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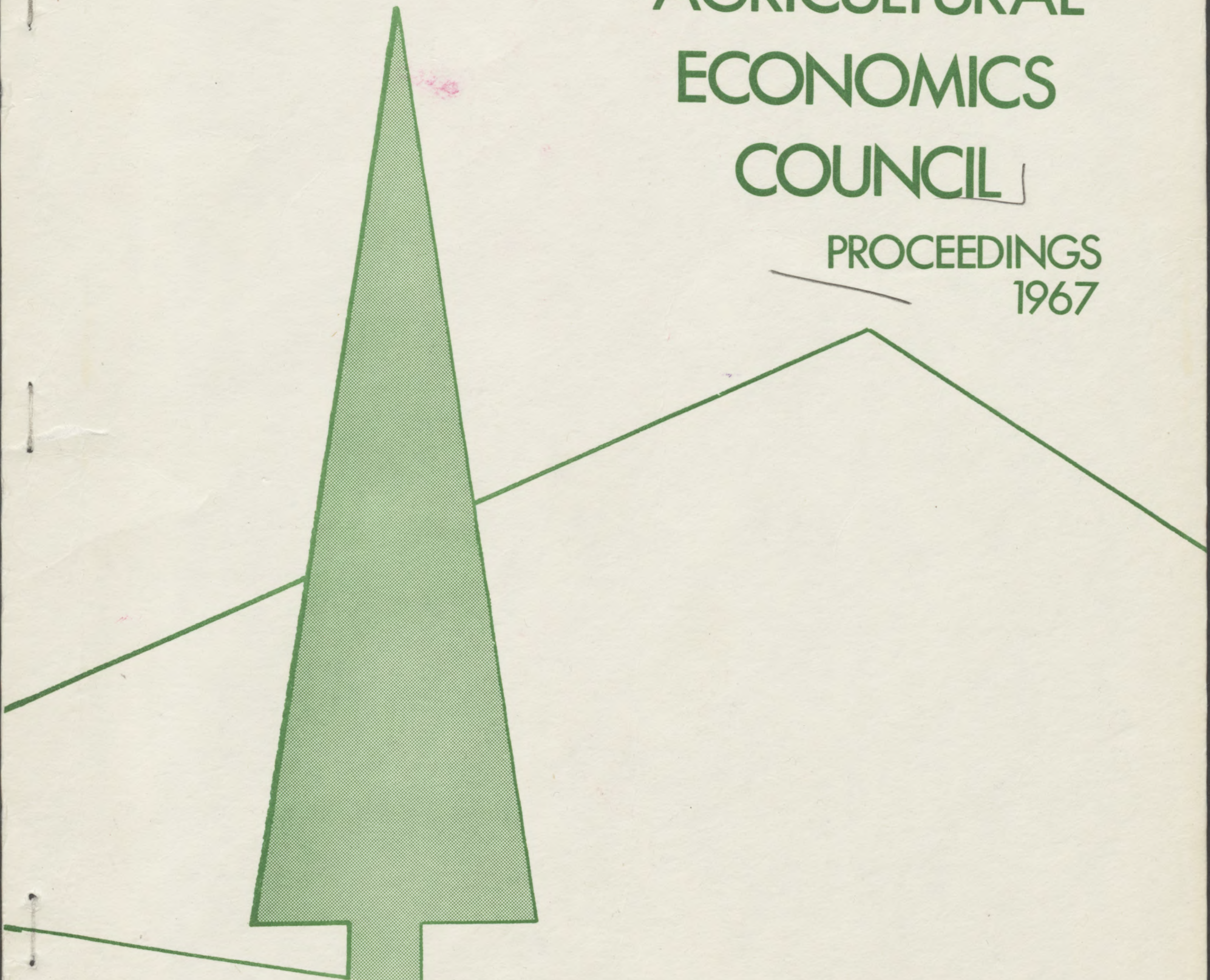

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IMPLICATIONS OF INTERNATIONAL TRADE ON CANADIAN AGRICULTURE

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We have developed this paper under four headings. The first reviews the significance of international trade in Canadian agriculture and examines recent trends. The second discusses implications of international trade for agricultural policy. The third deals with implications for resource use and adjustment, and the final subject is outlook for agricultural trade.

Agricultural Trade in Perspective

During 1961-66, Canada's agricultural exports averaged $1.5 billion as compared to imports which averaged nearly $1 billion. In this period, farm exports accounted for 20 percent of Canada's total merchandise exports while farm imports represented 13 percent of total merchandise imports. In recent years, Canada has ranked fourth in world agricultural exports and sixth in imports, accounting for seven percent of world farm exports and three percent of imports.

Our agricultural exports move mainly to the developed countries with the United Kingdom taking 20 percent, the United States 15 percent, the EEC and USSR 12 percent each, and Japan 8 percent in the two-year period 1964-65.

The main source of imports is the United States which provided 54 percent of the total in 1965-65. Imports of food make up about 70 percent of all agricultural imports, the most important of which are fruits and vegetables, plantation crops and sugar. About 45 percent of current farm imports can be classified as supplementary (i.e. products of a kind commercially produced in Canada), the United States being the main supplier.

In world agricultural production and trade, Canada's agriculture assumes importance for a number of commodities. During the recent period 1960-65, Canada produced about 6 percent of the world's wheat and was responsible for 25 percent of world wheat exports. In the case of other major commodities, the percentages are as follows: oat production: 12 percent of world total - exports, 14 percent; barley: 5 percent - 12 percent; flaxseed: 16 percent - 59 percent; tobacco: 3 percent - 2 percent; and meats: 2 percent - 0.2 percent. In the case of milk production, Canada produced 2.5 percent of the world total and accounted for seven percent of world exports of milk powder and two percent of world exports of cheese.

Currently agricultural exports amount to about 40 percent of the total value of agricultural production. In the case of such commodities as wheat, rye, legume and grass seeds, flaxseed, rapeseed and maple products from one-half to three-quarters of the production is exported. Exports are also important for barley, dry peas and beans, tobacco, cattle (purebred and feeder), cheese, skim milk powder and apples.

Wheat is Canada's number one export and in 1966 wheat and wheat flour exports accounted for 61 percent of the total value of farm exports. During 1961-65 wheat along accounted for 23 percent of total farm cash receipts.

Forty-six percent of total farm cash receipts were obtained from exports during

1963 and 1964. On a regional basis, 80 percent of prairie farmers' cash receipts were received from exports during this period. Moreover, this region accounted for over 48 percent of the total value of farm production in the country and contributed nearly 85 percent of the total value of farm exports. In the same period, Quebec and Ontario received 13 percent of their farm cash receipts from farm exports, British Columbia 38 percent and the Maritimes over 15 percent.[1/]

Wheat, oilseeds and coarse grains exports are of primary importance to the Prairies. Potato exports are primarily from the Maritimes while apple exports are important to British Columbia and Nova Scotia. Live cattle exports are of particular significance for Alberta and British Columbia while practically all tobacco exports are from Ontario.

Destination of Canadian Farm Exports

The degree of country concentration of our exports, although traditionally high, has been greatly reduced in recent years. During the two-year period 1950-51, the United Kingdom took 29 percent and the United States 39 percent of our agricultural exports, together accounting for 68 percent on sales averaging $929 million. By comparison in 1964-65, the five main importing countries of Canadian farm products (U.K., U.S.A., U.S.S.R., Japan and China, in declining order of importance) accounted for only 63 percent on sales totalling $1,647 million.

The main importer of Canadian farm products during the period 1964-65 was the United Kingdom, taking 20 percent of the value of total farm exports. The United States followed with 15 percent while the U.S.S.R. absorbed 12 percent, Japan 8 percent and Mainland China 7 percent.

Our share of the U.K. and U.S. markets has declined in the past decade. Never-the less, for many commodities, these two markets are still extremely important. For example, in 1965 the United States took over 90 percent of our meat and live animal exports while Britain absorbed 16 percent of wheat, 31 percent of flaxseed, 80 percent of tobacco, 96 percent of cheese and butter, and 48 percent of our apple exports. Next to the United States and Britain, the E.E.C. is the largest market for farm exports excluding wheat and wheat flour, taking 13 percent in 1964-65. Apart from the development of the centrally planned economies as a major market for Canadian agricultural exports, Japan has been the only other major customer to emerge in the post-war years. Between 1950 and 1965, the value of farm exports to Japan increased from $16 million to $143 million. There are no major commercial export outlets among the less developed countries.

The most significant development in Canada's post-war trade in farm products has been the emergence of centrally-planned economies as major markets. In 1964-65, sales of farm products to Communist countries accounted for over 30 percent of the total value of exports as compared with less than one percent throughout the fifties. Exports of farm products to centrally planned economies increased from an annual average of $17 million in the three-year period 1958-60 to over $600 million in 1966. The U.S.S.R. and China have been the two major markets, taking 50 and 25 percent respectively of our agricultural exports to Communist countries in 1964-65. In addition

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[1/] G. A. MacEachern and D. L. MacFarlane, "The Relative Position of Canadian Agriculture in World Trade". Proceedings of the Conference on International Trade and Canadian Agriculture, Banff, Alta., January 10-12, 1966, Table 4, p. 105.

Poland and Cuba have become relatively steady customers in recent years while other Eastern European countries have become substantial if somewhat erratic purchasers.

Composition of Farm Exports and Imports

Of the more than $1.6 billion worth of agricultural exports during the two-year period 1964-65, nearly 85 percent were crops and the remaining 15 percent livestock and livestock products. This compares with 79 and 21 percent during 1958-59 and 76 and 24 percent respectively in 1950-51. On the import side, there has been very little change in the composition although livestock imports have increased slightly in 1964-65 as compared with 1950-51.

Exports of rapeseed and flaxseed have increased markedly over the past decade. In 1965, rapeseed exports exceeded 10 million bushels in contrast to the shipment of 932,000 bushels in 1955, the first year of rapeseed exports. Exports of flaxseed have also increased substantially, rising from three million bushels in 1950-51 to over 15 million bushels in 1964-65.

During the post-war period, agricultural imports into Canada have shifted towards those products we produce. The main products concerned are soybeans, vegetables and fruits (other than apples), primarily from the United States. The U.S. has gradually increased its share of the Canadian import market until in 1964-65, it accounted for 54 percent of total farm imports as compared to 47 percent in 1950-51. Of the total imports of farm commodities in 1964-65, about 45 percent were of a kind produced in Canada.

Canada's post-war trade in farm products has shown a relatively stable growth of imports on the one hand and the erratic but upward trend of exports on the other. The erratic shifts in agricultural exports reflect in the main the fluctuating fortunes of wheat. For example, wheat and wheat flour accounted for 61 percent of total agricultural exports in 1961-65 as compared to 52 percent during 1956-60. At the same time the total value of exports increased from $4,835 million in the earlier five-year period to $6,984 million in 1961-65. Out of the increase, exports to the centrally planned economies (which consisted almost entirely of wheat) accounted for 77 percent.

Implications of Agricultural Trade on Policy

Canada has actively supported the promotion of national and international policies leading to freer and expanding trade in agricultural products. There are a number of reasons for this. Studies[1/] have shown that for some commodities Canada has a comparative advantage and in others could be competitive. Further, a population of 20 million and a low aggregate income elasticity of demand for food does not provide a large market for a commercial agriculture whose productivity is rising rapidly. Although reliance on export markets places producers at the mercy of the vicissitudes of those markets, the markets do provide opportunities for expanding economic activity.

[1/] See D. R. Campbell, "Alternatives and Opportunities for Canada in International Trade in Agricultural Products" and Gordon A. MacEachern and David L. MacFarlane, "The Relative Position of Canadian Agriculture in World Trade", both in Proceedings of Conference on International Trade and Canadian Agriculture, Banff, January 10-12, 1966, Economic Council of Canada and Agricultural Economics Research Council of Canada.

The heavy reliance on export markets in relation to production means also that the exports must stand on their own feet to a much larger extent than in an economy where a much smaller proportion of the production is exported and in an economy where agriculture is a smaller proportion of the national product. Thus, a unique characteristic of Canadian agricultural policy in relation to that of other developed countries has been the relatively small amount of government subsidy and assistance. It is extremely difficult to make precise comparisons between countries because of differences in subsidy programs and in methods of accounting but subsidies in Canada have been about 8 to 9 percent of net farm income while 15 to 30 or 40 percent and higher are much more common in other countries. The major subsidy program in Canada is for dairy products, a generally high cost industry.

In the case of wheat, the main export item, prices are determined on commercial markets. Administrative costs of the Canadian Wheat Board, the Government's wheat marketing agency, are paid out of returns from the sale of wheat. The guaranteed initial prices for wheat have been low enough so that they have never involved a subsidy. Some assistance has been given to grain producers in the form of acreage payments, storage assistance and perhaps in statutory freight rates. However, in relation to volume of production these have been very small. Payments have been usually made in a way which did not re-allocate resources to wheat production. Government guaranteed loans have been important in expanding wheat sales. During much of the post-war period, wheat prices remained quite stable but costs rose steadily. At times there was a good deal of pressure for wheat price subsidies. However, the commercial export market has been regarded as so important that governments as a matter of policy have attempted to preserve the commercial nature of that market and not jeopardize it by adopting policies which could be regarded as unfair or subsidized competition.

The importance of trade in the agricultural industry also has implications for a number of other policies. It has long been a government policy to emphasize research. This has provided increased productivity and helped to maintain the gains which had already been made. Wheat is a particularly striking example of a high research pay off. It has also been a long standing policy to develop and maintain quality and grade standards to facilitate domestic and export trade. Governments have promoted and encouraged producer marketing boards and some of these have been effective in developing exports. The foreign trade service of the government has also helped to encourage and promote exports. Again, in the case of wheat, the establishment of the Canadian Wheat Board with authority for compulsory marketing of grains in the prairie provinces, had a major impact in the development of export markets.

There have, therefore been substantial and aggressive efforts in the research and marketing areas which have enabled development of export market potentials. Policies in the area of structural adjustment have not, however, been emphasized nearly as much. Probably the main policy which has encouraged farm structural adjustment has been farm credit.

During the depression of the 1930's, private farm credit agencies essentially stopped making farm loans. The gap was filled by government credit programs. The two main ones are a federal farm credit agency for long term mortgage loans and government guarantees to banks for intermediate term loans. The main growth in long term loans occurred after the mid-1950's. For the year 1955-6, some $8 million were disbursed with loans outstanding amounting to $44 million. Since that time, and particularly since 1959 with the establishment of the Farm Credit Corporation whose objective was to establish economic farm units, loans grew very rapidly. For the year 1965-66, over $200 million in loans were disbursed and the principal of loans outstanding was over one-half billion dollars. More than one-half of the loans were for the purchase of land so that the program is an effective means of consolidating farms and in this way is a major force in structure improvement. There is as yet no indication of a slackening off in the growth of the loaning activity. There are also still indications of substantial future requirements in the consolidation of farms towards maximizing efficiency.

In the intermediate credit area, there has also been substantial growth. In 1955, there were 60,000 loans amounting to $69 million. By 1965, this had increased to 91,000 loans amounting to over $200 million. About three-quarters of these loans are for purchases of agricultural implements. A substantial increase in the non-real estate capital inputs in farming does raise the question, however, if the growth in intermediate loans has been enough to meet the full needs of the industry.

A relatively new development in the farm credit area is a program to make farm machinery loans to groups of three or more farmers. From the standpoints of reducing capital requirements and operating costs, the joint use of some farm equipment offers possibilities for savings. It is too soon in the life of this program to see whether or not it will have a big impact in farm credit or in costs of production.

The other main program aimed at improvement in agricultural structure is rural development. This program is under the Agricultural and Rural Development Act. The program is a very comprehensive one in scope dealing with structural adjustment, particularly for low income rural areas. It provides for:

(1) research in social and economic matters and in planning,

(2) enlarging, consolidating, regrouping or improving submarginal farms or converting ineffectively used land to other uses,

(3) rehabilitation, re-location, training and employment of rural residents,

(4) designation of "Rural Development Areas" where residents become eligible for special federal assistance in resource development,

(5) soil conservation and land improvement projects.

The program has not yet made a big impact, partly because the action programs have to be developed as co-operative federal-provincial ones, partly because of the particular difficulties involved in structure adjustment and finally because the program is a relatively new one.

In spite of generally effective farm credit programs and the scope and potential of the rural development program in structure adjustment, it would appear that considerably more emphasis in this area is needed in order to maintain and expand exports in the future.

Implications of Trade in Resource Adjustments

The changing composition and volume of our crop exports has been reflected in the organization of agriculture, and in particular, in significant acreage changes in the three prairie provinces. Acreage devoted to spring wheat reached 27 million in 1949 and then because of surpluses, dropped to a post-war low in 1957 of 21 million. It then rose to nearly 30 million in 1966, and in 1967 it is expected to approach 31 million acres. In comparison, oat acreage declined slightly from an average of 5.9 million in 1955-60 to 5.7 million acres in 1961-66. Barley acreage has dropped sharply from an average of 8.4 million in 1955-60 to 5.7 million in 1961-66 while rapeseed acreage has more than doubled from 400,000 to 860,000 acres in the same period.

During the period of wheat surplus and lowest wheat acreage, the stocks of wheat on farms had built up to more than 300 million bushels. Dependence on exports for such a large proportion of production imposes considerable strain and cost in changing resource use. Fortunately, a considerable part of resources devoted to wheat can also be used for coarse grains, rapeseed and flaxseed and acreages of these crops increased when wheat was in surplus. Utilization of coarse grains and even lower grades of wheat meant an expansion in livestock. Establishment of livestock enterprises, however, is a longer term and more expensive adjustment than shifting from one crop to another. Further, an increase in livestock production in the prairie provinces has important implications for the livestock industry in the whole country. Thus, although having surplus wheat and surplus capacity has permitted the reaping of huge benefits from the sudden demand, the costs which can be charged to shifting resources in meeting changing export requirements are substantial. The recent significance of the Communist markets tends to obscure the fact that Canada managed to maintain the levels of her farm exports to her traditional markets in the developed countries throughout a period characterized by widespread government intervention in the export and import of farm products. Canada's ability to remain competitive in a select group of temperate farm products without resorting to the widespread use of price supports and export subsidies reflects to a considerable extent the efficiency gains obtained from resource adjustment and in comparison with the U.S., it also reflects a lower return to factors of production in Canada.

Agriculture in Canada has been subject to the same adverse pressures that have plagued the agricultural sectors in other developed countries - returns to the factors of production engaged in agriculture have experienced a continual downward pressure as a result of the rapid rate of technological advance in relation to the demand for farm products. Output has tended to expand more rapidly than the growth in demand ensuing from income and population expansion. The market has tended to turn cost-price relationships against the agricultural sector. The end result has been low returns to the factors of production, particularly of labor. The adverse relationship of agricultural to non-agricultural incomes has resulted in the number of persons employed in agriculture declining from 939,000 in 1951 to 543,000 in 1966, or from 18.0 percent of the total labor force to 7.6 percent. In the same period, the number of farms in Canada declined from 623,091 to 430,532 while the average size of farms increased from 280 to 400 acres. In Saskatchewan, where most of the wheat is grown, the average size of farm increased from 550 acres in 1951 to 763 acres in 1966.

The magnitude of the resource adjustments which have occurred is further apparent when we look at the changes in the percentage distribution of the three major factors of production. During 1946-50, labor accounted for 49 percent of total inputs, real estate for 19 percent and capital for 32 percent. In comparison, in the period 1961-65 labor totaled 30 percent, real estate 24 percent while capital increased to 46 percent.

The reduction in the farm labor force increased resource productivity through fewer farms with higher ratios of capital to labor and lower per unit costs of output. As some farm labor left agriculture, other operators were able to expand acreage. The magnitude of the productivity gains which have accompanied these resource adjustments is apparent from the fact that there was a 66 percent increase in production between 1949 and 1965 but it was obtained with 2 percent less total inputs. This increase in production was achieved with a 45 percent decline in labor input, offset to a major extent by increases in land and capital inputs of 16 and 52 percent respectively.

All of these adjustments in resource use cannot all be ascribed to international trade. Some obviously are. Others are an integral part of the changing technology of the industry. The significant points appear to be that exports is a less predictable demand than the domestic market and that reliance on trade although providing opportunities for economic activity does impose an instability and insecurity as well as costs in resource adjustment. This reliance on trade is a constant reminder of the competitive nature of the business and calls for those policies which encourage development and application of technology in production, structural change, flexibility in resource use and which also encourages an efficient marketing system.

Outlook for Agricultural Trade

When we accepted the assignment for this paper, it appeared that the detailed results of the Kennedy Round negotiations would be known by this time. These, however, will only be made public later this week. However, it is obvious that the continuation of current levels of farm exports in Canada is conditional on the maintenance of the strong commercial demand from the Communist countries, particularly the U.S.S.R. and China. The uncertainty associated with any forecast based upon the continuance of these sales is obvious. Nevertheless, present levels of farm exports to the centrally-planned economies are likely to be maintained to at least 1970 in view of the long-term sales agreements currently in effect. The U.S.S.R. appears to be providing increased inputs and price incentives to stimulate increased output.

In contrast to the dynamic expansion of agricultural exports to the centrally-planned economies, our export of farm products to the United States and Western Europe has experienced little or no growth since the immediate post-1945 reconstruction demands of Western Europe and the export demands of the U.S. ensuing from the Korean War.

In so far as Western Europe is concerned, there appears to be little scope for expanding agricultural exports much beyond current levels although Canada should still be in a good position to supply those quantities of high quality wheat required for blending purposes. The prospects for expanding feed grain exports to Western Europe are poor in view of the emphasis on self-sufficiency and the adverse competitive position of Canadian oats and barley as compared to United States corn and grain sorghum. Only oilseeds and oilseed meal exports appear to offer significant growth potential in this market.

In relation to agricultural trade with the United States, Canada was a net exporter between 1948 and 1953. However, since that period Canada has been a consistent and increasing net importer. (In 1964-66 Canada's exports of farm products to the United States averaged $255 million annually as compared to imports which averaged $556 million). Prospects for balancing this trade are poor.

Over the next decade, apart from Japan, the outlook for expansion of commercial exports to our remaining markets (largely in the lesser-developed countries) does not appear to be overly encouraging. Commercial demand on the part of the developing countries will be rising but will be limited by shortages of foreign exchange and probably by increased levels of food aid. The question of Britain's entry into the Common Market and the terms of such entry are further significant unknowns in the complex of variables affecting the future of the Canadian trade.

In any event, the critical importance of international trade to Canadian agriculture means that any major changes in foreign agricultural policies and international trade policies will have a profound effect on the structure and health of Canadian agriculture. International policies aimed at freer and expanding trade in farm products would present favorable opportunities for the select group of agricultural commodities for which Canada has a significant competitive advantage.

Looking to the more distant future, the population pressures and general desire to improve standards of nutrition results in very large increases in world food requirements. The extent to which this will be met by production within the countries concerned, the extent to which entirely new production processes and sources will be used, the uncertain international trade policies and finally the uncertainty of international political developments makes speculation about international trade in agriculture at that time even more difficult than for the rather uncertain immediate future.

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