious to stability of production, and I think I am correct in saying that even though there is that sense of security amongst our farmers, many of them are beginning to be concerned about the price factor. In Canada and Australia our farmers, unlike those in the United States, receive the contract price; it is not made up to them in any way from the public purse as it is in the United States. While our farmers still would like to have the renewal of the International Wheat Agreement or of a similar type of contract, they are looking for two things in particular. They want higher minimum and maximum prices and price flexibility so that adjustments can be made during the life of the contract in the event of changing cost-price relationships.

I want to say just a word about Dr. Jacobsen's reference to the pattern of the flow of trade. He shows that, although there have been some variations in the proportions of exports and imports for the various countries, the general pattern has persisted. He deals specifically with the trade of butter and introduces some other commodities in general. We know that trade in agricultural products has moved primarily from the new world mainly to supply the United Kingdom (with some lesser movement to western European countries). I think it is desirable to remind ourselves continuously of this interdependence of these two areas. While it is true that we are slowly developing other outlets and sources for agricultural products, it will be some time before satisfactory substitute channels of flow can be developed. We need always to bear this in mind in our over-all trade negotiations. New market areas develop slowly and often some of them are disappointing, as some of our Canadian people have experienced in the case of dairy products.

Finally, I want to concur with everything Dr. Jacobsen said about the task of agricultural economists. There is considerable opportunity for liaison between the organizations of agricultural economists and those of farmers. Dr. Jacobsen expresses surprise at the power of farm organizations to influence government action in favour of farmers although they are becoming less important numerically. I suggest that some of the reasons at least lie in the realization by Governments, and other groups as well, of the importance that farm products play in our national economies. It is more fully recognized that agriculture truly is as important to general welfare as are our other industries, and Governments are ready to pay close attention to the suggestions of farmers in developing policies for agriculture. Because farm organizations play so important a role in the determination of agricultural policies I suggest that we can assist them greatly in the framing of these policies by presenting our views in a broad and forceful manner.

CARLOS DERTEANO, *National Agrarian Society, Peru*

The general public frequently wonders why such great differences exist in the world as far as economic development is concerned. A simple answer could be that not all the countries have had opportunities of developing their resources, if they are lucky enough to have any. Naturally many economic forces and relationships play an active part during the complex process of economic evolution.

Latin-American countries look forward to an economic structure based on permanent foundations. Governments realize that an appropriate relation between rural and urban population is required, that exports should exceed imports in order to have a positive trade balance and an adequate foreign exchange supply, and also that the national budget should be well balanced and in line with the financial capacity of the country. No doubt agricultural output in these countries exerts a definite influence on the volume of supplies and transportation, international trade, fiscal revenue, wage level, and cost of living.

Practically all Latin-American countries have worked out long-term projects for economic and social development far beyond any reasonable possibility of being carried out with the present slow rate of domestic capital formation. An overnight capital inflow from highly developed countries cannot be expected to solve all problems and expedite economic development. The situation is not as simple as it appears.

The expansion of farm-land and the increase of productivity per hectare is handicapped not only by local factors but by a number of external forces. I consider of fundamental importance the discrimination exercised in international trade, which is doing away with fair competition. Bilateral trade agreements and high customs tariffs to protect domestic production, as well as the setting up of import quotas, offer very representative examples. Trade limitations, restrictions, and even exclusions do not permit a country to set up a production goal based on an economic criterion. Peru, for instance, has extraordinarily favourable natural conditions for sugar-cane and cotton production. The United States imports most of its sugar requirements from abroad. Peruvian cotton, known as *Tanguis fiber*, because of its being unique in quality, does not meet competition from staples produced elsewhere. Notwithstanding these facts both products, which under normal conditions would have an excellent market in the United States, are subject to extremely low quotas that are to be regarded only as of minor significance. This is also true with regard to long staple cotton of the *Pima* type. Because Egyptian varieties are harvested earlier, they can arrive in the United States and cover the entire quota far ahead of the Peruvian staple. The elimination of these restrictions would contribute materially to the economic development of Peru, allowing the country to benefit from a rather stabilized economic structure, much more and faster than any other programme under way. The consumers in the United States would also benefit by being able to purchase the products at more reasonable prices. Peru's foreign trade is greatly affected by the shortage of dollars in former traditional markets and also by the governmental policy of the majority of countries with regard to purchases from abroad and exchange rates.

With the main objective of trying in the future to maintain equilibrium in world cotton supply and demand and to regulate market quotations, discussions are under way prior to an international cotton agreement amongst producing and consuming countries. As far as Peru is concerned such an agreement would not affect the future volume of production, provided that in figuring the quota the production of normal times is taken into account as well as the potential output that can be reasonably expected when irrigation projects are completed.

Export products should not endeavour to compete in the world market with those of other countries unless they are obtained at much lower comparative costs and in areas that have abundant natural resources and economic advantages. World resources should be complementary and not unduly competitive in a market of artificial prices.

Only when international trade once again recovers from undesirable regulations, and convertibility of exchange is restored within a more logical monetary policy, will the under-developed areas of the world improve their economic structures and obtain the highest possible incomes under given conditions of time and place and avoid the dangers of further internal and external inflation.

The future of Latin-American countries in economic development and foreign trade depends primarily on the increase of raw materials and the lowering of unit production costs by the use of efficient modern techniques, and by applying more effective principles of farm organization and management. This in turn will make possible the additional purchase of both capital and consumer goods from abroad.

S. R. SEN, *Ministry of Food and Agriculture, India*

The subject of international commodity agreements—or arrangements, to use Professor Black's broader term—is of great importance to all of us today.

It is the fear of surpluses or shortages—more often the former than the latter—which has been responsible for most of the international commodity agreements in the past. A number were negotiated during the period from 1947 to 1949 when the war-time demand for certain commodities tapered off, and when balance-of-payment difficulties threatened to lead to local surpluses. There was a slackening during the period of uncertainty immediately after the Korean War started, but lately there has again been some revival of interest. It may not be out of place to recall here that serious attempts to secure international co-operation in the field of production and distribution of agricultural commodities were first made shortly after the First World War under almost similar circumstances, although it was the Great Depression of 1930 which gave a real fillip to international commodity agreements. Most of the earlier attempts, however, were confined to agreements between producers only, and naturally so, because at that time the crux of the problem was over-production. The usual technique was to withdraw the surplus stocks from the market and dispose of them gradually as and when demand recovered. In some cases this was supplemented by a more or less effective regulation of production. The Stevenson Rubber Restriction Scheme of 1922 is one of the earliest examples of such an agreement. The Chadbourne Sugar Plan and the International Coffee Agreement are other important schemes of this type. Most of them were not very successful. But the International Tea Agreement in which India is one of the most important participants has succeeded very well. Among other things, there were certain economic and technical factors which contributed towards its success. In the first place, the demand for tea amongst its regular customers is relatively inelastic and hence a policy of regulation carried out within certain limits is likely to augment not only the net revenue of the producers but also the gross revenue of the industry as a whole. Again, tea has such a large number of unsaturated and potential consumers that even at comparatively high prices it is possible, by carrying on intensive propaganda, to expand its consumption or at least maintain it. Secondly, the fact that tea is a plantation industry, and one of the best organized at that, renders production and marketing control easier than in the case of many other commodities. Besides, unlike coffee, tea has no crop cycle worth the name to trouble the planter. The production of tea can be easily regulated without causing dislocation.

Certain important weak points of the scheme, however, could be noticed from the very beginning, at least so far as India was concerned. First, the great disparity between the prices in the export and the internal markets encouraged evasion and smuggling in spite of rigid statutory control. Secondly, the proportion of the non-agreement countries tended to increase, in spite of the cautious and watchful policy of the International Tea Committee, and it is difficult to say what would have been the position today but for World War II. Thirdly, the regulation of exports as enforced in India under the Indian Tea Control Act of 1933 caused a great deal of discontent within the country inasmuch as it did not make proper provision for new, small, and low-yield estates which were mostly owned by Indians who were late in the field while most of the older and bigger estates were owned by Europeans. These grievances were partially remedied by an amendment to the Act in 1938. Another problem arose in that there was a large number of varieties of tea and the planting restrictions applied to all of them without regard to their different conditions. Actually, it was the low-grade teas which had been in over-supply, but the high-grade producer, too, was compelled to cut down his produce. This penalized him in several ways. Although the prices of low-grade teas improved considerably owing to restriction, those of the high grades, already fairly highly priced, did not. Restriction, on the other hand, increased the cost of production of all teas, particularly of the high-grade ones. Again, most of the estates producing high-grade teas had low yields and did not receive adequate concessions with regard to planting restrictions, any method other than blanket curtailment having been fraught with practical difficulties. The ultimate result was that the policy of regulation tended to bring all teas to a common level irrespective of country of production and grade. In fact, this adverse effect on quality has been a feature of almost all similar schemes. Inasmuch as it encouraged combination amongst planters, the Tea Agreement also led indirectly to a deterioration in the position of estate labourers until the Government took a direct hand in labour problems. On the whole, however, the Agreement may be said to have operated successfully. But this was not a general rule so far as most of the commodity agreements between producers were concerned. It is well known that the International Rubber Agreement, the International Coffee Agreement, and the rest led to unwise price-rigging, undesirably large inventories, inevitable consumer-resistance, excess supplies, leakages, and all sorts of difficulties. The main trouble was that the interest of the consumer was not adequately protected in many of the agreements, while the producers were not always well organized nor were they always loyal to the agreements. These schemes failed because it was sought to make them tools for increasing the profits of the producers rather than for stabilizing prices at the level of normal and reasonable profits.

Most of the earlier commodity agreements, especially during the depression, were essentially between producers because at that time the problem was to counteract the effects of over-production. More recently, especially during and immediately after the Second World War, the problem became one of shortages and consumers also had to combine to safeguard their interests. In some of the more recent commodity agreements, for example, those for wheat, sugar, and wool, therefore, an attempt has been made to reconcile the interests of consumers and producers. It is the International Wheat Agreement, however, which came into force on 1 August 1949, which is perhaps the most important agreement of this type. Essentially, it is a 'put and take' agreement between producers and consumers. The exporting countries, viz. U.S.A., Canada, Australia, and France, agreed to put into the pool specific quantities of wheat for sale to importing countries at guaranteed maximum prices. The importing countries undertook to buy certain specified quantities at guaranteed minimum prices. Whether it can be counted a success or not, it is perhaps too early to say, though it must be said that it has been of little help so far to world wheat production. It is also difficult to say how far it has been successful even in its primary objective of stabilizing prices. Of course, there has been some stabilization, although at the maximum price limit, so far as the quantity of the wheat covered by the Agreement is concerned; but it has been argued, not without reason, that by fixing maximum and minimum prices for only a part of the total volume of the trade it has tended to give rise to more violent fluctuations of price for the quantity which is traded outside the Agreement than would have otherwise occurred. It is felt by many that a system of international buffer stocks might perhaps have been more effective and more economic in the long run. Moreover, inasmuch as the guaranteed prices for a particular commodity tend to be out of parity with the prices of competitive crops, there is an effect on the production pattern of various countries, which is not necessarily the most desirable one. The main difficulty in these matters is that political considerations often play as important a part as the purely economic. The difficulty which is being faced today about renewing the Agreement also proves that it has not so far been able to instil that element of confidence and stability which was originally expected of it. Whether the new Agreement would be an equitable one would depend upon the view that buyers and sellers would take of the future trend of prices, and whether it would be successful would also depend upon the actual trend of events. The chances of its success would be greater, however, if more producing countries participated in the Agreement. But perhaps even that is not enough because it has been our painful experience that the negotiators of these agreements usually tend to have too narrow an outlook and do not consider the economy of the world as a whole nor try to match surpluses with shortages from an equitable and long-term point of view, but concentrate on making the best of the short-term bargain so that they can be sure of *kudos* from 'the folks at home'.

It is also rather curious that negotiations for commodity agreements are rarely successful except when a surplus is expected, and they usually have the effect of restricting rather than expanding production, even in a world where there is shortage and hunger in many countries and where most of the apprehended surplus could easily be absorbed. Of course, there are occasions when 'restrictionism' proves to be very efficacious as a method of orderly retreat from an untenable or undesirable situation. But it has also the tendency of degenerating into a tool of monopoly exploitation and of impoverishing society as a whole by encouraging inefficiency and advancing sectional interests at the cost of social interests.

It is the consciousness of such difficulties which is now gradually turning attention to the need for having some more comprehensive measure, rather than separate commodity agreements, either between producers or between producers and consumers. An agreement between producers alone, unless the participants are very prudent and far-seeing, tends to ignore the interests of consumers, and to become a trial of relative bargaining strength with politics becoming more important than economics. The interrelation of the various commodities, and the optimum use of the various productive resources, are often forgotten and most of the agreements come to grief because the production pattern, and sometimes the consumption pattern too, tend to change in ways which are not in the best interests of the countries concerned.

Unfortunately the various attempts made so far by F.A.O. to solve this problem have not been very successful. It may be recalled that as early as October 1946 F.A.O. suggested the establishment of a World Food Board with the necessary funds for stabilizing prices of agricultural commodities in the world markets, for building up a world food reserve to meet any emergency that might arise through failure of crops, for providing funds for financing the disposal of surplus agricultural products wherever needed, and for co-operating with organizations concerned with international credit for industrial and agricultural development and with trade and commodity policy. These proposals, however, were found to be too ambitious and in 1947 modified proposals were made for an advisory and co-ordinating council, but even that was not acceptable to the various member Governments. It was found that the conflicting interests of producing and consuming countries could not be reconciled. Besides, there were difficulties about surrendering national freedom of action, and about bilateral bargaining, financial commitments, and foreign exchange which could not be satisfactorily solved. It was then decided to make an even more limited approach, and F.A.O. recommended the establishment of an International Commodity Clearing House. The feeling was that between the areas of surplus and shortage a bridge might be created along which trade could flow in a multilateral manner. The functions proposed for the Clearing House can be grouped under two heads: short-term trading and long-term trading. The purpose of short-term trading was to stimulate such trade as was being checked by shortage of convertible currency; the purpose of long-term trading was to maximize international trade and fix international prices within certain minimum and maximum levels. This proposal also failed as some countries thought it too commercial in character and initiated merely to get over the difficulty of currency convertibility. It failed to provide any solution for the problem of continuous surpluses developing in more advanced countries because of poor purchasing power in under-developed countries. The proposed Clearing House might find itself burdened with surpluses which it could not liquidate economically unless provision were made for sales at special concessionary prices to backward countries.

The only alternatives now left to F.A.O. were, on the one hand, to make more effective use of existing machinery, such as the Interim Co-ordinating Committee for International Commodity Agreements, for the initiation of inter-governmental commodity agreements for the solution of long-term surplus problems (which did not really mean very much) and, on the other hand, to set up some additional machinery for dealing with the short-term surplus of grains arising from balance of payments disequilibrium in so far as an international agreement for the commodity concerned did not exist or could not deal with this aspect of surpluses.

The commodity agreements made by producers have opened a way for international co-operation. Agreements between producers and consumers have widened the scope further in the case of particular commodities. But there is still no co-ordination and no attempt to solve international commodity problems in a rational and comprehensive manner. Until an attempt is made to match the interests, not only of the producers and consumers of particular commodities, but also of producers and consumers of all the important commodities which compete for the same physical as well as financial and foreign exchange resources, it will be difficult to have that degree of stability, prosperity, and orderly progress for which there is today such a universal desire.

M. CÉPÈDE, *National Agronomic Institute, Paris, France*

In Mr. Jacobsen's view seasonal fluctuations would be accentuated, and production made more irregular, if the same price were fixed for the whole year. This is certainly true for the kind of production which is continuous throughout the year. But for a crop which matures only once a year, would not a progressive price ensure that it would at any rate be distributed more evenly over the year? Secondly, Mr. Jacobsen implies that international trade in agricultural products is only possible if the exporting country has something left after its own consumption needs have been met. My belief is that some countries can be found where export is carried on without any guarantee that its own needs have been met at all satisfactorily.

Mr. Richards's paper stimulates me to make an observation about the organization of international markets. Of course, we have a charter, the Havana Charter, and it may be a very fine thing, no doubt, but in my own personal view it was not intended to be applied to rural economy. Nevertheless, it has certain very important implications for rural economists. Chapter 6, for example, is a special charter for the 'basic commodities' and, of course, every agricultural commodity has been acknowledged by the Charter as 'basic'. Unfortunately, it has not been ratified, though many countries have agreed under the General Agreement on Tariffs and Trade to apply some of the Charter's provisions but none from Chapter 6. Consequently, we have not obtained what we expected from it, namely, an organization for the trade of agricultural products. Needless to say, the International Wheat Agreement represents a 'commodity agreement'—a kind of organization of the agricultural market—but so far as concerns my country, we must face the fact that the I.W.A. is not a real commodity agreement. In 1949 we were an exporting country; we exported 850,000 tons, of which 90,000 tons was our quota under the I.W.A. which we sold for \$66 per ton, while the balance was sold on the free market. At that time we were paying our farmers a price of \$79 per ton so we lost money on our quota but, as the price on the Chicago market was \$80, we were able to compete with the United States on the free market, even in Brazil, and made sufficient profit on these free exports to balance the losses on our quota exported under the I.W.A.

This year it is the opposite, because having had a poor crop, we have to import. As exporters under the I.W.A., the price set was not applicable to our imports, and we had to buy on the free market. The price paid to the French farmer was \$103, the price on the U.S. market was \$93 (Kansas City, March 1952) which put the f.o.b. price (Atlantic coast) at \$101, and the European harbour price at \$118·50. What is worse, when we bought wheat from Turkey, the price was \$154 on the same free market.

If anyone were to ask me to explain why this has happened, I could only answer that it is because of our endeavours to organize the wheat market on an international basis through the I.W.A. So there must surely be some further explanation, or people will wonder whether my sense of humour is not a little faulty.

J. F. Booth, *Economics Division, Marketing Service, Department of Agriculture, Ottawa, Canada*

Yesterday we discussed agricultural efficiency and rural welfare. Today we have had papers on international trade. There is a close relationship between these two subjects and it is to this that I want to refer.

In speaking of welfare Dr. Schultz did not confine himself to rural welfare. He said that whether the national product of a particular country (which determines welfare) is large or small in relation to its population will depend upon the resources available—and upon the efficiency with which production is organized. Now, resources may be grouped roughly into two broad categories, those created by human beings and those that are natural. Some countries are rich in human resources; they may have a surplus for export. Others are rich in natural resources and have a surplus for export. The human resources include products of the arts and sciences—accumulated technology, skills, and crafts. These, to use familiar examples, are represented in the china and silverware of Britain, the linens of Ireland, the optical goods of Germany, the watches of Switzerland, and the leather products of Italy. They are represented also in the dairy products of the Netherlands and the Scandinavian countries, in the canned hams of Poland, and the wines of France. Some of these result from native skill applied to raw materials obtained from other countries. The resources created by human beings include also institutions and services in the fields of finance, insurance, transportation, and the like.

Throughout most of the nineteenth century and up to the First World War these products traded more or less freely for the natural products of the New World. In the process some of the human beings possessing these skills and technology also moved from the countries in which these were in surplus. Within our generation this comparatively free exchange has been disturbed or restricted for reasons that are familiar to us, and Dr. Richards has told us today of some of the efforts to reconstruct, or to build anew, conditions and machinery that will restore and enlarge the volume of trade. It does not matter whether we call the difficulties we now experience 'inconvertibility of currencies' or just plain lack of balance between exports and imports. The result is the same.

What I am trying to say is neither new nor profound. It is merely an attempt to remind ourselves that necessary and desirable as increasing efficiency in production is, we will not get maximum welfare, whether in the aggregate, by regions, by industries, or on a *per capita* basis, unless countries can trade the products of their human resources for the natural products of other countries. If this cannot be done, and done to the extent necessary, there will be a greater premium on natural resources in the future than in the past. The nations that possess these will acquire still more of the skills and techniques to develop them. Possessed of both the skills and the resources, the gulf between them and the other nations in the matter of welfare will widen. Neither group will attain the level possible were freedom of exchange more general, but the advantage will very definitely be with countries that are long on natural resources, and the extent of the difference will depend upon the volume and variety of these resources.

This is simple, I know, and has been oversimplified in my presentation for sake of brevity, but the relationship between human welfare and international trade is important, in some instances perhaps more so than the relationship between welfare and production efficiency.

A. P. Jacobsen *(in reply)*

Mr. Sinclair comes from a big wheat-growing region and I am well aware he has a background and a knowledge of some of the wheat problems which I do not have. On the other hand, we feel sometimes that international organizations attach too much importance to wheat. May I remind Mr. Sinclair that some day when there is too much wheat it will be hogs and flocks which will use the surpluses and create a balance between production and demand? When Mr. Sen says that I have spoken outside my title he is perfectly correct. There was some misconception about the division of the subjects for discussion this afternoon, but I hope that Mr. Richards and I between us have covered the whole issue.

A. E. Richards *(in reply)*

I think Mr. Craig-Martin is looking for a theoretically perfect formula for a new wheat agreement that will provide fair and stable prices and correct the supply situation. I do not think he will find it and if he does it will be too complicated to understand. There are many advantages in keeping a formula simple and understandable and as close to free market operations as possible. In the report of the Economic and Social Council on measures of international economic stability the Angell Select Committee, in putting forward their recommendations on international commodity agreements, laid down the principle that in the long run a commodity price stabilization scheme should not attempt to make the average price higher or lower than it would otherwise have been. The objectives should be to reduce fluctuations around a long term trend. The recently published Paley Report to the President of the United States made the same recommendation. I believe that my proposal most nearly meets these conditions. Mr. Craig-Martin has referred to changes in trade patterns, readjustments, and realignments in trade due to applied technology in opening new resources. In his position in the International Bank he gets a world vision of what is happening in international trade and sees it in proper perspective. We are grateful to him for this contribution. Most of these changes, no matter how they come about, mean progress in development and expansion of world trade. We have heard so much about trade restrictions and quotas that it is almost surprising to find that in spite of these trade barriers the volume of international trade has actually increased by from 40 to 50 per cent. compared with pre-war.