

chapter five

WHEAT, FEED GRAINS AND OILSEEDS

INTRODUCTION

The grain surplus problem has reached crisis proportions in Western Canada during 1969-70. The massive carryover of grain, uncertain and unstable prices, acute shortage of cash among farmers and a deteriorating outlook make it clear that something must be done quickly to alleviate these problems if the prairie grain economy is not to suffer irreparable damage. In seeking for a solution to the immediate crisis, however, the longer-run and more fundamental needs of the prairie grain industry must not be neglected. Emergency-oriented programs must not become the basis for longer-term policies for the grain economy.

Since the beginning of settlement in Western Canada, the grain economy has been subject to unpredictable fluctuations in crop yields, market conditions and farm income. There have been periods such as the 1930's when low prices and crop failure led to widespread mortgage foreclosure, farm abandonment and general economic distress throughout the prairie economy. During the mid-sixties, by contrast, high yields coincided with buoyant export markets to provide prairie farmers with one of the more favorable periods in the history of their industry. Longer-term policies for the grain industry must recognize the extreme fluctuations which can occur in conditions relating to the welfare of prairie grain producers.

In general, the predominance of wheat in the Prairie Provinces has made farmers extremely vulnerable to the vagaries of climate and changing market conditions. Adverse or healthy conditions in the wheat economy spread

quickly to other sectors of the agricultural industry. After nearly a half-century of experience with the problems of the prairie grain economy and a search during most of that time for adequate marketing policies and programs, a final answer continues to elude the farmer and the policy maker.

There is no consensus as to what course of action should be followed. The proposals for the solution of the problems surrounding the grain industry are many and conflicting. Some advocate the abolition of the Canadian Wheat Board and a return to the open-market method of selling grains. Others advocate an even stronger position for the Wheat Board in the marketing of grains. The recommendations and exhortations are many: rebuild the International Grains Arrangement; compete more aggressively in world markets through more competitive pricing arrangements; control the production of wheat; develop a more efficient grain industry through the introduction of higher yielding grains; encourage greater diversification in the Prairie Provinces through increased livestock production; do not shift the problems of the grain industry to the livestock producer; continue to sell higher quality wheat; shift to markets requiring lower quality wheat; wait long enough and crop failures in other parts of the world will solve the surplus grain problem; set up programs to feed the hungry and undernourished peoples of the world.

Each of these proposals is plausible but it is obvious that a policy for the grain industry cannot be built on a set of such conflicting proposals.

The Task Force is convinced that fundamental and far-reaching changes will be required if a satisfactory policy is to be developed for the grain industry and if the current grain surplus problem is to be solved in the foreseeable future. Short-run palliatives will not suffice. Historical differences of opinion must be buried and institutional rigidities set aside in the search for a policy which will provide an effective solution for the problems which plague the grain industry in Western Canada. The over-riding reality is the mounting surplus of grain and the horrendous consequences for the prairie economy, indeed for all of Canada, if a remedy is not found soon.

The discussions and recommendations which follow call for major changes and adjustments in existing policies and institutions. The Task Force recognizes that long-held traditions are being challenged and that many of the recommended changes will not be received enthusiastically by all persons associated with the grain industry. The Task Force contends, however, that present policies and programs are not working and no amount of tinkering with the present system will yield satisfactory answers to the problems facing the grain industry. It seems clear that radical new approaches must be considered. Major surgery must be performed if the patient is to be saved.

THE MARKETING AND PRICING OF WHEAT

The marketing of wheat cannot be understood without a full recognition of the dominant role played by the Canadian Wheat Board in the overall grain marketing system. The Board, a crown corporation which reported (until

recently) to the Federal Minister of Trade and Commerce,¹ does not own or operate grain handling facilities. Under the Canadian Wheat Board Act of 1935, however, the Board has complete control over the way wheat is marketed and the price at which it is sold. Before a producer can deliver his wheat to any licensed elevator he must obtain a delivery permit book from the Wheat Board. When and how much wheat may be delivered by the individual producer is determined by a system of delivery quotas established by the board. The country elevator system to which the farmer delivers his wheat acts as an agent for the Board; the facilities owned by private and co-operative elevator companies are utilized for the purchase, storage and shipment of grain delivered by producers, and a handling agreement is negotiated between these companies and the Board, setting out the conditions under which the operations are conducted for Board account. The country elevator delivers the wheat received from the farmer to terminal points or other destinations under instructions issued by the Board. These instructions are provided in the form of shipping orders. The shipping orders, in turn, dictate the allocation and use of railway boxcars. Members of the private trade who are shippers and exporters act as agents of the Board under a negotiated agreement. In this capacity they are responsible for the forwarding of wheat to eastern elevators and export terminals where it is held for Board account pending sale to domestic or export markets. The wheat is sold by the Board for export either through its agents or on the basis of a direct agreement between the Board and a foreign government or a government agency as purchaser of the grain.

Shipping and exporting firms perform many of the selling, exporting and handling details involved in marketing Canadian wheat. In 1967-68, there were 26 firms acting as shipping and exporting agents located in Winnipeg and 17 firms located in Vancouver to handle the West Coast trade.

Shippers are defined as those firms involved in the movement of grain within Canada. Exporters, who may also act as shippers, are primarily concerned with international or export markets and these firms buy and sell grain among countries and make the necessary transportation and financial arrangements.

Exporting firms are, in the main, large international corporations that have an international network of offices and contacts.² These firms deal in many commodities and are located or represented in most exporting and importing countries. These firms sell Canadian, American, Australian and Argentine wheat into importing countries. Canadian firms sell only a small proportion of exports. The risk and profitability associated with international trading are the main reasons for the decline of Canadian exporting firms and the rise of

¹ In October 1969, the Federal Government made a Minister-Without-Portfolio responsible for the Canadian Wheat Board. He will be associated with the Federal Department of Industry Trade and Commerce in this new capacity.

² The four major international grain exporting companies in Canada are: Cargill Incorporated (based in Minneapolis), Bunge and Borne Incorporated (based in Argentina), Continental Grain Company (headquarters in New York) and Dreyfus (several companies make up this group—headquarters in Switzerland).

these large international firms. These latter firms have developed a highly advanced information and communication system and their familiarity and continued use of such international factors as freight and exchange rates and the changing governmental regulations of different countries give these firms an advantage. Their broader base of operations, involving multi-national and multi-commodity selling, is an additional advantage over single country operations.

The question has been raised with the Task Force as to whether firms whose head offices are not located in Canada, and who trade in grain and many other products from many countries, would be under the same pressure to sell Canadian wheat as would a Canadian firm whose success would depend exclusively on the sale of Canadian grain. The Task Force recognizes the significance of this question but has no information on it which would allow it to reach a conclusion.

Many other operations and responsibilities of the Board could be described including the administration of such policies as the Prairie Grain Advance Payments Act but the above functions will indicate the pervasive influence of the Canadian Wheat Board in the marketing of wheat.

The initial price for wheat is set at the beginning of each crop year by the Federal Government. The initial price is actually a guaranteed floor price for the wheat producer for the crop year. With the exception of 1969, however, the initial price has been set well below the final price realized by the Wheat Board (Table 1). The price of wheat from one year to the next has varied very little and, until recently, there has been relatively little change in the monthly price of wheat.³ The international Wheat Agreements have no doubt contributed to this relatively high degree of price stability, particularly during those years when the market price of wheat has been close to the minimum price set under the International Agreements. During 1969, however, there has been considerable instability in the world price of wheat particularly during the period when the principal wheat exporters of the world ignored the minimum price set under the International Grains Arrangement and engaged in a wheat "price war".

There have been periods during the past two decades when it appears that the Canadian Wheat Board, through its pricing policy, held an umbrella over world wheat prices. This was particularly evident during the 1967-68 crop year when the United States declared a "free year" with respect to export pricing while the Wheat Board declined to lower prices to levels which would jeopardize the coming into force of the International Grains Arrangement.⁴

By following this policy, the Board did contribute to the objective of price stabilization but it also meant that the Board was unable to be as fully competitive as it might have been, with the result that loss of sales occurred.

³ See *Annual Report*, Canadian Wheat Board, 1967-68. For example, for No. 1 Northern Wheat in store Ft. William the average monthly price for the crop year 1967-68 varied from a high of \$2.04 in August 1967 to a low of \$1.90½ in November 1967.

⁴ See the 1967-68 *Annual Report*, Canadian Wheat Board, page 12.

During 1969 however, the Wheat Board followed a relatively aggressive course of action in the pricing of Canadian wheat. In March 1969, the Board cut its prices of wheat below the I.G.A. minima in response to the actions of other countries which had been reducing wheat prices almost from the time that the I.G.A. came into effect on July 1, 1968. A series of retaliatory cuts took place among all the major wheat exporting nations of the world and in July 1969, the I.G.A. price minima were suspended by the five major wheat exporting countries.

TABLE 1
Initial, Interim and Final Payments for No. 1 Northern Wheat
Basis in Store Ft. William/Port Arthur. 1960-61 to 1969-70

Pool Account	Initial Payment	Adjustment Payment	Interim Payment	Final Payment	Total Realized Price
(dollars per bushel)					
1960-61.....	1.40		.10	.295	1.795
1961-62.....	1.40	.10		.410	1.910
1962-63.....	1.50			.370	1.874
1963-64.....	1.50			.474	1.974
1964-65.....	1.50			.387	1.887
1965-66.....	1.50			.497	1.997
1966-67.....	1.50			.487	1.987
1967-68.....	1.70			.114	1.814
1968-69.....	1.70			n.a.	n.a.
1969-70.....	1.50			n.a.	n.a.

SOURCE: Canadian Wheat Board *Annual Reports*.

The downward pressure on wheat prices led the Federal Government to reduce the initial price to \$1.50 per bushel for the crop year 1969-70, 20 cents less than the initial wheat price in the previous crop year. At the same time, the Government announced that the sale of wheat in Canada for human consumption would be based on a minimum price of \$1.95½ per bushel for No. 1 Northern in store Ft. William.

The more aggressive course of action followed by the Wheat Board in the pricing of wheat in 1969 is in marked contrast to the policy followed in earlier years. While the Canadian Wheat Board contributed greatly to the stabilization of world wheat prices, the mounting surplus of grain in Canada during the past few years has raised serious questions about the efficacy of the approach followed by the Board. While the experience in 1969 indicates that "cut-throat" competition is not a desirable solution to the problem, it does suggest that it is not in Canada's best interest to emphasize price stabilization if wheat sales are lost as a result.

The wheat price war which erupted in 1969 also casts doubts on the present terms of the International Grains Arrangement which came into effect on July 1, 1968. The I.G.A. appears to have several advantages over the

earlier International Wheat Agreement insofar as Canada is concerned. Under the previous International Wheat Agreement, the price range was expressed in terms of a minimum and maximum price for one specific type of wheat (Manitoba No. 1 Northern) in one position (in store, Fort William/Port Arthur) with a formula for establishing equivalent minimum and maximum prices for other Canadian or foreign ports of origin. Under the I.G.A., instead of No. 1 Manitoba Northern at Ft. William/Port Arthur providing the bench mark for price standards, as had been the case previously, American No. 2 Hard Winter Wheat (ordinary protein) at the Gulf of Mexico ports became the new pricing base, and price ranges were established for 14 grades of wheat (Table 2).

TABLE 2
The Schedule of Minimum and Maximum Prices F.O.B. Gulf Ports,
International Grains Arrangement, 1968

Country	Grade of Wheat	Minimum Price	Maximum Price
(\$ U.S. per bus.)			
Canada.....	Manitoba No. 1.....	1.95½	2.35½
	Manitoba No. 3.....	1.90	2.30
United States.....	Dark Northern Spring No. 1, 14%.....	1.83	2.23
	Hard Red Winter No. 2 (ordinary).....	1.73	2.13
	Western White No. 1.....	1.68	2.08
	Soft Red Winter No. 1.....	1.60	2.00
Argentina.....	Plate.....	1.73	2.13
Australia.....	F.A.Q.....	1.68	2.08
E.E.C.....	Standard.....	1.50	1.90
Sweden.....		1.50	1.90
Greece.....		1.50	1.90
Spain.....	Fine Wheat.....	1.60	2.00
	Common Wheat.....	1.50	1.90
Mexico ¹		1.55	1.95

¹ The minimum and maximum price for Mexican wheat f.o.b. Mexican Pacific Ports, or border points.

SOURCE: *Annual Report 1967-68*, Canadian Wheat Board.

The main advantage of the new pricing formula to Canada was described by Runciman:⁵

A price related to an American wheat somewhere down the quality scale probably offers more protection to Canadian producers than a pegged-price for No. 1 Northern under which all other wheats in the world can fluctuate freely. Under the previous Agreement, the only price specifically fixed was that of No. 1 Northern in store at the Lakehead, all other maximums and minimums were calculated from this base but, in effect, Canada was the only country tied by the Agreement because she was the only producer of this grade. The other countries were not bound by fixed minimums and could

⁵ Runciman, A. M. *Canada's Stake in The International Grains Arrangement*, Proceedings of the Manitoba Institute of Agriologists, Winnipeg, October-November, 1968.

lower prices by widening grade spreads and quality differentials and thus undersell Canada's quality wheats by a wide margin. In fact, this is what happened when prices dropped sharply in January, 1965, and the United States cut prices below what was regarded as the minimum under the International Wheat Agreement.

There can be little doubt about the desirability of some mechanism such as the International Grains Arrangement to prevent chaotic conditions from developing in the international market for wheat. At the same time, there appear to be weaknesses and limitations in the International Grains Arrangement from Canada's point of view.⁶ These weaknesses and limitations may be briefly summarized as follows: the minimum price levels under the I.G.A. are at such a high level as to continue to stimulate production in countries which normally import most of their requirements; there is uncertainty concerning minimum prices for wheat other than the specific grades mentioned in the I.G.A. price schedule; the price level for Canadian wheat is not realistic in relation to present world demand for various kinds of high quality wheat; Canada lacks the flexibility of other countries particularly the U.S.A., since it has not as many types and qualities of wheats; internal freight rates in the U.S. with payments in the way of subsidies for extra freights permit the U.S. to be more competitive in an aggressive selling program, i.e. the U.S. traders can absorb the freight savings and offer wheat at a lower price.

The difficulties which emerged during 1969 are evidence of the need for changes in the I.G.A.

THE MARKETING AND PRICING OF CANADIAN FEED GRAINS

With one major exception, Canadian feed grains were sold through the open market prior to August 1, 1949. The exception involved the period during the last war when the Federal Government took steps to intervene in the marketing of coarse grains. In 1948 however, the Government of Canada introduced a bill which included provisions for the compulsory marketing of oats and barley through the Canadian Wheat Board. The Act became operative on August 1, 1949, after the three Prairie Provinces passed concurrent legislation placing the marketing of coarse grains under the Wheat Board.

Since that time it has been the policy of the Canadian Wheat Board to sell oats and barley either on the Winnipeg futures market or on a cash basis at Fort William, Vancouver, or country points. The Wheat Board sells coarse grains to the private trade. Private dealers can make use of the facilities of the futures market to hedge their stocks while making sales. The market is not an open market in the traditional sense of the term since the C.W.B. has complete control of the supplies of all prairie grain coarse

⁶ For a detailed discussion of these limitations see Runciman, A. M., *ibid.*

grains sold through commercial channels.⁷ The Wheat Board has been given the authority to license all imports of wheat, oats, and barley. As the sole supplier of prairie feed grains to the market the C.W.B. has a dominant influence on the prices which are set from day to day. The futures market for coarse grains can only be meaningful if the private trade has full confidence that there will be a consistent relationship between the cash and futures markets.

The grain producer has several ways in which he can dispose of his oats and barley. During the crop years 1967-68, for example, only 11.8 per cent of the total farm supplies of oats and 29.8 per cent of the farm supply of barley in the Prairie Provinces were delivered to the Wheat Board. The remainder is disposed of in various ways. A large proportion of the coarse grains is fed directly on the farm. Since 1960 individual grain producers have been permitted to deliver non-quota grain to feed mills which have been designated as non-quota mills by the Canadian Wheat Board. A considerable quantity of feed grains is sold by one farmer to another and to feedlot operators within the same province on a non-quota basis. During years of surplus, the non-quota prices for feed grains have been well below the prices set by the Canadian Wheat Board.

A matter of considerable controversy relates to the need for greater flexibility and greater competitiveness in the pricing of coarse grains by the Canadian Wheat Board. Until recently, when the Board adopted a more competitive position with respect to the pricing of export feed grains, the evidence suggests that Canada has lost considerable sales for barley both in the domestic and export markets.

In spite of a relatively large carryover of oats and barley in Canada each year, the need for cash by prairie farmers, low non-quota prices for feed grains in the Prairie Provinces and an annual Federal Government expenditure on feed freight assistance of 15 to 20 million dollars, considerable quantities of corn have been imported into Eastern Canada each year. This situation is difficult to explain and hard to defend, particularly since the grain surplus problem on the prairies has been growing for some time.

There appear to be several reasons for this failure to supply the feed grain needs of Eastern Canada. One of the major difficulties appears to have been associated with the adverse spread between the cash and futures price for barley. In order to encourage an orderly distribution of sales over a given season, the future prices should reflect a carrying charge. Normally, the cash price for a storable commodity such as barley should rise throughout the season at a rate equivalent to the cumulative storage costs; it should equate eventually with the futures prices. This has not been the case for barley and oats in the Winnipeg futures market during recent years. Indeed, the May futures price for barley has frequently been below the October price thus discouraging the purchase of feed grains for storage and sale

⁷ An open market has generally been defined as one where there are a large number of both buyers and sellers and a minimum of restrictions in the market.

at a later period in Eastern Canada. At the same time that this situation created an "artificial" shortage of prairie feed grains in Eastern Canada, American corn was imported, stored and later sold to Eastern livestock feeders.

The Wheat Board as the sole seller of feed grains on the Winnipeg futures market and through its use of delivery quotas has a dominant influence on the level at which prices are set for coarse grains.

While the primary objective of the Wheat Board is to obtain the highest possible prices for Prairie grain producers, high prices are of questionable value if they are not competitive with alternative sources of feed grains, and if potential sales are lost.

The absolute decline in the exports of Canadian feed grains during recent years at a time when the world market for feed grains has been growing is cause for serious concern. While import quotas, export subsidies and other similar practices have made it increasingly difficult for Canada to expand its sales of feed grains, it appears to the Task Force that a less-than-adequate job was done in competing for the feed grain markets of the world. Very wisely the Wheat Board decided during the latter part of 1969 to price more competitively, and the favourable results in terms of expanded exports which have been achieved to date are indications that Canada can and must keep its prices for feed grains in line with world demand and supply conditions.

A feed grain marketing policy which leads to burdensome surpluses, extremely low non-quota prices in the Prairies, the importation of American corn into Eastern Canada and loss of export sales can hardly be regarded as desirable from the western grain producer's point of view. It is clear that major changes are required in Canada's feed grain marketing policy if the current difficulties are to be resolved. More will be said about these necessary changes in later sections of this chapter.

THE MARKETING AND PRICING OF PRAIRIE-GROWN RYE AND OILSEEDS

Flaxseed, rapeseed and rye are sold through the open market. Country elevators purchase these crops at the prevailing market price and for their own account. The Canadian Wheat Board intervenes to the extent of setting delivery quotas and issuing shipping orders for these crops. Cash purchases from the farmer are hedged by the company selling futures contracts.

Unlike the situation for oats and barley where the futures market is heavily influenced by the Wheat Board as the sole supplier of coarse grains, the futures market for rye, flaxseed and rapeseed reflect the supply and demand forces of the open market. In contrast to the relatively "fixed" prices from day to day and from month to month for coarse grains, the prices for rye, flaxseed and rapeseed tend to be much more flexible and responsive to

changing market conditions. And as one would expect where the prices of these commodities reflect the forces of the free market, the futures prices tend to reflect the cumulative carrying charges, except when these crops are prevented from moving freely into position; the cash price converges towards the futures price throughout the marketing year. This is in contrast to the situation which has frequently prevailed for the feed grain futures prices as we have noted above.

THE TEMPORARY WHEAT RESERVES ACT

By July 31, 1970, it is estimated that the wheat carryover in Canada will amount to approximately one billion bushels, equal to 250 per cent of the wheat stocks carried at the end of the 1965-66 crop-year.

These excessive stocks of wheat in Canada result from a large number of policies, the most important of which appears to be the Temporary Wheat Reserves Act. The Act was passed in 1954 to relieve wheat producers temporarily of part of the costs of storage of abnormally large accumulated carryover of wheat. Under the Act, the Government of Canada pays to the Canadian Wheat Board, for the benefit of wheat producers, an amount equal to the carrying charge rate paid by the Board at the end of the immediately preceding crop year multiplied by the number of bushels of wheat in storage on August 1, in excess of 178 million bushels. The amount paid out under the Act may be seen in Table 3.

This Act appears to have had many implications for wheat production and marketing in Western Canada. Because of the Act, the effects of production in excess of market requirements have not been fully felt by farmers. This has been an important factor interfering with market forces, and perpetuating a supply of wheat in excess of demand. Furthermore, the Act may have encouraged the Wheat Board to accept larger amounts of wheat in preference to oats, barley or oilseeds since the storage subsidy applies only to wheat.

Commercial stocks of wheat have never been less than 287 million bushels at crop year-end since 1952-53, and have averaged 370 million bushels from then until 1966-67. Farm stocks have in addition averaged 115 million bushels over the same period at crop year-end. If a safe crop year-end level of wheat stocks on average, necessary to meet export commitments and domestic requirements is set at say 200 million bushels^a, then some 285 million bushels of excess wheat stocks (including those on farms) have been carried on average since 1952-53, and this level is increasing. The total cash carrying charges have been 12.6 cents per bushel on all wheat delivered to the Board since 1954-55 of which the Government's share

^a See later discussion relating to the need for a "normal granary" or a clearly defined storage or wheat carryover policy. There is a need for a buffer stock but there is a maximum carryover limit beyond which undesirable surpluses begin to appear.

through the Temporary Wheat Reserves Act has averaged 8.5 cents per bushel on all wheat delivered to the Wheat Board. The average annual cost to the Government has been \$35 million. It is estimated that the funds to be paid under this Act for the 1969-70 crop year will be in excess of \$63 million.⁹

The Temporary Wheat Reserves Act subsidizes producers' incomes after they have produced in excess of market demands, and encourages them to continue producing in excess of market demands. It has become self-perpetuating as one of the measures which creates excessive production of wheat and mis-allocation of resources in agriculture, and yet appears necessary to protect farmers' incomes. This "temporary" policy has been in existence for 15 years.

What is required is that the net effect of all policy measures should be to reduce wheat production and maintain sales sufficiently to eliminate these surplus stocks as soon as possible. One way in which this might be achieved is by using the money now spent under the Temporary Wheat Reserves Act to direct resources from wheat production to the production of other crops for which there are growing markets.

TABLE 3
Canadian Wheat Board Carryover and Carrying Charges Under the
Temporary Wheat Reserves Act, 1955 to 1968

Year	Licensed Elevator Capacity (at July 31)	Number of Bushels in Storage (at August 1)	Number of Bushels in Excess of 178 Million Bushels (at August 1)	Carrying chgs. Paid During Crop Year (beg. August 1)
		(million bushels)		(\$ thousand)
1955.....	586	395	217	31,486
1956.....	615	373	195	28,817
1957.....	628	408	230	35,554
1958.....	637	406	228	39,825
1959.....	642	417	239	43,604
1960.....	639	455	277	50,431
1961.....	649	440	262	47,974
1962.....	644	324	146	28,897
1963.....	660	416	238	44,934
1964.....	669	328	150	28,568
1965.....	676	396	218	40,926
1966.....	678	306	128	24,294
1967.....	682	358	180	34,980
1968.....	682	432	254	55,879

SOURCE: Garland, S. W. and Hudson, S. C. *Government Involvement in Agriculture*

⁹ See *Coarse Grains Quarterly*, August, 1969, Dominion Bureau of Statistics, Ottawa.

THE PRAIRIE GRAIN ADVANCE PAYMENTS ACT

Because of the large accumulated surpluses of grain in the mid 1950's and the growing lack of space in the country elevator system to accommodate farm deliveries of grain, the Federal Government enacted the Prairie Grain Advance Payments legislation in November, 1957. This legislation provided for advance payments to producers on a portion of their farm-stored grain. Normally, grain producers do not receive any payment for their wheat, oats or barley until the grain is delivered to the elevator.

Under the original terms of the legislation the Wheat Board was authorized to make advance payments to producers on farm stored wheat, oats and barley at the rate of 50 cents per bushel for wheat, 20 cents for oats and 35 cents per bushel for barley, subject to a limitation of the deliverable quantity of grain (i.e. up to six bushels per specified acre quota) and to a maximum amount of \$3,000 for each applicant. Under an amendment of the legislation in October, 1968, the size of the advance payment was increased to \$1 per bushel for wheat, 40 cents per bushel for oats and 70 cents per bushel for barley up to a six-bushel per specified acre quota and a maximum of \$6,000 per applicant.

The recipient of a cash advance is obligated to deliver enough grain until half of the initial payment for the grain is equal to the cash advance made to him.

The number and size of the advance payments made to grain producers since the inception of the program are noted in Table 4. The largest number of advance payments were made during the crop year 1968-69 and will be much bigger still in 1969-70. The cost to the Federal Government of the interest-free cash advances to grain producers has ranged from a low of \$385,962 in 1961-62 to nearly a \$1.4 million in 1960-61, and will be far bigger in 1968-69 and 1969-70 with both larger advances and higher commercial rates of interest.

For the first time since the inception of the program, a large number of grain producers receiving advance payments were unable to deliver sufficient grain during the 1968-69 crop year to repay the advances. On July 31, 1969, approximately \$41.5 million in cash advances were still outstanding. In spite of the outstanding advances for the crop year 1968-69, these same producers were eligible for full advances for the new crop year 1969-70. Indeed, by the end of September, 1969, another 22,000 new advances had been made for a total of some \$57 million to that time for the 1969-70 crop year. It is anticipated that the total cash advances taken during the 1969-70 crop year will be very large in view of the difficulty in marketing grain.¹⁰

The value of the cash advance program to prairie grain producers during years when they are unable to make deliveries can not be doubted. However, the cash advances program should be designed to cope with periodic or

¹⁰ If all eligible producers apply for advance in the 1969-70 crop year the total extended could go well beyond \$300 million.

TABLE 4

Payments Under the Prairie Grain Advance Payments Act 1957-58 to 1968-69

Crop Year	Number of Applications	Total Amount Advanced	Average Amount Advanced	Advances Outstanding at Crop Year-End		Total Cost (Interest Charge)
				Amount	As % of Total Amount Advanced	
		\$000	\$	\$		
1957-58.....	50,412	35,203	698	3,324	0.009	480,531
1958-59.....	45,341	34,370	758	3,920	0.011	524,407
1959-60.....	50,047	38,493	769	4,683	0.012	816,502
1960-61.....	76,089	63,913	839	10,695	0.017	1,417,719
1961-62.....	22,342	16,657	745	9,725	0.058	385,962
1962-63.....	39,683	29,252	737	8,935	0.031	489,513
1963-64.....	63,427	62,136	980	20,829	0.034	869,552
1964-65.....	38,375	32,962	859	22,162	0.067	540,360
1965-66.....	43,509	40,600	933	37,943	0.094	665,826
1966-67.....	36,953	36,668	992	91,759	0.251	540,180
1967-68.....	45,811	47,281	1,032	1,703,349	3.857	780,018
1968-69.....	113,491	151,852	1,338	41,488,104	27.321	n.a.

SOURCE: Channon, J. W. *The Prairie Grain Advance Payments Act 1957-69*
 Canadian Farm Economics, Vol. 4., No. 4, October 1969
 Economic Branch, Canada Department of Agriculture, Ottawa

cyclic surpluses and not perennial overproduction or stock building. The program should not be used to insulate farmers from the realities of the market place or to encourage a chronic surplus of unmarketable grain. Nor should the cash advances program be employed to offset the harmful effects of other marketing policies or programs.

One further limitation of the cash advances program relates to basis for payment. It favours wheat and discriminates against barley and oats to the extent that a producer is encouraged to deliver the higher valued commodity, wheat, under the program (i.e. a producer received \$1 per bushel for wheat and 40 cents and 70 cents respectively for oats and barley up to a six-bushel per specified acre quota).

THE WHEAT BOARD GRAIN DELIVERY QUOTA SYSTEM

Because the amount of grain which producers want to deliver to elevators normally exceeds the elevator capacity available, the C.W.B. finds it necessary to impose delivery quotas for individual producers. A conflict of objectives arises between equity and efficiency. Equity demands that all producers be able to deliver roughly equal amounts of grain per acre regardless of the kind and grade they have produced, but efficiency demands that preference be given to the kind and grades in demand. Rapid movement of these grains and grades into markets would reduce storage costs and would tend to encourage the right kind of production related to market demand in the

future. This requires a flexible quota system which reflects market demand back to the producer. The Wheat Board's quota system is insufficiently flexible. Under the present quota policy, the natural tendency is for farmers to deliver the higher valued grains and grades first in order to obtain more cash. These grades may not reflect actual market demands, so that both surplus stocks and deficits may appear for different grains and grades, without this market demand being reflected back to the producer.

The quota system moreover discriminates against the more productive farmers and high yielding varieties since it is based on bushels per acre. It encourages larger acreage and larger output. The quota system should reflect the demands of the market and should not discourage efficient agricultural production.

FREIGHT ASSISTANCE POLICY FOR FEED GRAINS

A policy was introduced by the Federal Government in 1941 which provided for a subsidy on the transportation costs of feed grains from the Prairie Provinces to British Columbia and Eastern Canada. The policy was conceived during wartime conditions with the objective of encouraging greater livestock production in those regions of Canada in which feed grains were in deficit supply.

The program was administered by the Federal Department of Agriculture from its inception in 1941 to 1963 and the Department of Forestry from 1963 to 1967. In 1967, the Canadian Livestock Feed Board, which was established under the Livestock Feed Assistance Act of 1966, took over the administration of all matters relating to freight and storage assistance on feed grains.

The specific objectives of the Canadian Livestock Feed Board are to ensure:

1. The availability of feed grain to meet the needs of livestock feeders;
2. The availability of adequate storage space in Eastern Canada for feed grain to meet the needs of livestock feeders;
3. Reasonable stability in the price of feed grain in Eastern Canada and in British Columbia;
4. Fair equalization of feed grain prices in Eastern Canada and in British Columbia.¹¹

The total amount of the subsidy spent on feed freight assistance amounted to nearly \$456 million during the period 1941-67. Table 5 indicates the distribution of grains under the program among the recipient provinces. A diminishing proportion of the subsidy is going to Ontario and an increasing proportion to Quebec. The average subsidy per ton for the entire period 1941-67 ranged from \$4.96 for Ontario to \$23.60 for Newfoundland.

¹¹ For further details see, Garland, S. W. and Hudson, S. C. *Government Involvement in Agriculture*, a report prepared for the Federal Task Force on Agriculture; See also Annual Report of the Canadian Livestock Feed Board, Crop Year 1967-68.

The storage subsidy on feed grains amounts to 2.5 cents per bushel for the winter period when the grain is stored in Eastern Canada. Storage expenses paid by the Federal Government on winter supplies of feed grains in Eastern Canada totalled \$3.2 million from the inception of the storage program in 1963 until March 31, 1967.

TABLE 5
Selected Data on Feed Freight Assistance by Province, for the Period 1941-67

Province	Federal Government Expenditures	Proportion of grain shipped under the programs	Ave. subsidy payment per ton of feed shipped
	(thousand dollars)	%	\$
Ontario.....	128,343	38.9	4.96
Quebec.....	193,808	40.9	7.14
New Brunswick.....	27,578	3.9	10.73
Nova Scotia.....	42,659	5.5	11.78
Prince Edward Island.....	9,840	1.3	11.72
Newfoundland.....	8,522	0.05	23.60
British Columbia.....	45,090	9.0	7.65
Total.....	455,840	100.0	—

SOURCE: Annual Report of the Canadian Livestock Feed Board, Crop Year 1966-67

One of the basic contradictions of the feed grain economy in Canada may be noted in Table 7. In spite of a relatively large carryover of oats and barley in Canada each year, low non-quota prices for barley and oats in the Prairie Provinces and an annual Federal Government expenditure on feed freight assistance of 15 to 20 million dollars, considerable quantities of corn are imported into Eastern Canada each year paying a duty of eight cents per bushel. While a proportion of the imported corn is used for industrial purposes, a significant amount is used by Eastern livestock feeders.

In keeping with other major recommendations appearing later in this chapter the Task Force recommends that the freight subsidy on feed grain movement from the Montreal freight zone into Eastern Quebec and the Atlantic Provinces should be discontinued by August 1, 1970; further the Federal Government should make direct payments to the five provincial governments i.e. Quebec, Prince Edward Island, New Brunswick, Nova Scotia and Newfoundland of the equivalent of the average payment made over the past three years on all shipments beyond the Montreal freight zone. These payments should be used on projects designed to strengthen the agricultural sector, in whatever way the five provincial governments see fit, e.g. transportation or adjustment subsidies. These payments to the provincial govern-

ments should be a fixed annual sum for a period of five years commencing in 1970 and should then be gradually reduced for a further period of five years with a complete discontinuance of the subsidies by 1980.¹²

TABLE 6
Quantities of Western Feed Grain Moved Under the Feed Freight Assistance Program
1967-68

Province	Wheat	Oats	Barley	Rye	Screenings	Mill Feeds
	000 bus.	000 bus.	000 bus.	000 bus.	tons	tons
Newfoundland.....	155	175	288	33	1,369	7,501
Prince Edward Is.....	150	234	752	13	853	9,317
Nova Scotia.....	1,182	1,153	1,557	88	4,878	32,922
New Brunswick.....	276	931	962	71	4,915	31,251
Quebec.....	5,195	18,184	17,360	575	19,800	247,657
Ontario.....	1,925	11,762	10,163	338	34,995	141,803
British Columbia.....	2,064	2,219	4,195	50	5,237	30,310
Total.....	10,947	34,659	35,278	1,170	72,047	500,761

SOURCE: *Grain Trade Year Book 1967-68*, Winnipeg Grain Exchange

The feed freight subsidy from the Prairies into British Columbia and as far as the Montreal freight zone should be removed by August 1, 1970. The same recommendations should also apply to Ontario corn.

The tariff on American corn should be replaced by a variable import levy which would apply whenever free market corn prices in the United States fall below the United States floor price. If the support price were \$1.05 and the free market price 95 cents per bushel, the variable import levy would be 10 cents. This would provide protection against serious distress prices for Canadian corn growers.

While the marketing and pricing policies for feed grains sold through the Canadian Wheat Board will be examined in detail below, it is clear that the pricing policies of the C.W.B. together with the restriction on the inter-provincial movement of feed grains not sold through the Board have created some distinct anomalies in the feed grain economy in Canada.

LICENSING AND TARIFFS ON FEED GRAINS

Elsewhere in the report the Task Force has recommended a move to a free continental market for livestock and livestock products and indicated considerable possibilities for increased exports to the U.S.A. Competitive forces dictate that livestock producers must have access to feed grains on conditions comparable to their competitors south of the border.

¹²To the extent that the Federal Government exercises partial control over the expenditure of these funds, this should be through the Department of Regional Economic Expansion (David L. MacFarlane).

Currently the C.W.B. has the power to licence or refuse to licence imports of oats and barley, and there is a tariff of eight cents per bushel on corn.

The Task Force recommends that the Wheat Board's licensing power for feed grain imports be terminated on July 31, 1970, and that the tariff on corn be eliminated, and replaced by a variable import levy which would apply whenever free market corn prices in the U.S.A. fall below the United States floor price.

TABLE 7

Imports of Corn, Canada, by Crop Year, and Carryover of Barley and Oats

Crop Year	Barley Exports	Bushels of Corn Imported	Carryover at beginning of crop year		Price of Barley (3 C.W. 6)		Price of Oats (2 C.W.)		Total federal Government expenditures on feed freight assistance
			Barley	Oats	C.W.B.	Non-quota	C.W.B.	Non-quota	
	000 bus.	000 bus.	000 bus.	000 bus.	\$	\$	\$	\$	\$000
1958-59.....	70,444	13,318	118,165	156,916	1.01	0.70	0.69	0.44	22,442
1959-60.....	63,759	12,799	131,153	129,979	0.98	0.67	0.77	0.50	20,552
1960-61.....	47,178	21,407	128,470	100,827	1.05	0.67	0.74	0.52	19,519
1961-62.....	42,909	29,583	112,557	115,154	1.28	0.98	0.77	0.52	15,592
1962-63.....	15,377	31,172	57,824	79,066	1.13	0.93	0.72	n.a.	15,571
1963-64.....	46,935	23,423	89,245	150,278	1.18	0.74	0.69	0.63	19,445
1964-65.....	37,032	17,817	118,270	179,408	1.26	0.83	0.77	0.55	17,865
1965-66.....	38,029	23,897	88,776	130,121	1.29	n.a.	0.84	0.56	19,755
1966-67.....	58,542	22,871	97,752	127,163	n.a.	n.a.	n.a.	n.a.	20,600
1967-68.....	41,405	29,411	131,751	109,791	n.a.	n.a.	n.a.	n.a.	19,790
1968-69.....	20,500	33,700	130,600	77,000	n.a.	n.a.	n.a.	n.a.	n.a.
1969-70.....	n.a.	n.a.	197,700	128,400	n.a.	n.a.	n.a.	n.a.	n.a.
Average (1958-59 to 1967-68)....	46,161	22,570	107,396	127,870	n.a.	n.a.	n.a.	n.a.	n.a.

n.a. — not available.

AGRICULTURAL POLICY AND THE CANADIAN WHEAT BOARD

A great deal of confusion exists between the broader policy issues of agriculture and the marketing of grain. This confusion has led to an increasingly critical debate about the role and responsibilities of the Canadian Wheat Board in the grain industry of Western Canada.

After 35 years of operations, the Wheat Board has become an integral, if not a dominant, part of the prairie grain economy. Its operations and activities pervade almost every aspect of the farm and grain marketing business in Western Canada. At times, indeed, it has become difficult to distinguish between the basic responsibilities of the Wheat Board and the more general aspects of government policy as it relates to the agricultural industry in the Prairie Provinces. Unless this distinction is made clear, however, the proper role and performance of the Canadian Wheat Board is difficult to evaluate.

The Wheat Board was designed originally to focus on the marketing of Canadian wheat. When the Board was first established in 1935, the Minister of Trade and Commerce announced at that time,¹³

The concentration of surplus stocks of wheat in Canada during the past few years has created an abnormal situation in the world wheat trade. Last June this situation was recognized by Parliament as not being in the interests of Canada or her wheat producers, and the Dominion Government desires to have our surplus restored to a normal basis. . . . It is not necessary to have and there will not be any 'fire sale' of Canadian wheat, but it will be for sale at competitive values and will not be held at exorbitant premiums over other wheats.

This statement, made in 1935, is remarkably appropriate in 1969. During the intervening years, many complex problems have beset the Canadian wheat industry and, Prairie farmers have come to look to the Wheat Board for the action to cure their ills. At times, the more general price and income problems of prairie grain producers appear to have been forced upon the Wheat Board.

That prairie grain producers have price and income problems is not to be denied. To permit these problems to dominate the policies of the Wheat Board, however, cannot but interfere seriously with its primary role as a marketing agency.¹⁴ It is the view of the Task Force that the farm income problem must be separated deliberately from Canadian Wheat Board operations. The Board should not be expected to provide any magic solution to the income problems on prairie farms.

The primary role of the Wheat Board must continue to be the sale of wheat and feed grains at the best possible competitive prices.

There is growing evidence, however, that the Canadian Wheat Board has had imposed on it policies and responsibilities for which it was not designed. The Temporary Wheat Reserves Act designed to alleviate farmers of the burden of carrying large surpluses of wheat, the Prairie Grain Advance Payments Act developed to provide farmers with cash when markets were 'glutted', the provision for accelerated depreciation on farm grain storage facilities, the setting of excessively high price minima under the International Grains Arrangement and the political pressure for equal treatment of farmers under the grain delivery quota system, have all forced the Wheat Board into a surplus management function. Storage and inventory control are the necessary parts of any marketing function but they should be regarded as the means for stabilization and as aids in marketing, not as serving equity objectives or separate income objectives or as ends in themselves.

¹³ *Annual Report, The Canadian Wheat Board, 1935-36.*

¹⁴ Justice W. F. A. Turgeon noted in *Report of the Royal Grain Inquiry Commission, 1938*, "In most of the representations made to me for the creation of a Wheat Board the underlying principle seemed to be that of government guaranteed minimum price for wheat. Conditions may well recur where the government will feel in duty bound to assist wheat growers, by protecting those who have a crop against a disastrous fall in prices, or by providing in whole or in part for the subsistence of those who have no crop or an insufficient one. These two cases of need may occur at the same time or at separate times. In either case, there is no necessity of setting up a compulsory marketing board to deal with the situation."

The Wheat Board quota system appears to have had as its primary objective the equal treatment of grain producers, a worthy goal in itself but frequently in conflict with the objective of marketing efficiency. A marketing system clogged with types and grades of grain which may not be required at a given time or place cannot respond as rapidly or as effectively as it should to the dynamic and constantly changing conditions of a highly competitive market. The pressures generated by the Temporary Wheat Reserves Act to fill the pipe line with wheat on July 31 adds to the problem and reduces flexibility in marketing.

The pressure exerted by prairie grain producers on the Wheat Board to increase grain prices, a perfectly understandable position in view of the growing price-cost squeeze in agriculture, does not appear to be consistent with the need for a more flexible and competitive pricing policy by the Board. High prices are hardly a virtue if the grain must be stored or if markets are lost. The setting of initial prices by the Federal Government at the beginning of each crop year generally establishes the price level above which the Wheat Board is expected to operate regardless of competitive market conditions. The fact that the initial prices set by the Government during the last year appear to have been above competitive market prices has been recognized in the form of a "two-price" system for wheat and barley sold in the export market.

The Task Force does not suggest that problems of periodic surpluses, low incomes, inflation, instability of prices and incomes and the price-cost squeeze are not of paramount concern to Prairie grain producers. They are. But it is wrong, in fact it could be fatal, if the Wheat Board, a marketing agency, is expected to solve these more general problems and issues, or if these broader policy issues are imposed on the grain marketing system.

These problems are far too vast and complex for any other than a comprehensive policy approach to the agricultural industry. This is not to say that the Wheat Board should be absolved of its responsibility in dealing with the very difficult problems associated with the marketing of grain—this is its job—but the Board should not be expected to undertake responsibilities which go beyond its capacity as a marketing agency.

The Canadian Wheat Board is basically a marketing agency and it is in this role that it must be judged.

Even when the broader agricultural policy issues are set aside, the Wheat Board faces many difficulties as a compulsory marketing agency. These difficulties were anticipated by Chief Justice Turgeon as early as 1938:¹⁵

...any group of men endeavoring with the best intentions in the world to make a success of selling wheat would be exposed to a great deal of criticism.

Turgeon suggested that this criticism would apply with even greater force to a government board. He pointed out that members of a compulsory

¹⁵ See Report of the Royal Grain Inquiry Commission, 1938, Ottawa; also MacGibbon, D. A. *the Canadian Grain Trade, 1931-1951*, University of Toronto Press, 1952, pp. 43 ff.

government board would be answerable not only to the producers who believed in the board, but those who did not believe in it, and who would protest against what they considered to high-handed interference. He emphasized that in the light of past experience, one could conclude that as time went on such a board would suffer more and more from the atmosphere of political controversy that would surround it.

In his penetrating study of grain marketing in Western Canada, MacGibbon warned,¹⁶

...there is the weighty consideration that where control of a country's disposable surplus rests with one body, if its decisions are influenced by political considerations or if it misjudges the future trend of wheat values, the effects are widespread and may entail heavy losses which have to be borne by the taxpayer or by the producers themselves.

The Task Force finds these two quotations to be only too applicable in 1969. A group of men of the finest intentions and great experience and ability have, through force of circumstances and political pressure and inadequate research on markets, been party to a development which now will truly "entail heavy losses which have to be borne by the taxpayer or by the producers themselves." Most of the rest of this chapter will deal with some of these heavy losses by taxpayers and producers and the way to avoid them in the future.

The Wheat Board's task of marketing grain during recent years has been complicated by a growing array of trading restrictions and obstacles in the international markets of the world. Export subsidies, import quotas and levies, barter and give-away programs, sales for foreign currency and the increasing use of domestic subsidies by traditionally importing countries to bring about a greater degree of self-sufficiency in grain production have made it increasing difficult for Canada to compete in the export markets. Given these difficulties, however, there are several aspects of the Wheat Board's marketing policies and practices which merit further examination.

One area of concern relating to the Wheat Board's operation appears to be the lack of effective communication between the Board which markets the grain and the farmers who grow it.¹⁷ A new generation of farmers, who remember nothing about and know little of the origins of the Canadian Wheat Board in 1935, view the Board as an increasingly remote and bureaucratic institution. The failure of the Board to communicate with farmers has created frustration and criticism, problems which should be taken seriously and quickly corrected.

While the Task Force recognizes the need for confidentiality in terms of the specific operations of the Board, it does suggest, however, that the basic

¹⁶ MacGibbon, D. A. *ibid.*, p. 214.

¹⁷ See, for example, Parker, L. E., "The Producer's Role in the Marketing of Farm Products", a paper delivered to Farm Conference Week, The University of Manitoba, February, 1969. This paper was presented on behalf of the Carman District Farm Business Association, a group of commercial farmers which spent several months obtaining information relating to the grain marketing system.

policies and general operating principles of the Wheat Board should be more widely understood. The Task Force was impressed by the general lack of knowledge about the functions and responsibilities of the Board among producers in whose interest the Board is supposed to operate and the general grain trade with whom the Board is expected to deal. To put it more bluntly, the Task Force is apprehensive about the growing frustrations and antagonisms which are beginning to pervade the Canadian grain industry.

The Canadian Wheat Board is a public corporation, and like all public corporations, its policies and general operating procedures should be fully understood if it is to retain the confidence and support of the public in the performance of its duties.

One of the more serious criticisms of the Board relates to its lack of attention to marketing research. The Task Force finds it inconceivable that an organization whose annual volume of business exceeds one billion dollars, should have devoted so little attention or funds to the development of a comprehensive program of marketing research.¹⁸ It seems fair to suggest that many of the problems and difficulties recently encountered by the Wheat Board could have been anticipated and possibly avoided had a continuing program of marketing research been a part of the Board's operations. The Task Force notes that much of the data and information which it obtained with respect to Canadian grain marketing came from sources external to Canada. It should be noted, however, that the Board is not alone in its lack of emphasis on marketing research. The Task Force has noted elsewhere in this Report that very little of the agricultural research dollar in Canada has been devoted to marketing.

Another area in which the Wheat Board has received considerable criticism during recent years relates to its marketing and pricing practices for feed grains. These criticisms have been dealt with at length in earlier sections of this Report. As the sole seller of feed grains at the primary level of marketing, the Wheat Board has considerable latitude as to how and at what level prices are set for feed grains. In terms of the evidence available, and from interviews which the Task Force had with several persons knowledgeable in the grain industry, it appears that Canada has not been competitive in the feed grain export markets of the world, in large part because of the lack of flexibility and competitiveness in the Board's pricing practices. In spite of feed freight assistance, distress prices for non-quota sales, the large carry-over of feed grains and shortage of cash in the Prairies, imports of corn from the United States increased from 23 million bushels in 1966-67 to 34 million bushels in 1968-69.

¹⁸ Parker, L. E. *ibid.*, Parker noted, "The Board readily admits to a lack of research in market analysis.... The Board has seldom farmed out any research work. At the present time two Ph.D. theses are being concluded at the University of Wisconsin with Canadian Wheat Board financial assistance." Parker noted that no financial support was provided by the Board for market research at Western Canadian universities. It should be noted that the Wheat Board has recently hired several marketing specialists.

During this period, the prices for feed grains were held at a high and relatively stable level, a virtue when grain is moving but a dangerous course of action to follow during periods of surplus supplies and intense competition in the market place. High and stable prices are hardly in the best interests of the prairie grain producer if the grain must be stored or if potential sales are lost.

During recent years, considerable criticism has been aimed at the handling and transportation of grains in Western Canada. The Wheat Board has major responsibility to see that the right types and grades of grain are moved at a specified time to a given destination. To the extent that these marketing functions are not fulfilled, delay and frustration are created, excessive handling and storage costs are incurred, and potential customers for Canadian grains may be driven to alternative sources of supply. The movement of the right types and grades of grain to the West Coast ports has been replete with difficulties during recent years. It is recognized that part of the difficulty has been due to government policies which have forced the Wheat Board into a surplus management and storage role, but the fact remains that the Board is charged with the responsibility for moving marketable supplies of grain into position for sale. It is hoped that the recently developed Block Shipping System would eliminate many of the difficulties which have been involved in the transportation and movement of grain.

The Task Force has recommended that a clear distinction should be made between the basic responsibilities of the Wheat Board and the more general aspects of governmental policy as it relates to the agricultural industry in the Prairie Provinces. In making this recommendation, however, the Task Force does not advocate that the Wheat Board or the wheat economy should be isolated from the rest of the agricultural industry or from policies relating to agriculture.

On the contrary, policies for the Wheat Board and for the wheat economy should be an integral part of overall policy for the Canadian agricultural industry; there is an urgent need for closer co-ordination and planning among the various institutions, policies and programs relating to agriculture, including the wheat industry.

At the present time, for example, several departments of government, a multitude of policies and many institutions are involved in the production, marketing and distribution of wheat. This proliferation must make planning and co-ordination extremely difficult and complex, if not impossible. The Board of Grain Commissioners, which operates under the jurisdiction of the Department of Agriculture, is responsible for many policies and programs relating to the Canadian grain industry including inspection and grading of grain, official weighing of grain at terminal and mill elevators, compilation of statistics relating to handling and storage of grain, licensing of elevator operators and grain dealers, operation of the Canadian Government Elevators System and a research program relating to many aspects of plant breeding and quality of cereal grains and oilseeds.

In addition to the specific policies and responsibilities outlined above, the Department of Agriculture is responsible for a large number of policies and programs which relate directly and indirectly to the Canadian grain industry, such as credit, Feed Freight Assistance and livestock programs.

The Canadian Wheat Board, previously reporting directly to the Minister of Trade and Commerce and, more recently, to a separate Minister of the Federal Cabinet, has responsibility for many functions described above. Transportation, an extremely important aspect of grain marketing and distribution, remains the primary responsibility of the Department of Transport. The Canadian Livestock Feed Board, which is responsible for the availability, pricing and storage of feed grains in Eastern Canada, reports to the Minister of Agriculture. The Canada Grains Council which was developed recently with the idea of attempting to bring about a greater degree of co-ordination among the various agencies involved in the grain industry, reports to both the Minister of Agriculture and the Minister of Trade and Commerce. More recently, the Federal Government announced the establishment of a "Grain Group" composed of members from the Departments of Agriculture, Industry, Trade and Commerce, and Transport and chaired by the Minister responsible for the Wheat Board. The primary responsibility of this Group is to co-ordinate policies relating to the export sales of wheat.

The need for greater integration and co-ordination among the various policies and programs relating to the grain industry in Canada is obvious. Equally obvious are the complex issues and difficulties involved in bringing about greater integration and co-ordination among the various agencies and policies within the grain industry. The problem is further complicated by the fact that a "grains policy" must be closely related to general agricultural policy in Canada.

There are several alternative approaches which could be adopted; each will have definite advantages and limitations. After weighing the evidence, the Task Force can see no valid reason why wheat, or grains in general for that matter, should be treated differently, or in isolation from other commodities or sectors of the agricultural industry. Accordingly, the Task Force recommends that grains policy in Canada should be the primary responsibility of the Department of Agricultural Industry (now the Department of Agriculture).

Furthermore, it is recommended that the responsibility for the Canadian Wheat Board should be transferred to the Federal Department of Agricultural Industry.

One Minister and one Department must assume primary responsibility for the formulation and administration of policies relating to the Canadian grain industry if the type of integration and co-ordination so desperately needed is to be achieved.

DEMAND PROSPECTS FOR CANADIAN WHEAT

World wheat production increased by about 50 per cent in the ten-year period ending in 1964-65 and more slowly, at about three per cent per year since 1964-65. The U.S.S.R. is by far the largest producer of wheat in the world followed by Western Europe and the United States in that order. Canada, by contrast, produced only 5.7 per cent of the total world wheat supply during the 1968-69 crop year.

World imports of wheat increased more rapidly than production up to 1965-66, almost doubling in a decade. However, about one-third of this increase was in the form of concessional exports or food aid (U.S. aid shipments of wheat in 1965-66 were some 583 million bushels). When the United States reduced its aid shipments in 1966-67 to 414 million bushels, world wheat trade decreased by almost exactly the same amount. In 1967-68 world wheat trade declined by about 15 per cent. World *commercial* exports of wheat rose rapidly in 1965-66 and then declined in 1966-67 and 1967-68 to a level below that of the early 1960's. World exports of wheat have shown great variability depending upon yields in importing countries, especially the Communist countries. In the case of the U.S.S.R., for example, wheat imports rose to 8.8 million tons in 1963-64, declined to 2.6 million tons in the following year and increased to a peak of 9.2 million tons in 1965-66. Since that time the imports of wheat by the U.S.S.R. have declined reaching a low of 1.5 million tons in 1967-68.

During the period 1956-61, the average annual exports of wheat from Canada amounted to 260 million bushels. Approximately 82 per cent of Canada's wheat exports went to developed countries, ten per cent to the developing countries and approximately eight per cent to the centrally planned countries.¹⁹ Since that period, very significant changes have taken place in the pattern of Canada's wheat export trade. During the period 1961-66, the proportion of Canada's wheat exports going to developed countries declined to 47 per cent of the total while the proportion going to the centrally planned countries increased from eight per cent in the earlier period to 45.4 per cent five years later. A small but increasing proportion of Canada's wheat exports has gone to the developing countries.

During the 1950's, over half of Canada's wheat exports went to Britain and the E.E.C. countries; in 1968-69 this proportion had dropped to slightly over one-third of the total quantity exported. During the same period, Mainland China has become a significant importer of Canadian wheat, taking nearly 30 per cent of the amount exported in 1968-69. The greatest variation in Canada's wheat export trade was associated with the U.S.S.R. whose imports varied from a high of 198 million bushels in 1965-66 to a low of

¹⁹ The Developed Countries include the E.E.C., Britain, other western European countries, Japan and South Africa; the developing countries include Africa, Asia and the western Hemisphere; the centrally planned countries include Eastern Europe, U.S.S.R., Mainland China, North Korea and Cuba.

1.7 million bushels in 1968-69. Russia's imports of Canadian wheat have been closely associated with the size of the Russian crop which has tended to vary considerably from year to year.

Canada's share of the total world wheat import trade during the past decade reached a high of 26.8 per cent in 1963-64 and dropped to a low of 17.2 per cent in 1967-68. Approximately half of British imports of wheat continues to be supplied by Canada. Canada's wheat exports to the E.E.C. countries have constituted from one-quarter to over one-third of these countries' total wheat import needs during the past decade. Canadian wheat continues to occupy a relatively important position in Japan, the U.S.S.R. and Mainland China although the proportion of Canadian wheat imported tends to vary substantially from year to year.

One of the major factors influencing the pattern of Canadian wheat export trade has been the export policies and programs of the United States. The United States wheat exports depended heavily upon Public Law 480 from 1954 to 1966. In 1964-65 almost 80 per cent of the wheat exports from the United States were in the form of concessional sales.²⁰ In 1965-66, U.S. wheat exports consisted of 583 million bushels of concessional sales and only 277 million bushels of commercial sales for total exports of 860 million bushels. Simultaneously the United States imposed wheat acreage restrictions as something of a counterweight to her high support prices and in 1966 her stocks had fallen to what was regarded by U.S. government officials as an undesirably low level.

The year 1966 marked a series of major changes in U.S. wheat policy, all of which affected Canada adversely. The U.S. wheat acreage allotment was increased by about 30 per cent, a modified two-price system was introduced using domestic milling certificates, and aggressive selling in commercial markets supplanted much of the earlier emphasis on food aid. Between 1965-66 and 1966-67, U.S. concessional sales dropped from 583 to 414 million bushels but commercial exports increased from 277 to 333 million bushels. In 1967-68 the U.S. was the only major exporter to increase its wheat exports, while total world exports declined by about 15 per cent, and Canadian exports declined almost 40 per cent. Fortunately for Canada, U.S. allotments have been cut from 68 million acres in 1967 to 59 million acres in 1968 and to 51.6 million in 1969.

In other words, the United States has reduced, in recent years, its emphasis on disposing of surpluses in non-commercial markets and has become, with the aid of its lower support prices and the use of a two-price system and export credits, an aggressive competitor for the stagnant commercial wheat market. It is clear that Canada faces increased competition from the U.S.A. in all wheat markets. Canada has already lost a share of the world wheat market to the United States, and may lose even more unless

²⁰ Concessional sales include both Public Law 480 shipments and non-commercial soft credit sales.

our wheat exports remain fully competitive, not only in price and credit conditions, but also in quality, including protein content.

Indeed, the relative amounts of wheat stocks held by Canada and the United States have changed quite substantially during the past ten years. During the period 1956-61 the average wheat stocks held by Canada amounted to 17.3 million metric tons compared to 31.6 million tons for the United States. By 1967-68, the wheat stocks held by Canada exceeded by 3.4 million tons the wheat stocks in the United States. In fact, Canada had over one-half of the total wheat stock held by the four principal wheat exporting countries of the world. Roughly the same situation held at the end of the 1968-69 crop year.

Projections made by F.A.O. concerning production and consumption of wheat in importing countries by 1975 are given in Table 8. For the period 1961-63, the overall gap between production and consumption amounted to 38.8 million metric tons for the wheat importing countries of the world. Under a low growth assumption, the gap for 1975 is projected to be approximately 41 million metric tons. Under a high growth assumption, the gap between production and consumption for the wheat importing countries is expected to be around 20 million metric tons.

The F.A.O. projections indicate that the "developed" importing countries will likely increase their production by 34 per cent by 1975 and their consumption by around 18 per cent.²¹ This would narrow the deficit from 13 million tons in 1961-63 to around 6 or 7 million tons by 1975.

The "developing" countries are expected to increase their production anywhere from 35 to 85 per cent by 1975 while the consumption of wheat is projected to increase by about 50 per cent. Under a high growth rate, it is expected that the developing countries will not increase their imports of wheat, while under a low growth rate wheat imports could increase to around 28 million tons (compared to 16.5 million tons annually in 1961-63) by 1975. Not only level of income but the rapidity with which new production technologies are adopted, particularly the new Mexican wheat varieties, will determine the quantity of wheat which will be imported by the developing countries. The implications are obvious for Canada's wheat economy.

According to the F.A.O. projections, the deficit of the centrally planned economies could vary anywhere from 6 million tons of wheat to a slight surplus position of one million tons (Table 8) depending on whether those countries achieve a low or a high growth rate by 1975. Under the low growth rate assumption, it is projected that wheat production in the centrally planned economies will increase by 31 per cent and under a high growth rate, production is projected to increase by 45 per cent by 1975. The projected increase in wheat consumption by 1975 is expected to be about 27 per cent greater than during the period 1961-63.

²¹ Agricultural commodities—Projections for 1975 and 1985, Vol. I F.A.O. 1967.

TABLE 8

Projected Consumption and Production of Wheat in Importing Countries 1975

Region and Country	1961-63 average		Trade	Low G.D.P. 1975		High G.D.P. 1975	
	Production	Consumption		Production	Consumption	Production	Consumption
(millions metric tons)							
<i>Developed Countries</i>							
U.K.....	3.1	7.6	4.5	5.4	7.9	5.4	7.8
E.E.C.....	25.8	27.0	1.2	35.0	31.9	35.0	31.5
Other North Europe....	3.2	4.2	1.0	3.5	4.5	3.5	4.4
South Europe.....	17.3	20.1	3.0	22.9	23.5	22.9	22.7
Japan.....	1.4	4.3	3.0	1.1	6.6	1.1	7.1
New Zealand.....	0.2	0.4	0.2	0.4	0.3	0.4	0.5
South Africa.....	0.8	1.0	0.2	1.1	1.4	1.1	1.4
Total.....	51.8	64.6	13.0	69.4	76.3	69.4	75.4
<i>Developing Countries</i>							
Latin America.....	4.1	8.7	4.7	5.5	13.0	7.0	13.5
Africa.....	3.2	4.7	1.5	4.5	6.9	5.7	7.2
Near East.....	8.7	11.3	3.0	10.8	16.3	14.0	16.6
Far East.....	15.7	22.6	7.3	22.2	35.0	32.5	36.6
Total.....	31.7	47.3	16.5	43.0	71.2	59.2	73.9
<i>Centrally Planned Countries</i>							
U.S.S.R.....	50.0	49.2	-0.8	59.6	57.5	64.4	56.1
Eastern Europe.....	13.6	18.1	5.1	17.4	20.2	18.0	20.3
China Mainland.....	19.7	24.5	5.0	30.3	35.4	31.8	36.9
Total.....	83.3	91.8	9.3	107.3	113.1	114.2	113.3
Totals.....	166.8	203.7	38.8	219.7	260.6	242.8	262.6

SOURCE: *Agricultural Commodities—Projections for 1975 and 1985*, Volume I, F.A.O. Rome, 1967.

The above projections will serve as part of the background for the forecasts of Canadian wheat exports presented below.

Sales to the United Kingdom
(Marquis quality)

Exports of wheat and flour from Canada to Britain have declined steadily from 161 million bushels in 1947-48 to 69 million bushels in 1967-68 and 56 million bushels in 1968-69. Total British wheat imports fell by about 30

million bushels in the past ten years, almost all of it accounted for by the decline in imports from Canada.²² Table 9 indicates that Canadian exports to Britain have not fluctuated as much as exports from other countries.

The British market prospect appears weak in the future because of increased effort on the part of the British to save foreign exchange by reducing imports. A report by the British Economic Development Committee for Agriculture in June, 1968, recommended an increase in domestic wheat production from 3.8 to 5.7 million long tons by 1972-73. The proposed increase in domestic production of two million long tons represents nearly one-half of British wheat imports. On the other hand, a substantial part of this proposed increase would be of feed rather than milling wheats. A further indication of British emphasis on reduction of imports was the higher floor price for wheat imports introduced as a protective measure in August 1968.

Canadian exports to Britain by 1980 should be 50 to 80 million bushels. F.A.O. projections show total British imports declining substantially as domestic production increases. However, with larger volumes of domestic filler wheat it is felt that imports of Canadian high quality wheat will be required in fairly steady volume.

If Canada is to retain the British wheat market, however, substantial changes will be called for in Canada's wheat grading system. In particular, some form of protein grading will have to be adopted. With the introduction of the Chorleywood Baking Process in 1960, a larger proportion of "soft wheats" can be used in the bread-making process.²³ Bread which formerly required 60 to 75 per cent hard wheat can now be produced with 75 per cent soft wheat and 25 per cent hard wheat. The hard wheat used in the Chorleywood Baking Process must be of a high protein content and a uniform quality. Under Canada's present grading system, it is becoming increasingly difficult to provide the British milling industry with the type of hard wheat required. On the other hand, the United States, Australia and the U.S.S.R. are in a position to offer hard wheat on a guaranteed protein basis to the United Kingdom. Accordingly, Canada must compete on a similar basis or ultimately lose her traditional wheat markets in Britain.

This situation in the British market is being repeated in Germany, Holland, Belgium and France, and most other areas where protein levels in domestically produced wheats are relatively low. In general, in countries where there is a high production of soft wheat the requirements are for imports of high protein hard wheats of maximum protein uniformity; over-all quantities of imported wheats will decrease but the business will go to those countries able to guarantee high-protein hard wheats.

²² Much of the decline in Canadian exports to Britain was taken over by the United States, Australia and at times by the U.S.S.R., who were in a position to guarantee hard wheats of a high protein level, something which Canada was unable to do. For further detail see Irvine, G. N., "Technological Advances in the Milling and Baking Industries and Their Effects upon Markets for Canadian Wheat", a paper presented to a Wheat Marketing Seminar, Department of Agricultural Economics, University of Manitoba, December 3, 1969.

²³ Irvine, G. N., *op. cit.*

TABLE 9
United Kingdom Wheat Imports, 1957-58 to 1967-68

Year	Canada	U.S.A.	Australia	Argentina	USSR	France	Others	Total
(millions of bushels)								
1957-58.....	102	22	12	10	2	27	5	180
1958-59.....	103	26	23	18	5	5	11	191
1959-60.....	94	23	23	10	4	5	4	163
1960-61.....	89	18	29	8	11	4	4	163
1961-62.....	86	17	26	13	12	7	5	167
1962-63.....	89	3	15	10	14	5	12	152
1963-64.....	88	19	30	3	3	20	12	175
1964-65.....	82	9	22	18	—	9	14	154
1965-66.....	78	30	25	12	—	14	8	167
1966-67.....	73	26	15	8	—	3	23	148
1967-68.....	69	10	23	2	5	11	30	150

SOURCE: International Wheat Council. *Review of World Situation*.

Sales to the European Economic Community (Marquis quality)

Total wheat imports including those from Canada into the E.E.C. have shown a moderate decline over the past decade. Exports from Canada declined from an average of about 60 million bushels in 1957-60 to an average of about 50 million bushels in 1965-68. This is largely due to the highly protective variable import levies, offering protection equivalent to a tariff of almost 100 per cent. These levies have encouraged domestic production at high prices. At the same time, the E.E.C. grants export subsidies equivalent to the difference between the E.E.C. domestic price and prices required to make sales in export markets. The export subsidies have, in addition, affected Canadian exports in other markets.²⁴

Unless these costly policies of protectionism and subsidies are changed, the outlook is for a continuing gradual decline in Canada's wheat exports to the E.E.C., which are already challenged by the increasing U.S. exports and active U.S. wheat export promotion. A reasonable forecast for 1980 might be of the order of 40 million bushels. The F.A.O. forecasts the E.E.C. to become a net exporter of wheat by 1975. However, there should continue to be a fairly steady demand for Canadian high quality wheat for bread making.

It is recognized that the high cost of the subsidies involved under the present E.E.C. agricultural policies is coming under considerable criticism. Should the subsidies be reduced, the outlook for Canadian wheat exports to the E.E.C. and to countries presently buying subsidized wheat from France should brighten accordingly.

²⁴ For details concerning trade policies of E.E.C. and other areas, see Chapter 4, International Trade.

TABLE 10
E.E.C. Countries Imports of Wheat, 1957-58 to 1967-68

Year	Canada	U.S.A.	Australia	Argentina	USSR	France	Other	Totals
(millions of bushels)								
1957-58.....	70	40	10	24	—	24	35	203
1958-59.....	58	43	1	22	16	11	39	190
1959-60.....	47	32	4	20	10	19	27	159
1960-61.....	75	77	22	15	23	20	20	252
1961-62.....	67	69	20	38	11	22	21	248
1962-63.....	52	26	2	20	9	6	16	131
1963-64.....	65	71	8	23	2	19	11	199
1964-65.....	53	29	—	50	—	22	10	164
1965-66.....	44	72	—	32	—	27	12	187
1966-67.....	55	61	4	22	1	18	11	177
1967-68.....	41	55	5	17	1	33	17	169

SOURCE: Hedlin, Menzies: *The Wheat and Oil Seeds Economy in Canada. A Study for the Task Force.*

Sales to Other Western European Countries (Switzerland, Norway, Denmark, Austria, Eire) (Marquis quality)

Canada's exports to other Western European countries have declined by more than one-third in the past decade, from an average of 17 million bushels in 1957-60 to an average of 11 million bushels in 1965-68, due to increased competition particularly from the United States and France. Canada's exports to these countries are likely to continue at about 10 million bushels per year to 1980, for reasons similar to those indicated for the U.K. and the E.E.C.

Sales to Japan (Marquis quality)

Japan's total wheat imports have shown spectacular growth over the past 15 years, more than tripling between 1952-53 and 1966-67 to a level of about 159 million bushels. Canadian wheat exports to Japan shared in this growth, and amounted to about 60 million bushels in 1966-67, though only some 40 million bushels in 1967-68. It should be noted here that the fear of a world shortage of wheat in 1966-67 was the main impetus behind the increased imports of Canadian wheat by Japan in that year. The decline of imports by Japan in the following year represented a move to average out the wheat imports from Canada around the more normal requirements of the country.

The Japanese market for wheat is likely to continue growing strongly. Sales to Japan depend on competitive pricing as well as quality.²³ If Canadian

²³ See Irvine G. N. *ibid* Dr. Irvine warns that the changes which have taken place in the baking industry in Britain will spread to Japan. When this occurs, Canada must be in a position to provide bread wheats of a guaranteed protein level to the Japanese market if she is to remain competitive in this market.

prices and quality are competitive, Canada's wheat exports to Japan by 1980 should be around 80 million bushels. Competition is increasing, however, from lower priced French, Australian and Argentinian wheat as well as from American wheat.

Sales through Flour-Markets other than the U.K.
(Marquis quality)

Canadian exports of wheat flour have declined rapidly in recent years, as importing countries have increased their milling capacity. Flour exports (other than to the U.K.) totalled some 32 million bushels in 1965-66, 26 million bushels in 1966-67, and 22 million bushels in 1967-68 (half of which went to Cuba).

The outlook for flour exports is one of continuing decline, unless flour is included in aid programs. Export prospects for 1980 could be about 10 million bushels.

Sales in Canada for Human Consumption
(Marquis quality)

Canadian human consumption of wheat for bread, cakes, pastry, pasta, etc. has risen from 40 million bushels in 1946-47, to 46 million bushels in 1956-57, and 56 million bushels in 1966-67, showing a fairly steady increase of about 2 per cent per annum. This increase may be projected to 1980, giving human consumption of wheat in Canada of some 70 million bushels by that date.

Sales of Lower Quality Wheat

(a) *The U.S.S.R.*

The Soviet Union is the world's largest wheat producing and consuming area, normally producing as much as Canada, the United States, Australia and Argentina combined. The important point to be noted is that a 15 per cent change in Russian wheat production is equivalent to total Canadian wheat exports. In view of the fact that production in the U.S.S.R. is extremely variable, predictions as to Russian imports are hazardous in the extreme. Consumption of wheat per capita varies from 150 per cent to 250 per cent of U.S. consumption.

The longer-run prospects for Canadian wheat exports to the U.S.S.R. depend both upon the latter's domestic production and upon negotiations respecting new contracts, which in turn depend partly upon price. Import supplies are small relative to domestic supplies in the U.S.S.R. As a result Canadian export prospects are difficult to assess. Nevertheless, it is unlikely that Canada can maintain a near monopoly position in export sales to Russia, especially if Canadian wheat sells at premium prices. With increasing domestic production in the U.S.S.R. and the likelihood of increasing

competition from lower-priced wheat exporters, there is a reasonable probability that Canada's wheat exports to the U.S.S.R. will decline to around 10 to 20 million bushels by 1980. In future, the Soviet Union is likely to be a surplus producing area, as indicated by F.A.O. projections, except when bad weather leads to crop failures. A small volume of exports is likely to continue to go to Vladivostok for Eastern Russia.

(b) *China*

Communist China is a more consistent importer of Canadian wheat than the U.S.S.R., as shown in Table 11.²⁶ If Canada offers competitively priced wheat exports, prospects could amount to about 90 million bushels and maintain this level on average to 1980. The F.A.O. indicates that there is little information available on China's grain plans but that the most reasonable assumption is that imports will continue on the present scale.

TABLE 11
Exports of Canadian Wheat to Communist Countries, 1960-61 to 1967-68

Year	U.S.S.R.	Mainland China	Eastern Europe	Total
(in millions of bushels)				
1960-61.....	8	35	22	62
1961-62.....	—	72	22	94
1962-63.....	—	56	23	79
1963-64.....	234	41	36	312
1964-65.....	10	62	70	143
1965-66.....	202	74	33	309
1966-67.....	93	91	31	214
1967-68.....	60	52	12	126

SOURCE: Hedlin, Menzies: *The Wheat and Oil Seeds Economy in Canada*. A study for the Task Force.

(c) *Eastern Europe*

Canada's exports of wheat to some eastern European countries have been covered by three-year contracts. Sales to eastern Europe declined from around 30 million bushels in 1966-67 to 11 million bushels in 1967-68, and are not stable.

Total production of wheat in Eastern Europe has grown rapidly in the past decade. Competition is strong from the U.S.S.R., France, and in some years from the United States. Therefore Canadian exports may be only about 10 million bushels by 1980, unless Canada competes more effectively by offering a greater number of classes of wheat.

²⁶ On September 26, 1969, the Canadian Wheat Board announced the sale of 86.2 million bushels of wheat to China over a one-year period. In the agreement, China is to pay 25% cash when each ship is loaded and the balance within 18 months with interest.

(d) *All Other Commercial Export Markets* (including less developed countries but excluding foreign aid)

Canada's total commercial exports of wheat (not flour nor aid exports) to all other commercial markets including less developed countries average only some 20 to 30 million bushels per annum, with South Africa, Cuba and Venezuela the most important outlets. The largest commercial market in this group, Brazil, (imports of 80 to 100 million bushels), has not yet been penetrated by Canada, since sales to this market are primarily by the United States on a subsidized or barter basis. The slow growth in purchasing power, and different consumption habits in most less developed countries plus the emergence of new high-yielding varieties and strong competition from other exporters, would tend to limit Canada's commercial exports to all other commercial export markets at a fairly constant level of some 30 million bushels in future. More research is needed on individual markets, and efforts should be made in particular to penetrate the Brazilian market. With two-fifths of world wheat exports including concessional exports going to L.D.C.'s, a major sales effort with cheaper wheats might pay handsome dividends. Total exports to Asia, Africa and Latin America are shown in Table 12.

(e) *Foreign Aid* (food aid)

Canada provided some 53 million bushels of wheat as food aid in 1966-67, primarily due to crop failure in India and Pakistan. In 1967-68 wheat exports as food aid dropped to some 20 million bushels. However, Canada is committed to providing about 18 million bushels of wheat per annum under the World Food Program for the next few years. This amount, plus Canada's other multilateral and bilateral food aid programs should maintain food aid shipments for some years at 30 to 40 million bushels. Canadian food aid shipments might be about 20 million bushels by 1980—this, after all, can only be an estimate.

(f) *Seed and Feed* (in Canada)

It is possible that high yield wheats might replace the traditional feed grains as sources of feed to a considerable extent, but this is no more than a possibility at present. A significant amount of wheat has been fed in the past, particularly when on-farm stocks become large. The amount seems to have varied from about 40 to 70 million bushels per year.

Summary of Demand for Canadian Wheat

Putting together the data and projections of this section in Table 13, one finds a rather pessimistic outlook for 1980. Acreage requirements in 1980 obviously depend on one's assumptions. Assuming that there will be two different types of wheat grown, and that the yield of Marquis quality wheat

TABLE 12

Exports* of Wheat and Wheat Flour from all Countries to South and Central America, Asia (other than Japan), and Africa 1963 to 1968

Region and Country	1963-64	1964-65	Year 1965-66	1966-67	1967-68
	(000 Metric Tons)				
South and Central America	4,876	5,364	5,913	6,503	6,558
of which:					
Brazil.....	2,077	2,121	2,326	2,728	2,370
Venezuela.....	502	586	568	619	689
Peru.....	453	429	601	631	547
Cuba.....	466	566	624	667	726
Chile.....	130	218	391	440	523
Columbia.....	166	217	245	201	275
Asia (except Japan)	15,968	18,861	20,564	19,378	19,172
of which:					
China (Mainland).....	5,198	5,054	6,372	5,007	4,156
India.....	4,664	6,542	7,612	6,277	6,817
Pakistan.....	1,669	1,892	1,064	2,045	2,175
Korea, South.....	760	525	568	817	955
Philippines.....	538	471	586	566	746
China (Taiwan).....	342	447	434	365	595
Malaysia.....	307	328	354	495	542
Africa	3,805	4,415	4,930	6,984	5,690
of which:					
Egypt.....	1,897	2,014	2,404	2,254	2,326
Algeria.....	402	356	437	1,113	607
Morocco.....	154	496	354	982	853
South Africa.....	184	79	216	834	97

*Including concessional exports or food aid.

SOURCE: International Wheat Council, *World Wheat Statistics 1968, Table 9 and 1969, Table 8d.*

is 25 bushels in 1980,²⁷ then 12 million acres would be required. Assuming a high yielding variety suitable for feed and for lower quality milling markets and with a yield of 32 bushels in 1980, another 8 million acres would be required. Thus, for all purposes—high quality milling, low quality milling, for export and domestic use, and including 80 million bushels for feed—20 million acres in wheat seems to be a reasonable target for 1980.

The prospects for Canadian wheat exports vary tremendously from year to year. Who could have predicted, for example, that exports of Canadian wheat to the U.S.S.R. would have risen from zero in 1962-63 to 234 million bushels in the following year, then fallen to 10 million bushels in the next year, and risen to 202 million bushels in the year after that? The Task Force recognizes that making predictions for a commodity such as wheat is extremely hazardous.

²⁷ Recent yields have averaged about 22 bushels per acre. Some authorities project yields averaging as high as 28 bushels per acre by 1980 (See Economics Branch, Canada Dept. of Agriculture, *Demand-Supply Projection for Canadian Agriculture, 1980*). A somewhat more conservative forecast is used here; See also Shebeski L. and McGinnis R.C. op. cit.

TABLE 13
Present and Future Demand for Canadian Wheat and Flour
All figures in millions of bushels and for Canadian crop years

	1966-67 Actual	1967-68 Est'd	1980 Forecast	1980 Range
A. Marquis Quality				
1. United Kingdom.....	73	69	60	(50 to 80)
2. European Economic Community.....	50	42	40	(35 to 50)
3. Other Western Europe.....	13	9	10	
4. Japan.....	60	40	80	(60 to 90)
5. Flour markets (other than U.K.).....	26	22	10	
6. Canadian human consumption.....	56	57	70	
7. Sub-total.....	278	239	270	
B. Lower Quality Wheat***				
1. U.S.S.R.....	93	75	10	(0 to 100)*
2. China.....	90	50	90	(50 to 120)*
3. Eastern Europe.....	31	11	10	
4. All other commercial.....	26	18	30	
5. Foreign aid.....	53	20	20	
6. Feed wheat (domestic use).....	41	60	80	
7. Sub-total.....	334	234	240	**
C. Seed.....	44	45	35	
Grand Total (A7, B7 and C).....	656	518	545	

Source: Canadian Wheat Board *Annual Reports*, for actual and provisional consumption figures.

*The higher range figures will only be attainable, if at all, by the introduction of higher yielding lower priced wheats, and/or crop failures in importing countries.

**If high yielding feed wheats are introduced, they may compete both domestically and internationally as feed grains for animal feeds. The potential size of such markets is great if feed wheats are competitive with other feed grains, but forecasts are impossible at this time.

***Small discrepancies in data due to differing sources and different crop years.

The extreme variability in Canada's wheat exports and production raises the basic question as to what an optimum inventory or carryover of wheat in any given year should be. During the period 1951-52 to 1961-62, for example, Canada's exports of wheat averaged 257 million bushels (see Table 14). The annual wheat carryover ranged from a low of 214 million to 729 million bushels. The main reason for the variation in the carryover during this period appeared to be the wide fluctuation in wheat yields. If the difference between the highest yield (26.7 bushels per acre) and the lowest yield (10.6 bushels per acre) is applied to the average wheat acreage (23.5 million acres) for the period in question, the difference in Canada's total wheat production would have been approximately 378 million bushels.

The main reason for the variation in Canada's wheat carryover during the period 1962-63 to 1966-67 appeared to be the variability in Canada's wheat

exports. The range in wheat exports varied from a low of 298 million bushels in 1962-63 to a high of 545 million bushels in 1965-66 (See Table 14).

During the entire period 1951-52 to 1966-67, Canada's wheat exports varied from a low of 197 million to a high of 545 million bushels. The range in Canada's annual wheat carryover varied from 214 million to 729 million bushels while the average wheat yield per acre fluctuated from a low of 10.9 to an all-time high in 1966 of 27.7 bushels per acre.

TABLE 14
Variability in Canada's Wheat Exports, Carryover, Wheat Acreage and Yields
(Wheat exports do not include flour equivalent)

	Annual Wheat Exports	Annual Wheat Carryover	Annual Yield/ Acre	Average Wheat Acres
	(millions of bu.)			(millions)
1951-52 to 1961-62				
Average.....	256.7	532.9	19.7	23.5
Low year.....	196.7	213.9	10.6	20.9
High year.....	319.7	728.8	26.7	25.5
1962-63 to 1966-67				
Average.....	444.2	487.0	23.7	27.9
Low year.....	298.3	416.5	20.0	26.2
High year.....	544.9	570.7	27.7	29.2
1951-52 to 1966-67				
Average.....	315.3	519.0	20.9	24.9
Low year.....	196.7	213.9	10.6	20.9
High year.....	544.9	728.8	27.7	29.2

It is obvious that extremely severe fluctuations can occur in Canada's wheat carryover when high yields coincide with a period of low exports or conversely, when low wheat yields in Canada coincide with a buoyant export market. One can speculate as to what the situation might have been like had the 10.9 bushels per acre wheat crop in 1961 continued during the period of large export sales to Russia and China. The wheat problem would have been serious, indeed, had the 27.7 bushels per acre wheat crop in 1966 continued during three or four years of depressed export markets for wheat.

There is a need for Canada to develop a "normal granary" concept as an integral part of her wheat marketing policy. The "normal granary" would act as a buffer between the unpredictable variability of wheat exports on one hand and the widely fluctuating wheat yields on the other. Some minimum and maximum limits should be set within which fluctuations in the wheat carryover would be regarded as a normal part of the marketing process. A great deal of research is needed in order to determine what these minimum and maximum limits should be. It should be noted, however, that the "normal granary" should not be allowed to become an "abnormal" granary as surpluses

begin to appear. In other words, there must be a maximum carryover limit beyond which it would be clearly undesirable to hold grain in stock.

If recent developments are any indication of the events which might take place in the coming decade, it is clear that substantial adjustments will have to be made in the wheat industry.

In brief, the implications of this section are:

- (a) current indications are that total acreage in wheat should be no more than 20 million acres by 1980;
- (b) Canada may have to turn to the production of some higher yielding classes of wheats attractive to a wider range of markets if even the output of 20 million acres is to be marketed;
- (c) higher yielding wheats have the potential for achieving increased sales in feed grain markets. Canada must be able to supply high quality wheats of a guaranteed protein content to retain her European and Japanese markets and to serve Canadian consumers, and should have higher yielding wheats in order to retain and capture sales in other competitive markets, to develop feed wheat outlets, and to help improve farmers' incomes.

DEMAND PROSPECTS FOR CANADIAN FEED GRAINS

The world coarse grains economy has experienced some remarkable changes and adjustments during the past 10 to 15 years. Production of coarse grains has expanded very substantially in many countries of the world. There have been marked changes in the utilization of feed grains and a very significant shift in the pattern of international trade. New and changing domestic and international policies have had a very important effect on the competitive relationships of exporters and importers of coarse grains.

1. *World Production of Coarse Grains*

During the period 1957-68, world production of coarse grains increased from 408 to 526 million tons (Table 15). By far the largest part of this increase came from corn. One-third of the increase in world corn production occurred in the United States (primarily through increases in yield) with the remainder of the production increase occurring in Western Europe and several countries in Asia and Africa. Almost half of the increase in barley production during the period 1955-68 occurred in Europe, particularly West Germany, France and the United Kingdom. The production of millets and sorghum also increased very substantially reaching a high of 84 million tons during the crop year 1967-68. The production of oats and rye actually declined during the past ten years.

2. *World Exports of Coarse Grains*

World exports of coarse grains increased from 20.6 million to 41.4 million tons during the ten-year period ending in 1967-68 (Table 16). By far the

TABLE 15
Coarse Grains: World Production by Type of Grain¹

	1955-56 average 1957-58	Year				Change 1955/56— 57/58 —average to 1967-68
		1964-65	1965-66	1966-67	1967-68 ²	
		(millions tons)				%
Production						
Maize.....	160.1	218.4	228.4	239.8	233.9	46
Barley.....	78.3	108.2	104.1	115.0	118.9	52
Millet and sorghum.....	59.8	74.0	78.7	79.2	84.0	40
Oats.....	62.1	44.4	46.5	47.3	50.4	-19
Rye.....	35.5	32.7	34.4	31.0	32.4	-9
Mixed grains.....	6.1	6.1	6.0	6.0	6.3	3
Total.....	407.9	483.8	498.1	518.3	525.9	29

¹ Data includes estimates for Mainland China, North Korea and North Vietnam.

² Preliminary

SOURCE: FAO Commodity Review 1967, page 38; and U.S.D.A. Foreign Agriculture Circular

largest exporter of coarse grains is the United States followed by Argentina, France and South Africa. While the export volume of feed grain doubled during the decade, Canada's exports of feed grains declined by almost one-third.

A significant shift has occurred in the relative position of the major exporters of coarse grains during the past two decades. During the immediate post-war period, the United States handled about one-third of all coarse grains moving into export trade; fifteen years later the United States accounted for over one-half of all coarse grain exports. Since the war, Canada's position among the major exporters of coarse grains dropped from 10.5 to 3.1 per cent of the total volume exported, while France increased her share from 0.2 to 7.6 per cent during the same period of time.

Western Europe (particularly the E.E.C.) was the largest importer of feed grains. During the 1967-68 crop year, the E.E.C. countries imported 16.8 million tons of feed grains out of the 41.2 million tons traded. Japan, the next largest importer of feed grains, purchased 8 million tons in 1967-68. The United Kingdom, once a relatively large importer of coarse grains, accounted for only ten per cent of the world feed grain imports during the crop year 1967-68.

3. Trade Patterns In Coarse Grains

By far the largest proportion of the increase in world exports of feed grains was represented by corn. During the decade ending in 1968, world production of corn increased by 46 per cent, while the export volume of corn increased by approximately 300 per cent during the same period of

TABLE 16

World Trade in Coarse Grains¹, Crop Years 1956-57 to 1960-61 and 1964-65 to 1967-68

	1956-57 to 1960-61	1964-65	1965-66	1966-67	1967-68
	(millions tons)				
<i>Exports</i>					
Argentina.....	2.9	5.2	3.8	6.5	4.3
Australia.....	0.9	0.8	0.5	0.9	0.3
Brazil.....	n.a.	0.0	0.6	0.6	1.4
Canada.....	1.7	1.1	1.2	1.3	1.2
France.....	n.a.	2.9	2.8	3.8	4.1
S. Africa.....	0.7	0.7	0.3	0.7	3.4
United States.....	9.4	17.6	25.5	21.0	19.7
U.S.S.R. ²	n.a.	0.6	0.2	0.2	0.1
Eastern Europe ²	0.3	0.8	0.5	0.6	0.7
Others.....	n.a.	5.0	6.8	7.1	6.2
World ²	20.6	34.7	42.2	42.7	41.4
<i>Imports</i>					
Western Europe.....	n.a.	22.7	29.1	27.7	26.7
—E.E.C.....	8.4	14.0	17.9	16.9	16.8
—U. Kingdom.....	4.1	3.9	4.3	4.1	4.1
Asia ³	n.a.	6.3	7.6	11.7	10.9
—Japan.....	1.5	5.1	5.2	7.8	8.0
Eastern Europe ²	n.a.	1.2	1.8	1.2	0.8
Others.....	n.a.	3.3	2.7	2.1	2.8
World ²	20.4	33.5	41.2	42.7	41.2

¹ Rye, barley, oats, corn, sorghum, millets and other grains² Excluding trade within the centrally planned countries³ Excluding China (Mainland)SOURCE: "A Review of the World Grain Situation", *Canadian Farm Economics*, Economics Branch, Canada Dept. of Agriculture, Vol. 4, No. 3, August, 1969.

time (Table 17). The export trade in sorghum has also increased very substantially during recent years, rising from 1.6 million tons to a high of 9 million tons during the period 1955-67. There has been very little change in the volume of barley exported during the past decade while trade in oats and rye declined significantly.

There has been a marked shift during recent years in the relative importance of each of the coarse grains in the world export market. Twenty years ago, barley and oats together ranked about equally with corn in the world export market. Since that time, corn exports have grown in importance, comprising about two-thirds of the export trade in recent years (Table 17).

At present corn comprises by far the largest proportion of the total feed grains exported from the United States, Argentina, South Africa and

TABLE 17
Coarse Grains: World Exports by Type of Grain¹
Year Beginning

	1955-56 1957-58 average	1964-65	1965-66	1966-67	1967-68 ²	Change 1955-56 to 1967-68
(millions of tons)						
<i>Exports</i>						
Maize.....	6.9	23.0	27.3	25.9	27.7	301
Barley.....	6.8	7.8	7.7	7.1	7.0	3
Sorghum.....	1.6	4.2	7.2	9.0	5.6	250
Oats.....	1.4	1.5	1.6	1.2	1.1	-22
Rye.....	1.0	0.5	0.6	0.5	0.4	-60
Total.....	17.7	37.0	44.0	43.7	41.8	236

¹ Data includes estimates for Mainland China, North Korea and North Vietnam

² Preliminary

SOURCE: F.A.O. *Commodity Review 1967*, p. 38; and U.S.D.A. *Foreign Agriculture Circular*.

Thailand (Table 18). Sorghum is also an important export commodity from the United States and Argentina. Barley, on the other hand, comprises about two-thirds of the total coarse grains exported from France and Canada while barley and oats are about equally important to Australia. While France and Australia are in direct competition with Canada insofar as world barley markets are concerned, the corn and sorghum exports from other countries also offer very effective competition to Canada's barley export trade. (Table 18).

TABLE 18
Percentage of Each Grain Comprising the Coarse Grains Export Package for
the Major Exporters
(average for the 5 year period 1962-63 to 1966-67)

Country	Corn	Barley	Sorghum	Oats	Rye	Total	Total coarse grains exports
	%	%	%	%	%	%	(millions tons)
United States.....	67.9	7.0	22.7	1.3	1.1	100.0	19.11
Argentina.....	73.6	4.4	15.6	5.4	1.0	100.0	4.52
France.....	30.7	66.5	0.9	1.3	0.6	100.0	2.75
South Africa.....	91.8	0.3	7.9	—	—	100.0	1.28
Thailand.....	95.5	—	4.5	—	—	100.0	1.02
Australia.....	0.3	48.2	4.3	47.2	—	100.0	0.70
Canada.....	0.8	64.8	0.6	18.1	15.7	100.0	1.13

SOURCE: Laughland, A. W. *Canada and World Trade in Wheat, Coarse Grains and Oilseeds, Saskatchewan Wheat Pool, January, 1969.*

The relative position of the major importers of coarse grains has changed quite substantially during the past two decades. Italy and Japan, once small importers of coarse grains, have become relatively important in the world trading pattern for coarse grains. On the other hand, the United Kingdom and West Germany have declined in relative importance as markets for coarse grains.

Corn represents by far the most important feed grain purchased by the major importing countries of the world. In fact, corn represented over 80 per cent of the total feed grains imported by Italy and the United Kingdom during the period 1962-63 to 1966-67 (Table 19). Only in the case of West Germany did barley occupy a relatively important position with respect to the imported feed grains. It is significant to note that, while Japan represents an important market for Canadian exports of barley, over 90 per cent of the total feed grains imported by that country during the past five years consisted of corn and sorghum. The same situation prevails in the case of Belgium and Luxembourg. It is clear that any expansion in Canada's barley export trade will have to take place in direct competition with corn and sorghum, two export commodities of primary importance to the United States.

TABLE 19
Percentage of Each Grain Comprising the Coarse Grains Import Package for
the Major Importers
(average for the five year period 1962-63 to 1966-67)

Country	Corn	Barley	Sorghum	Oats	Rye	Total	Total coarse grains imports
	%	%	%	%	%	%	(millions tons)
Italy.....	81.1	15.1	0.4	3.4	—	100.0	5.34
Japan.....	61.3	8.4	29.3	0.2	0.8	100.0	5.12
United Kingdom.....	83.6	6.6	9.0	0.7	0.1	100.0	4.25
West Germany.....	49.3	31.0	6.8	9.5	3.4	100.0	4.01
Netherlands.....	58.2	6.8	23.9	7.1	4.0	100.0	3.06
Belgium-lux.....	48.8	15.8	30.6	3.3	1.5	100.0	1.88

SOURCE: Laughland, A. W. *Canada and World Trade in Wheat, Coarse Grains and Oilseeds*, Saskatchewan Wheat Pool, January 1969.

4. Canada's Export Markets for Coarse Grains

Canada's major markets for coarse grains, particularly barley, include the United States and three countries—the United Kingdom, Japan and Italy—in which imports of corn and sorghum predominate at the present time. The United States market for exports of Canadian feed grains has declined in relative importance during the past 20 years, while the U.K. market has remained relatively stable. Only in the case of Japan and Italy has there been a gain in the market for Canadian feed grains.

Barley is by far the most important coarse grain export from Canada. During the period 1956-61, the average annual export of barley from Canada amounted to about 69 million bushels. Barley exports declined to a low of 15 million bushels in 1962-63, recovered slowly to 58 million bushels in 1966-67 and declined to another low of 21 million bushels in 1968-69 (Table 20). Rye has never represented a large proportion of Canada's coarse grains exports. It appears that Canadian exports of oats are becoming less important, amounting to only two million bushels in 1968-69.

TABLE 20
Exports of Canadian Barley, 1967-68 and 1968-69

Destination	1967-68	1968-69
	(bushels)	
Italy.....	9,567,134	—
Netherlands.....	35,000	—
Britain.....	1,943,024	10,879,269
Ireland.....	—	499,875
Israel.....	2,954,047	1,266,300
Japan.....	15,448,226	771,830
Australia.....	1,304,630	—
U.S. Oceania.....	—	116,200
Columbia.....	459,292	—
United States.....	4,372,116	7,676,923
Total, all countries.....	36,083,469	21,210,397

SOURCE: Coarse Grains Quarterly, August 1969, Dominion Bureau of Statistics, Ottawa.

5. Future Production and Consumption Trends

The future possibilities for exports of Canadian coarse grains have to be assessed against the background of world production and consumption trends. During the period 1961-63, the average annual deficit for feed grains in the importing countries of the world amounted to 20.8 million metric tons (Table 21). Most of this deficit occurred in the developed countries, particularly the E.E.C., the U.K., Northern European countries and Japan. The projected feed grains deficit by 1975 is expected to be around 39 million tons under a low growth assumption and around 30 million tons under a high growth assumption. It is expected that the centrally planned countries will continue to be approximately self-sufficient in coarse grains by 1975 and so the growth in imports of feed grains is expected to take place in the developed and developing countries. The largest imports are projected for Japan and the E.E.C. countries. In general, the F.A.O. projections indicate a potential growth in imports of feed grains by 1975 of anywhere from 50 to 100 per cent over that for the period 1961-63.

TABLE 21

Projected Production and Consumption of Coarse Grains in Importing Countries by 1975 and Average for Base Period 1961-63

Region and Country	1975						
	1961-63 average			Low G.D.P.		High G.D.P.	
	Production	Consumption	Trade	Production	Consumption	Production	Consumption
(million metric tons)							
<i>Developed Countries</i>							
United Kingdom.....	7.7	12.1	4.5	13.6	16.3	13.6	16.9
E.E.C.....	29.3	38.8	9.6	41.2	52.9	41.2	55.4
Other North Europe....	12.6	14.8	2.1	15.7	19.0	15.6	19.6
South Europe.....	18.1	19.8	1.7	23.0	27.1	25.0	22.5
Japan.....	1.8	4.6	2.6	1.3	10.5	1.3	11.3
Total.....	69.5	90.1	20.5	94.8	125.8	96.7	125.7
<i>Developing Countries</i>							
Latin America.....	21.2	21.8	0.6	34.0	34.0	35.8	34.5
Africa.....	27.7	27.5	-0.2	37.4	41.2	42.9	42.5
Near East.....	8.3	8.1	-0.2	10.4	10.4	11.3	12.2
Far East.....	31.2	31.5	0.3	38.0	42.7	44.1	44.3
Total.....	88.4	88.9	0.5	119.8	128.3	134.1	133.5
<i>Centrally Planned Countries</i>							
U.S.S.R.....	48.3	45.7	-2.6	67.5	66.4	72.0	69.5
Eastern Europe.....	33.9	35.6	1.7	42.7	42.1	41.1	42.8
China Mainland.....	65.3	66.0	0.7	86.1	87.1	90.8	91.8
Total.....	147.5	147.3	-0.2	196.3	195.6	203.9	204.1
Grand Total.....	305.4	326.3	20.8	410.9	449.7	434.7	463.3

SOURCE: *Agricultural Commodities—Projections for 1975 and 1985*, Vol. 1, F.A.O. Rome, 1967

DEMAND PROSPECTS FOR CANADIAN OILSEED CROPS

1. Production of Oilseed Crops

The world production of oilseed crops has been steadily expanding during the past few years. Since 1960, oilseed production has increased by almost 16 per cent with most of this increase taking place in the edible vegetable oils. The leading oilseed crop is soybeans followed by sunflowerseed and peanuts. Rapeseed is rapidly becoming an important crop in many countries of the world.

Almost 70 per cent of the world soybean production takes place in the United States. The other major producer is Mainland China with about 20

per cent of the world production. Canada's production of soybeans has been increasing very slowly and currently comprises less than one per cent of world production.

India and China produce about one-half of the world's rapeseed output while other important producers include Canada, Poland, France and Pakistan. World flaxseed production has remained fairly constant over the past 20 years while Canada's production has remained steady at about 20 million bushels or 15 to 20 per cent of world production.

Oilseed crops do not occupy much of the farmland in Canada at the present time. Flaxseed production dropped from 2.3 million acres in 1965 to a low of 1 million acres in 1967. By 1969 flaxseed acreage in Canada had climbed to a high of 2.4 million acres.

Soybean production is confined primarily to southwestern Ontario. Soybean acreage increased slowly from 228 thousand acres in 1963 to 295 thousand acres in 1968. During this same period Canada imported substantial quantities of soybeans and soybean cake and meal from the U.S.A. Soybean imports are more than double Canadian production.

Rapeseed production in Canada has increased very rapidly during the past few years. Between 1963 and 1969 rapeseed acreage increased from 478,000 to 2.0 million acres. Domestic crushings of rapeseed have increased each year and reached about 7 million bushels in 1968-69 compared with exports of 14 million bushels.

Rapeseed oil comprises about one-third of vegetable oil now used in Canada. During 1968-69, Canada exported 14.3 million bushels of rapeseed of which 10.9 million went to Japan and 1.8 million to Taiwan. Exports of rapeseed to the E.E.C. countries declined from 4.5 million bushels in 1966-67 to only 391,000 bushels in 1968-69.

Sunflowerseed production in Canada is confined to southern Manitoba. Canadian production of sunflowerseed oil is sold primarily as salad oil in Western Canada. Only a small quantity of sunflowerseed is exported each year, mainly to the United States. Indeed, Canada imported over 40 million pounds of sunflowerseed oil in 1968 mainly from the U.S.S.R. and other Eastern European countries.

Mustard seed production in Canada has increased quite substantially during the past six years. In 1968, 533,000 acres were devoted to mustard seed production. During the 1967-68 crop year, about 2.2 million bushels of mustard seed were exported with over half going to the United States. Japan, the Netherlands and West Germany also imported substantial quantities of mustard seed from Canada.

2. Trade in Oilseed Crops

World exports of the principal vegetable oils and oilseeds are increasing each year. Of the edible vegetable oils and oilseeds entering export trade, soybeans is the most important crop, comprising about 40 per cent of the total. The United States dominates the soybean oil and meal export market,

accounting for 75 to 80 per cent of total world exports. Canada's exports of soybean oil and meal have been generally quite small and, in most years, have been about equal to imports from the United States. Japan and West Germany have accounted for about half of the world imports of soybeans. Pakistan and Spain are the largest importers of soybean oil, while the main importers of soybean meal include Canada, Denmark, France, the U.K. and West Germany.

Rapeseed accounted for about seven per cent of the total edible vegetable oil and oilseed crops exported in 1967. Canada is the major exporter of rapeseed followed by France and Sweden. The main exporters of rapeseed oil are France, Sweden and West Germany. The relatively small amount of rapeseed oil exported from Canada goes to the United States. France, Italy and West Germany account for the main exports of rapeseed meal. The main importers of rapeseed are Italy, Japan and West Germany and in recent years these countries have accounted for about 60 per cent of world imports of rapeseed.

Japan is by far the most important market for Canada's export of rapeseed (Table 22). Between 1957 and 1967 Canadian exports of rapeseed to Japan increased from 739,000 to approximately 8.4 million bushels; by the end of the crop year 1968-69, exports to Japan amounted to nearly 11 million bushels. According to a recent study, there would appear to be even greater opportunities for the use of Canadian rapeseed in Japan.²⁸ It was found that rapeseed meal in Japan was being used almost wholly to fertilize tobacco plants and citrus fruits, with very little research work being carried out to determine the suitability of rapeseed meal for animal feed. The results of the study indicated that Japan could conceivably use about four times (40 million bushels) as much rapeseed as she imported from Canada in 1968. It was indicated, however, that if Canada is to capture this potential market, she must do a much better job of selling the merits of rapeseed to users.

Italy has been the next most important market for Canadian rapeseed, although this market declined very significantly during 1967-68 and 1968-69. Nationalist China, was Canada's second best customer for rapeseed during the 1968-69 crop year. The study carried out for the Rapeseed Association of Canada did indicate, however, that the processors in Taiwan encountered serious problems in the processing of Canadian rapeseed, difficulties which should be recognized by Canada if that market is not to be lost. It was recommended that some persons knowledgeable in the processing field should be sent to Taiwan to help the processors resolve their difficulties.

Canada's prospects for expanded exports of rapeseed to the E.E.C. countries are somewhat uncertain. The protection of the E.E.C. levies, the relatively high domestic price support programs and the use of export subsidies by the E.E.C. exporters to third countries not only encourage greater production within the E.E.C. countries but makes it difficult for countries such as Canada to sell in these markets. If the protein content of rapeseed

²⁸ Report to the Rapeseed Association of Canada by a two-man team which visited Japan in March, 1969.

TABLE 22

Major Importers of Canadian Rapeseed, 1957-58 to 1968-69

Crop Year	Japan	U.K.	Belgium-Luxembourg	West Germany	Italy	Netherlands	All Others	Total
(thousand bushels)								
1957-58	739	62	20	1,110	2,238	2,092	88	6,349
1958-59	976	22	11	459	2,221	1,926	55	5,670
1959-60	2,289	31	8	—	138	10	472	2,948
1960-61	877	169	311	607	2,949	845	2,317	8,075
1961-62	1,231	146	108	226	3,320	988	898	6,917
1962-63	3,080	73	158	215	1,358	372	414	5,670
1963-64	4,331	92	—	6	189	167	636	5,421
1964-65	2,567	357	68	638	1,462	1,036	2,107	8,235
1965-66	6,986	162	335	1,075	2,804	1,470	794	13,626
1966-67	8,404	158	—	68	3,163	960	1,056	13,809
1967-68	10,197	—	—	—	324	307	1,481	12,309
1968-69	10,909	—	—	64	184	143	3,011	14,311

SOURCE: *Grain Trade Yearbook, 1966-67*, Sanford Evans Services Ltd; *Rapeseed Production in Western Canada*, Searle Grain Co. Ltd. April, 1966. *Coarse Grains Quarterly*, Aug. 1969, D.B.S.

could be utilized more widely for human food in protein deficient areas of the world, this could have very significant implications for the rapeseed industry in Canada. Most developing countries do not have sufficient resources to depend on livestock products as a source of protein for humans.

Canada is the leading exporter of flaxseed followed by the United States. The major exporter of linseed oil is Argentina. On world markets, Canadian flaxseed exports have met with increasingly stronger competition from the United States. Flaxseed exports during 1968-69 at 13.4 million bushels, were six per cent more than the 1967-68 level of 12.6 million bushels. Major markets for this oilseed in 1968-69 were: Japan, with imports of 4.9 million bushels; and the Netherlands and Britain with 2.2 million bushels each. In general, there appears to be a gradual shrinking world demand for flaxseed and linseed oil.

3. Domestic Market for Oilseed Crops

In addition to the export markets, there appears to be considerable opportunity for the expansion of rapeseed consumption in the form of edible oils in Canada. During the period 1964-66, the total domestic consumption of edible oils was estimated to be around 448 million pounds (Table 23). Of this total only 260 million pounds or about 58 per cent, were produced from soybeans, rapeseed and sunflower seed grown in Canada. Each year large quantities of edible vegetable oils are imported into Canada. It is estimated that 40 million pounds of sunflowerseed oil were imported into Canada in 1968 most of which came from the U.S.S.R. and Romania. The soybean, corn and cottonseed oil imported into Canada came mostly from the United States and most of the imported peanut oil from Nigeria.

TABLE 23
Canadian Production, Trade and Consumption of Edible Vegetable Oils, Average
1964-66

Vegetable oils	Production	Imports	Exports	Apparent Domestic use
		(thousand pounds)		
Soybean oil.....	197,924	29,598	29,646	197,876
Rapeseed oil.....	56,790	—	132	56,658
Sunflowerseed oil.....	5,929	—	—	5,929
Cottonseed oil.....	—	39,098	—	39,098
Corn oil.....	—	17,251	—	17,251
Peanut oil.....	—	16,816	—	16,816
Coconut oil.....	—	40,670	—	40,670
Palm oil.....	—	19,922	—	19,922
Palm kernel oil.....	—	8,795	—	8,795
Olive oil.....	—	3,269	—	3,269
Cocoa butter.....	—	13,962	—	13,962
Vegetable oils and fats.....	—	17,129	599	16,570
Vegetable cooking oils and pack salad oils.....	—	7,037	—	7,037
Margarine and shortening.....	—	4,384	167	4,217
Total.....	260,643	217,931	30,504	448,070

SOURCE: *Fats and Oils in Canada*, Dept. of Industry, Food Products Branch, December, 1967.

4. Future Prospects

In general, the future prospects for vegetable oil seed crops, particularly rapeseed, appear to be very bright in Canada. Rapeseed exports account for only seven per cent of the total world exports of edible vegetable oil crops and Canada is the leading exporter of rapeseed. It appears that the export demand for rapeseed is very elastic, and that if Canada is prepared to be price competitive, there is a very substantial market for Canada's exports of rapeseed. In addition, of course, market promotion developments will continue to be an important aspect of any expansion in world markets for rapeseed.

The Task Force has been advised that the limited storage available for rapeseed and difficulties involved in the movement and transportation of this crop make it extremely difficult to provide continuity of supply to importers. The Task Force has been advised that the 1.5 million bushels of storage space allocated in Vancouver for rapeseed is completely inadequate.

In addition to the export markets, it appears that considerable opportunities are available in the domestic market for rapeseed oil. It is conceivable that a doubling of consumption could take place by replacing the vegetable oils presently being imported from other countries.

The future prospects for the increasing use of rapeseed meal appear to be bright. In addition to the expanding market for rapeseed meal in countries such as Japan, there are considerable opportunities for the increased use of rapeseed meal as a livestock protein supplement in Canada. Because of certain inherent qualities, there is a restricted use of rapeseed meal for livestock at the present time but improvements in the meal will be forthcoming through plant breeding and better crushing and processing techniques.

On the basis of the evidence available to the Task Force, it is estimated that rapeseed production could be increased to about five million acres within the next decade. Whether this target is attained will depend primarily on the production efficiency and the price competitiveness of the Canadian rapeseed industry.

PRAIRIE LAND USE

Total acreage in all grain production in the Prairie Provinces has increased from 40.5 million acres in the late 1950's to approximately 45.4 million acres in the late 1960's (Table 24). The number of acres of improved land on the Prairies has increased by about one million acres per year since 1946, and the acreage devoted to all crops (including tame hay) and summer-fallow has increased steadily during this period (Table 25). If these past trends were to continue at a somewhat slower pace, the total acreage in all grains in the Prairie Provinces could amount to approximately 51 million acres by 1980; this would represent a five million acre increase over the late 1960's. Whether and to what extent this increase in crop clearing under A.R.D.A., the provision in the Income Tax Act which permits the cost of land development as a deductible expense to farmers, and provincial policies, which encourage the development of new lands for agricultural purposes such as that in the Peace River area.

While there is a certain romance in the extension of the agricultural frontier, the Task Force recommends that a general moratorium be placed on the development of new lands for agricultural purposes by both federal

TABLE 24
Acreages in Grains, Prairie Provinces, 1955-59 to 1967

Province	Average 1955-59	Average 1960-64	1965	1966	1967
(thousand acres)					
Alberta.....	11,902	12,131	12,930	13,611	13,849
Saskatchewan.....	22,560	22,511	23,625	25,056	24,795
Manitoba.....	6,279	6,234	7,012	7,037	7,125
Prairie Total.....	40,741	40,876	43,567	45,704	45,769

TABLE 25
Land Use in the Prairie Provinces, 1946-66

Year	Improved Lands	All Crops and Summer fallow	Wheat	Summer fallow
		(thousand acres)		
1946.....	65,408	61,858	23,731	20,398
1951.....	71,840	66,494	24,385	21,569
1956.....	75,706	69,238	22,064	24,113
1961.....	80,370	71,803	24,629	27,860
1966.....	85,191	78,643	29,166	25,224

SOURCE: Census data.

and provincial governments. There appears to be little justification for the use of public funds to expand the agricultural land base during the next decade.

In the projected land use estimates which follow, the Task Force assumes that the improved land acreage in the Prairie Provinces for the next decade will remain at approximately the present level, i.e. 85 million acres.

TABLE 26
Land Use and Production of Principal Crops, Canada
and the Prairie Provinces, 1968 and 1969

	1000 acres		Yield per acre		Pro- duction	1000 bushels
	1968	1969	1968	1969	1968	1969
<i>Canada</i>						
Winter Wheat.....	355	360	42.0	40.8	14,910	14,688
Spring Wheat.....	29,068	24,608	21.8	27.2	634,934	670,131
All Wheat.....	29,422	24,968	22.1	27.4	649,844	684,819
Oats for grain.....	7,556	7,855	48.0	48.5	362,516	381,195
Barley.....	8,836	9,535	36.8	39.9	325,373	380,535
All rye.....	679	927	19.2	18.1	13,049	16,785
Mixed grains.....	1,667	1,740	51.4	49.9	85,602	86,771
Corn for grain.....	957	978	84.8	72.3	81,168	70,772
Flaxseed.....	1,524	2,441	12.9	12.8	19,666	31,264
Soybeans.....	295	322	30.6	23.6	9,027	7,599
Rapeseed.....	1,052	2,012	18.4	18.2	19,400	36,700
<i>Prairie Provinces</i>						
Spring Wheat.....	28,860	24,400	21.8	27.3	629,000	665,000
Oats for grain.....	5,340	5,830	46.6	48.9	249,000	285,000
Barley.....	8,330	9,000	36.1	39.7	301,000	357,000
Rye.....	619	859	18.4	17.4	11,400	14,959
Flaxseed.....	1,502	2,420	12.8	12.8	19,300	31,000
Rapeseed.....	1,052	2,012	18.4	18.2	19,400	36,700

SOURCE: Coarse Grains Quarterly, August, 1969. Dominion Bureau of Statistics.

The projected land use for the Prairie Provinces by 1980 is shown in considerable detail in Table 27 and Chapter 10. The land use requirement for spring wheat is based on the assumption that the total domestic and export requirements for wheat will amount to approximately 545 million bushels by 1980. The projected land use requirements for oats and barley were based on the anticipated livestock and other domestic uses for coarse grains together with projected exports of eight million bushels of oats and 100 million bushels of barley by 1980.²⁹ In the case of barley, the Task Force believes that the projected export of 100 million bushels is quite reasonable given the anticipated world exports of feed grains during the next decade.

TABLE 27
Projected Land Use for The Prairie Provinces

	1966	Projected 1980
	(thousands acres)	
Spring Wheat.....	29,780	19,750
Oats.....	6,200	4,800
Barley.....	6,870	9,500
Rye.....	583	700
Mixed Grains.....	670	1,000
Corn.....	19	250
Flaxseed.....	2,029	1,500
Rapeseed.....	1,388	5,500
Tame Hay.....	5,185	8,521
Tame Pasture.....	4,991	7,179
Fodder Corn.....	48	80
Total Crops.....	57,763	58,780
Summer fallow.....	25,224	25,000
Grand Total.....	82,987 ¹	83,780

¹ Note that the difference between this figure and the total improved land acreage, or about 2.2 million acres, is accounted for by other uses not listed in this table.

Detailed calculations of Projected 1980 acreages appear in Chapter 10.

Considerable expansion (5.5 million acres) will have to take place in the acreage devoted to tame hay and pasture to accommodate the projected increase in livestock production by 1980 (see Chapter 10).

It is difficult, of course, to predict with any degree of accuracy what the exact market requirements for rapeseed might be by 1980. The prospects

²⁹ The projected feed requirements for livestock may be noted in Chapter 6 on livestock. It should be noted that the future exports of feeder cattle to the United States are projected to be 500,000 annually. For each 100,000 head of feeder cattle exported, the amount of land utilized for this purpose would amount to approximately 500,000 acres or the equivalent of approximately 20 million bushels of barley.

for rapeseed, however, appear to be bright. In addition to the potential opportunities for greatly increased use of rapeseed oil for domestic purposes, there appears to be considerable opportunity for increased exports of rapeseed to other countries of the world, particularly Japan, Taiwan and to a lesser extent in the E.E.C. countries. In addition to the use of rapeseed oil for human consumption purposes, there are good prospects for considerable expansion in the use of rapeseed meal for livestock feeding. While rapeseed meal is used at present for livestock feeding purposes, certain undesirable qualities currently prevent an even greater use of the meal. However, current and prospective developments in plant breeding work suggest that this limitation will be overcome in the not too distant future. Another limitation in the use of rapeseed meal relates to the variable quality of the meal resulting from the crushing and extraction processes used at the present time. The Task Force has been advised, however, that improvements in the crushing process are taking place and that it will be only a matter of time before a uniform, high quality product is available. Once these limitations have been overcome, rapeseed meal should replace a significant proportion of the imported soybean meal presently being used in Canada for livestock feeding purposes. In addition, if rapeseed can be produced at a competitive cost with soybeans, there should be growing opportunities for the export of rapeseed meal.

A shift to a protein-system of grading for wheat with a market-justified price premium for protein content could have significant implications for land use in the Prairie Provinces. A study by the Board of Grain Commissioners indicates that the highest protein content for wheat appears to be associated with the brown and dark-brown soil zones; the protein content declines as one moves from these soil zones through the brown-black transition and black and grey-black transition soils in the Prairies which are associated with the production of below average protein content in wheat.

A specific land use policy aimed at encouraging the production of high-protein wheat is complicated by the fact that there are considerable inter-year variations in protein content among the various soil types and the additional fact that the amount of fertilizer used has a significant effect on the level of protein content in wheat. In general, however, some rough approximations may be made as to where high-protein wheat should be produced in the Prairies.

NEW MARKETING GUIDELINES FOR WHEAT

Since the Second World War, the Canadian Government and the Wheat Board have had as one of their major objectives the stabilization of world wheat prices. The support of the International Wheat Agreements, the setting of initial prices for wheat and the pricing policies followed by the Board were all aimed at the stabilization of wheat prices. When foreign competitors engaged periodically in price cutting, Canada generally refused

to follow suit. The best example of Canada's position on world wheat pricing occurred in 1967-68 when the United States declared that in the absence of a formally accepted international agreement on wheat prices, it would consider 1967-68 as a "free year" in regard to export pricing. The Wheat Board refused to make any serious reductions in wheat prices even when it was evident that some sales would be lost, the argument being that retaliatory price cuts would jeopardize the coming into force of the International Grains Arrangement.

While the Wheat Board has contributed greatly to the stabilization of world wheat prices, events during recent years have raised serious questions about the benefits of the approach followed by the Board. The mounting wheat surplus in Canada is a heavy cost to bear for price stability. There are growing doubts about the value of international agreements as a mechanism for ensuring price stability. One author made the following observation:³⁰

Stability in the world wheat market has resulted more from the consistency of domestic and international goals of the major participants in the market than from the existence of the I.W.A. In fact it may be argued that the I.W.A. continues to exist because it is consistent with the goals of the major participants. Should this consistency cease to exist, new patterns of price behavior would result simply because domestic agricultural policy goals are dominant in most of the nations involved in the International Wheat Agreement.

The actions followed by the U.S. in 1967-68 and France and Australia during 1968-69 made it clear that Canada's main competitors support international wheat price stabilization only as long as it is in their interests to do so. At the same time, major importers of Canadian wheat, such as Britain and Japan, have demonstrated during recent years that they will import from those countries offering wheat on a competitive price and quality basis.

The Task Force does not recommend the scrapping of the International Grains Arrangement or deny that some form of international wheat agreement may be needed but it does content that Canada should not make unilateral sacrifices to maintain price stability for wheat. The wheat price war during 1969 indicates that an international wheat agreement must have the mutual support of all participants concerned if it is to be meaningful.

Much of the difficulty associated with the International Grains Arrangement appears to be associated with the unrealistically high minimum prices which have been set. Given the present surpluses of wheat in the major exporting countries, the Task Force recommends that Canada should take the initiative in negotiating for a more realistic set of minimum and maximum prices under the International Grains Arrangement. History has shown that international wheat agreements appear to work well as long as the market price operates somewhere between the minimum and maximum price levels set. Within this range the specific price is settled by the normal factors of

³⁰ McCalla, A. F. "A Duopoly Model of World Wheat Pricing." *Journal of Farm Economics*, Vol. 48, No. 3, Part I, August, 1966, pages 711 ff.

demand and supply. If, however, prices rest on the minimum level under the agreement, exporters are sorely tempted to steal a march on their competitors by using various techniques to shave their prices. The inevitable result, particularly where exporters are burdened with surpluses, must be a breakdown in the international agreement. Because there are no practical or meaningful sanctions behind the International Grains Arrangement which can be exercised in the case of countries which violate the Arrangement, it is difficult, if not impossible, to maintain a minimum price level which appears to be well above the prevailing competitive price for wheat.

Given that it is appropriate strategy for the Wheat Board to maintain wheat prices and not engage in cut-throat competition with the U.S. and other competitors as long as the I.G.A. remains effective, there still remain questions as to whether the Wheat Board should not discriminate more freely between markets and offer a more flexible pricing mechanism to facilitate and encourage sales of Canadian wheat by the wheat exporting firms operating on behalf of the Wheat Board.

It has been suggested that the Wheat Board's practice of announcing selling prices for wheat is disadvantageous to Canada in two ways. First, it gives foreign competitors an opportunity to negotiate sales contracts which just shade these prices. Second, the limited price flexibility allowed to the wheat trading firms gives them less opportunity to negotiate and satisfy buyers that they are obtaining a good deal, and also reduces the trading margin and thus the incentive of these firms to sell Canadian rather than United States or other wheat, which they also handle.

Price flexibility appears to be important. The Wheat Board should give consideration to abandoning its public announcement of fixed prices for all price takers, and instead price flexibly and selectively with different buyers (domestic or foreign). Furthermore the Wheat Board should allow the traders sufficiently attractive margins so that they have some latitude for negotiation with various customers.

The Task Force recommends that the current wheat surplus be reduced to manageable proportions through the Transition Policy described below. Thereafter the pricing strategy of the Wheat Board during any given year must be dictated by the prevailing world demand and supply conditions. The "initial price" for wheat must be low enough to permit price flexibility throughout the crop year. The basis of wheat delivery quotas should become wheat acreage rather than "specified acreage". Never again must the Canadian Wheat Board adopt policies which result in the creation of a surplus as large as that which accumulated in 1969.

NEW MARKETING GUIDELINES FOR COARSE GRAINS

There is a general and growing dissatisfaction with the present methods of marketing and pricing feed grains in Canada. Many recommendations have been made for changes in the coarse grains marketing system. Some groups

have recommended an even stronger control over the marketing of coarse grains by the Canadian Wheat Board. For example, it has been advocated that Prairie producers should be prevented from delivering non-quota wheat, groups have recommended a complete return to the open market method of selling coarse grains. Still others have recommended the creation of a Coarse Grains Marketing Board completely separate from the operations of the Wheat Board.

In general, the problems associated with the marketing and pricing of Canadian feed grains may be summarized as follows:

1. A declining share of the expanding world markets for feed grains.
2. Importation of American feed corn during times of surplus feed grain supplies in Canada.
3. A perennial debate over the merits of the Feed Freight Assistance program which costs approximately \$20 million annually.
4. Distress prices associated with inter-farm sales of feed grains within each of the Prairie Provinces.
5. A futures market for feed grains which may have operated in such a manner in recent years as to lead to the creation of "artificial shortages" in Eastern Canada.
6. A marketing system which favours wheat and tends to discriminate against coarse grains.
7. A marketing system which does not permit efficient producers to compete in the feed grain export markets of the world.

The proposals which follow relate to longer-run changes in the marketing system for barley and oats. Before these changes can be implemented, however, a Transition Policy, discussed in a later section of this Report, will be necessary to eliminate the burdensome surpluses which prevent any constructive changes in the marketing system.

We now turn our attention to the longer-run changes needed in the marketing and pricing of feed grains. Under the proposed modification of the present market system, the Canadian Wheat Board would continue to be the only authorized commercial channel for the purchase of oats and barley from the primary producer. The Task Force proposes that all coarse grains produced and offered for sale to the Canadian Wheat Board by farmers within a given crop year must be cleared from the market during the same crop year with the exception of a normal operating carryover which should be clearly defined. The Task Force recommends that the Canadian Wheat Board should announce in October of each year the quantity of oats and the quantity of barley which are to be carried over by the Canadian Wheat Board at the end of that crop year (i.e. the following July 31). In any given year the actual carryovers could be less than those announced by the C.W.B.

in October if further sales not originally anticipated could be made, but the carryovers should not exceed those announced in October. Grain delivery quotas for coarse grains, if established at all, should be used only to regulate the flow of available coarse grain to the market within the crop year and by May of each crop year grain delivery quotas should be completely lifted for oats and barley. It is also recommended that all purchases of coarse grains from farmers by the Canadian Wheat Board be hedged immediately in the futures market, and if it is not practical to hedge each individual purchase, it is proposed that a system be developed by the Canadian Wheat Board whereby a certain (but not necessarily constant) quantity of coarse grains would be hedged daily. The primary purpose of the hedging would be to develop a futures market which would reflect the genuine free play of demand and supply forces in the market place.

The Task Force recommends that the practice of setting "initial prices" for coarse grains at the beginning of each crop year be discontinued. It is proposed that the price ultimately received by the individual farmer for any given delivery be a monthly pooled price for his particular grade of grain. At the time of a given delivery of grain, the farmer would receive a first payment calculated to be approximately 75 per cent of the estimated final pooled price for that month; he would also be issued a participation certificate which would entitle him to receive the remainder of his payment once the actual pooled price was determined for the month in question.

When an annual pooled price is used, delivery quotas are necessary to ensure a more uniform flow of grain to the market throughout the crop year, i.e. there is no incentive for the producer to delay delivery of his grain if he receives the same price regardless of when he delivers within the crop year. Under an open market, the futures price should normally reflect a cumulative seasonal carrying charge. That is, a farmer delivering later in the crop year should receive a higher price (to the extent of the carrying charge) than his neighbour who delivers his grain earlier in the crop year. A monthly pooled price would help to regulate the flow of grain to the market throughout the crop year without relying so heavily as in the past on delivery quotas.

The primary objective of the new marketing guidelines for coarse grains would be to shift the Wheat Board from a surplus management role to a highly aggressive marketing function. The proposed system would leave the Wheat Board and the private trade free to price competitively in the domestic and export markets of the world. It would permit farmers to market at any time during a given crop year any coarse grains that they wished to deliver (consistent with quotas provided up to May each year). In general, the proposed system of marketing should be designed to remove the shackles which tend to inhibit a healthy and vigorous growth of the coarse grains industry in Canada.

Under the proposed marketing system, there will be times when the prices which the farmer receives may not be as high as he would like to see, but the main criterion of success will be whether he received the best possible prices for all the feed grain that he wished to sell. The Task Force believes this to be more desirable than the case where high prices set by the Wheat Board lead to limited sales of quota and distress prices for non-quota sales of feed grains in the Prairies. After 20 years of experience, it has become clear that the competitive forces (i.e. pricing, promotion, providing desired quality, etc.) of the international and domestic market cannot be ignored if lost markets and burdensome surpluses are to be avoided. If the competitive prices of the market place are thought to be "unjust" or "unfair", or too low at times to yield the producer a reasonable level of income, other policies should be developed apart from the marketing system to deal with the problem. This issue is dealt with in the next section of the Report.

The Task Force believes that a more competitive marketing system for feed grains would eliminate many of the problems and difficulties which have plagued the industry during recent years. It would provide Canada with the opportunity to regain some of the world markets for her feed grains. It would make it much more difficult for American corn to be imported into Eastern Canada and, at the same time, it would give Eastern livestock producers competitive access to Prairie feed grains. The benefits of these proposals for coarse grain marketing would be extended to livestock production and permit more efficient location of livestock feeding. A more competitive marketing system would permit efficient grain producers to compete in the feed grain markets of the world. Under the proposed marketing system for barley and oats, there would be a common market price for sellers and buyers, not a series of different prices such as those which prevail at the present time within the Prairies, in the export markets and in Eastern Canada.

Prairie grain producers have demonstrated that they have the capacity to produce feed grains competitively if the markets are available. The Task Force believes that markets are available if the Canadian marketing system is geared to the competitive realities of the world market place. Canada did not share in the 21 million ton increase in world feed grain exports between 1958 and 1968. However, every effort must be made to provide the Canadian feed grain producer with the opportunity to share in the large world export trade in feed grains. The Task Force projects Canadian exports of 100 million bushels of barley, a reasonable and practical target.

PRAIRIE GRAIN PRICE STABILIZATION PROGRAM

Various policies have been developed in the attempt to stabilize the price and income position of the Prairie farmer. The introduction of the Prairie Farm Rehabilitation Act and the Prairie Farm Assistance Act in the 1930's,

and the enactment of the Federal Crop Insurance legislation in 1958 were designed to protect the farmer against unpredictable variations in crop production. The crop insurance program, in particular, provides the farmer with an effective means of countering the effects of crop yield instability.

Other policies have been designed to stabilize the price and income position of the Prairie farmer. The setting of initial prices by the Federal Government at the beginning of each crop year provided Prairie grain farmers with a minimum price for those quantities of their wheat, oats and barley which they were able to deliver to the Wheat Board in any given crop year. The Temporary Wheat Reserves Act and the Prairie Grain Advance Payments Act were designed to provide farmers with greater stability of price and cash income. Other *ad hoc* policies have been used, such as the acreage payments to Prairie producers during the early part of the 1960's. More recently, Prairie grain producers have been guaranteed a minimum price (i.e. \$1.95½ per bushel for No. 1 Northern wheat basis Fort William) for wheat consumed in the domestic market.

None of these policies has been entirely satisfactory. Perhaps the most serious criticism that can be made of many of them has been the lack of a clear-cut philosophy as to what the various policies were supposed to accomplish, either individually or collectively. In addition, several of these policies have created difficulties in grain marketing because of mixing of marketing and general income objectives.

The Task Force believes that the marketing of the grain must be separated from the general income issues of Prairie agriculture if a highly competitive system of grain marketing is to be developed. There can be no doubt that such a system must be developed. At the same time some form of price and income protection against serious declines in grain prices is fully warranted, because the Task Force recognizes that the introduction of a more competitive pricing system will inevitably introduce greater price fluctuations than has been the case in the past with grain delivered to the Canadian Wheat Board. The discussion which follows outlines a proposal for the development of a *Prairie Grain Price Stabilization Program*.³¹ Under the Program, the Prairie grain producer would be provided with a price floor for a certain portion of his crop.

The Program specifies that prescribed local delivery point minimum prices be established for wheat, oats and barley at levels equivalent to 80 per cent of the annual average of the final Canadian Wheat Board prices received at these local delivery points by farmers for the preceding ten-year period.³²

The Task Force recommends that the prescribed minimum price apply to a "designated yield" from only one-half of the farmer's "base acreage" for

³¹ The Program should apply to the designated area defined by the Canadian Wheat Board.

³² The "prescribed minimum price" level for wheat, oats and barley corresponds to the minimum price support level for specified commodities under the Agricultural Stabilization Act. It should be noted that wheat, barley and oats grown in the Prairie Provinces are not eligible for support under the Agricultural Stabilization Act.

each of wheat, oats and barley.³³ If, in any given year, the prices fall below the prescribed minimum price level (i.e. 80 per cent of the preceding ten-year average) a producer would be paid directly an amount equivalent to the difference between the prescribed minimum price and the actual market price times the "designated yield" applied to his "eligible acreage" (i.e. one-half of his "base acreage").

An example illustrating the application of the Prairie Grain Price Stabilization Program is shown in Table 28. In the example used, the farmer has a base acreage (average for the preceding three years) of 300 acres in wheat, 75 acres in oats and 150 acres in barley. His "eligible acreage" would be one-half of these amounts. The "designated yields" to be applied to the eligible acreage (one-half of the base acreage) are based on the long-term yields applicable to the farmer's area and soil type as described above. The prescribed price supports are derived by taking 80 per cent of the average Wheat Board prices for the previous ten years at his delivery point. In the example shown in Table 28, the farmer would have received a total payment of \$1,020.

In effect, the farmer received a support price of \$1.46 per bushel for one-half (3,000 bushels) of his total calculated wheat crop, while the remainder of the wheat crop sold for \$1.30 per bushel. The same reasoning applies to his barley. In the case of oats, however, the farmer received no payment because the actual market price for oats of 72 cents per bushel exceeded the prescribed support price of 68 cents per bushel.

It is to be emphasized that the farmer would be eligible for payments under the Program even though he did not produce a crop during the current year; the payments are based on the preceding three-year average. If, for example, the producer shown in Table 28 did not plant wheat in 1970, he would still be eligible for payments in 1970 under the Program on the basis of his average wheat acreage for the preceding three years (i.e. the average wheat acreage for the period 1967-69 was 300 acres).

The financial support for the Program would be based on a \$100 million revolving fund, to be administered under the Federal Agricultural Stabilization Act. A maximum of \$100 million would be available from the fund in any given year regardless of how low the prices of grain might drop. In

³³ The "designated yield" is defined as the long-term average yield applicable to a given farmer or his soil type as used by the crop insurance agency in his province. For those farmers not insured under the crop insurance program, the long-term average yields which would apply in calculating coverages (if such farmers were to insure), would be used in determining the "designated yield". The farmer's "base acreage" for each of wheat, oats and barley is defined as the average acreage for the preceding three-year period for each of these crops. For example, if the farmer's wheat acreages in 1967, 1968 and 1969 were 400, 300 and 200 acres respectively, his "base acreage" for 1970 would be 300 acres. The farmer would have a "base acreage" of 300 acres for wheat in 1970 even if he did not plant wheat in that year. If the farmer planted no wheat in 1970, his "base acreage" for wheat in 1971 would be

the average of the preceding three years $\left(\frac{300 + 200 + 0}{3} \right) = 167$ acres. The farmers'

"eligible acreage" is defined as one-half of his base acreage.

other words, the fund could not be overdrawn. In the event that prices dropped so low that the fund would be overdrawn, a highly unlikely possibility, the \$100 million would have to be pro-rated accordingly.

TABLE 28

An Example Illustrating the Application of the Agricultural Price Stabilization Program to an Individual Farmer

1. Base acreage ave. 1967-69	
Wheat.....	300 acres
Oats.....	75 acres
Barley.....	150 acres
2. Guaranteed support price: 80% of average of previous ten year prices	
Wheat No. 1 Northern Fort William.....	\$1.46/bus
Oats.....	\$0.68/bus
Barley.....	\$1.01/bus
3. Actual prices received—basis Fort William	
No. 3 Northern Wheat.....	\$1.30/bus
2 C.W. Oats.....	\$0.72/bus
3 C.W. (6 row) Barley.....	\$0.81/bus
4. Acreage eligible for price support	
Wheat $\frac{1}{2}$ of base acreage.....	150 acres
Oats $\frac{1}{2}$ of base acreage.....	38 acres
Barley $\frac{1}{2}$ of base acreage.....	75 acres
5. Designated yield to be applied to eligible acreage (based on yields established under Crop Insurance Program for farmer's area)	
Wheat.....	20 bus/acre
Oats.....	42 bus/acre
Barley.....	36 bus/acre
6. Payment to farmer	
Wheat (150 acres \times 20 bus. = 3,000 bus).....	3,000 bus \times 16 cents = \$480
Oats (38 acres \times 42 bus. = 1,596 bus).....	1,596 bus \times 0 cents = \$ 0
Barley (75 acres \times 36 bus. = 2,700 bus).....	2,700 bus \times 20 cents = \$540
Total Payment.....	\$1,020

The fund would be financed by the Federal Government and those Prairie grain producers who choose to participate in the Program. Prairie grain producers would contribute to the fund through a levy which would become operative when the prices for wheat or oats or barley exceeded 110 per cent of the annual average of the Canadian Wheat Board prices for representative grades for the preceding ten-year period, basis Fort William.³⁴ If, for example, grain prices had risen above 110 per cent (e.g. to 120 per cent) of the average prices, the farmer used as an example in Table 28 would have contributed about \$245 to the fund.

³⁴ We have proposed that the criterion for contribution should be Fort William prices in order to provide equitable treatment among all producers in the designated Prairie area.

Aggregate payments by grain producers to the fund in any year would be matched by an equal contribution to the fund by the Federal Government. Prairie grain producers and the Federal Government would continue contributing to the fund (whenever prices exceeded 110 per cent of the ten-year average prices) up to a maximum of \$100 million. In any year in which payments from the fund exceed the accumulated monies in the fund the difference would be met by the Federal Government. Total payments in any year should not exceed \$100 million. If, for example, the producers' and the Federal Government's accumulated contribution to the fund amounted to \$65 million in a given year, and if during that same year grain prices dropped such that payments from the fund amounted to \$80 million, the deficit of \$15 million would be covered by the Federal Government.

The levy of one per cent should be applied on the value of the "designated yield" (defined above) times the farmer's base acreage for wheat and oats and barley—the base acreages being the average of the acreages for these crops for the three preceding years.

The Program should be *voluntary*. Farmers not wishing to participate in the Program would opt out from paying the levy and would, accordingly, not be eligible for payments from the fund if prices for wheat, or oats or barley dropped below the prescribed minimum support level. In years in which such farmers opted out of the Program, their acreages for those years would be designated as zero for purposes of calculating their base acreage if they were to return to the Program in subsequent years. Their base acreage would be reduced to the extent that the zero acreage would be used in calculating the preceding three-year average acreage.

A further refinement must be applied to the proposal outlined above. In order to encourage a suitable balance among the quantities of wheat, barley and oats produced, it is recommended that the \$100 million revolving fund be allocated in such a way as to provide a maximum of \$55 million for wheat, \$30 million for barley and \$15 million for oats in any one year. These proportions correspond approximately to the projected acreages for wheat, barley and oats in the Prairie Provinces by 1980.

In effect, there would be separate accounts in the fund for each of wheat, oats and barley. For example, the aggregate payment to wheat producers could not exceed \$55 million in any given year. On the other hand, wheat producers and the Federal Government would continue contributions to the fund through the levy (whenever prices exceeded 110 per cent of the previous ten-year average prices) up to a maximum of \$55 million. The same reasoning applies to oats and barley.

It should be emphasized that nothing would be paid to grain producers under the Program for wheat or oats or barley in years when the actual market prices for any of these crops exceeded the prescribed minimum prices.

The Task Force emphasizes that the minimum prices established for wheat, oats and barley should be restricted to the "designated yield" applied to one-half of the individual farm base acreage in wheat, barley and oats

production. Many price support programs have failed because farmers have become insulated from the realities of the market place. By confining the proposed minimum price support to one-half of the base acreage, the "market price" for the remainder of the crop would indicate to the individual farmer which crops to produce and how much of each. The Task Force believes that the market price is a better allocator of resources in farm production than any arbitrary rules and production controls which can be devised.

If the Prairie Grain Price Stabilization Program, a form of price insurance, is taken together with the Federal-Provincial crop insurance program, a form of yield protection, Prairie grain farmers would in effect have a *minimum income guarantee*. More specifically, the individual farmer would have available to him a systematic form of protection against sharp and unpredictable drops in yields and prices. While the individual farmer would have a minimum income guarantee, he would still be free and have sufficient incentive to produce and to sell his crops at the best possible prices in the open market.

The Task Force recommends that the Prairie Grain Price Stabilization Program should be implemented just as soon as the current grain surpluses have been reduced to manageable proportions under the Transition Policy described in detail in the following section. This step should be accompanied by the changes recommended above for the development of a more competitive grain marketing system.

The Prairie Grain Price Stabilization Program will make a much more effective and positive contribution to income stability for Prairie agriculture than do existing programs such as the Temporary Wheat Reserves Act and the Prairie Grain Advance Payments Act. In the proposed Program the Federal Government will share directly with producers in achieving greater income stability for the Prairie economy. The Task Force recommends the discontinuance of the Temporary Wheat Reserves Act, The Prairie Farm Assistance Act, and the cash Advance Payments Act under the Transition Policy described below, and recommends that at the end of the Transition Policy they be replaced by the Prairie Grain Price Stabilization Program.

A TRANSITION POLICY FOR THE PRAIRIE GRAIN INDUSTRY

The current grain surplus problems hang like an ominous cloud over the Prairie Provinces. If Canada's wheat inventory were to be reduced to an average carryover by the end of the 1969-70 crop year, almost one billion bushels of wheat would have to be exported this year, an obvious impossibility. In addition to the large stocks of wheat, Canada also has a large supply of feed grains on hand.

Grain surpluses and an acute shortage of cash among Prairie grain farmers will continue for some time unless drastic steps are taken to alleviate the problems.

It is necessary and desirable that a Transition policy be developed for the Prairie grain industry if the current problems are not to be accentuated and if severe disruptions are not to occur in the livestock and oilseed economy.

The immediate objectives of a Transition Policy for Western Canadian agriculture should be:

1. A reduction in the excess carryover of wheat and coarse grains.
2. The provision of financial assistance to Prairie farmers consistent with necessary and desirable adjustments in the agricultural industry.

Any transition policy designed to deal with these two immediate problems should be compatible with the development of the longer-run agricultural policy embracing the Prairie Grain Price Stabilization Program described earlier in this chapter.

The alternatives to choose from, in dealing with the current grain surplus problem, are few and mostly unproductive. Continuation of present policies is indefensible. Payments under the Temporary Wheat Reserves Act will exceed \$60 million during the 1969-70 crop year and will do nothing to reduce the current grain supplies. Funds extended under the Prairie Grain Advance Payments Act, while welcome to hard pressed grain producers, represent temporary assistance only, make no contribution towards the solution of the grain surplus problem and could cost the Federal Government approximately \$14 million in the form of interest free cash advances during the 1969-70 crop year. Government liability on 1968-69 wheat stocks for which farmers received an initial payment of \$1.70 per bushel (No. 1 Northern basis Ft. William) and which are being sold during the 1969-70 crop year for prices less than the initial payment to farmers, will amount to approximately \$4.5 million for every cent that selling prices average below the initial payment. Other costs include the farmers' expense of storing grain on the farm, losses incurred by farmers on the distress prices associated with non-quota sales of grain, interest on debts and the loss of income by all businesses in the Prairie economy as a result of stagnation in the grain industry.

Straight cash grants such as the acreage payments program during the early 1960's, while providing farmers with temporary financial relief, are *ad hoc* in nature and contribute nothing towards the solution of the grain surplus problem. Food give-away and surplus disposal programs are not a practical solution for the immediate problems of the grain industry even though hunger and malnutrition prevail in many parts of the world. To depend on drought and misfortune in other countries as the means of reducing Canada's grain surplus is not a positive or a reliable foundation on which to build a grain policy.

As a Transition Policy, the Task Force recommends that a system of voluntary *acreage diversion payments* and an *amended quota policy* be established commencing in the spring of 1970.²⁵ Under the proposed acreage diversion program, farmers would be paid a specified sum per acre to divert wheat and barley acreage to forage.

²⁵ Although the Task Force regards this as the desirable timing, it recognizes that there may be administrative and technical difficulties in achieving this schedule.

Wheat

Three of the options relating to the use of wheat acreage diversion payments may be seen in Table 29. In making the calculations shown in Table 29, the following assumptions were used:

1. that an acreage diversion payment of \$7 per acre during the first year would be sufficient to induce farmers to divert a portion of their wheat acreage to forage; that a further payment of \$5 per acre would be paid on the diverted acreage for the second and subsequent years providing it remained in forage.
2. that annual exports of wheat would be 360 million bushels.
3. that domestic use of wheat would amount to 160 million bushels annually.
4. that the wheat yield would be approximately 23 bushels per acre.
5. that the funds would be available to support the acreage diversion program.

Hard spring wheat acreage on the Prairies in 1968 was 28.9 million acres, and in 1969 was 24.4 million (average 26.6 million acres). Case 1, Table 29, indicates that if \$60 million were made available during the first year to support the acreage diversion program, the average 1968-69³⁶ wheat acreage (26.6 million acres) would be reduced by approximately 8.6 million acres; about 18 million acres would remain in production in 1970. Given the above assumptions and a wheat acreage held at approximately 18 million acres, it would require four years before the year-end carryover could be reduced to 576 million bushels. The total cost of the program for the four years would amount to approximately \$60 million for the first year and \$43 million for each of the three subsequent years, or a total of \$189 million.

In Case 2, Table 29, and given the same assumptions but raising the acreage diversion payment to \$81 million for the first year, wheat acreage would be reduced to approximately 15 million acres, and it would require three years before the year-end carryover of wheat could be reduced to 481 million bushels. The total cost for the three years would amount to \$197 million.

Case 3, Table 29, indicates that if the funds were increased to \$102 million for the initial year, wheat acreage would be reduced to approximately 12 million acres and it would require two years to reduce the year-end carryover to 508 million bushels. The total cost for the two years would amount to \$175 million.

The projected year-end carryover would vary up or down, of course, depending on the yield per acre and the quantity of wheat exported in any given year. For example, to the extent that the annual wheat yield per acre

³⁶ The average acreage of 1968 and 1969 is used as a base in order to provide more equitable treatment of producers. If only 1969 acreage were used, it would not reflect the fact that some producers reduced their wheat acreage more than others between 1968 and 1969.

TABLE 29
Possibilities Relating to the Use of Wheat Acreage Diversion Payments

	Crop Year 1969-70	Crop Year 1970-71	Crop Year 1971-72	Crop Year 1972-73	Crop Year 1973-74
<i>Case 1</i> (Gross cost during initial year = \$60 million)					
Carryover (beginning crop year).....	849,821	1,000,000	894,000	788,000	682,000
Production.....	684,000	414,000	414,000	414,000	414,000
Total Supply.....	1,533,821	1,414,000	1,308,000	1,202,000	1,096,000
Domestic use.....	(160,000)	(160,000)	(160,000)	(160,000)	(160,000)
Exports.....	(360,000)	(360,000)	(360,000)	(360,000)	(360,000)
Year end carryover.....	1,000,000	894,000	788,000	682,000	576,000
<i>Case 2</i> (Gross cost during initial year = \$81 million)					
Carryover (beginning crop year).....	849,821	1,000,000	827,000	654,000	
Production.....	684,000	347,000	347,000	347,000	
Total Supply.....	1,533,821	1,347,000	1,174,000	1,001,000	
Domestic use.....	(160,000)	(160,000)	(160,000)	(160,000)	
Exports.....	(360,000)	(360,000)	(360,000)	(360,000)	
Year end carryover.....	1,000,000	827,000	654,000	481,000	
<i>Case 3</i> (Gross cost during initial year = \$102 million)					
Carryover (beginning crop year).....	849,821	1,000,000	754,000		
Production.....	684,000	274,000	274,000		
Total Supply.....	1,533,821	1,274,000	1,028,000		
Domestic use.....	(160,000)	(160,000)	(160,000)		
Exports.....	(360,000)	(360,000)	(360,000)		
Year end carryover.....	1,000,000	754,000	508,000		

SOURCE: Derived by the Task Force.

exceeded 23 bushels, or annual wheat exports fell below 360 million bushels, the year-end carryover would increase accordingly.

Given the urgency of the problem, the Task Force recommends that the Federal Government *provide \$81 million for 1970, and \$58 million for each of the two following years, in support of a wheat acreage diversion program.* This would mean that wheat acreage would be held at approximately 15 million acres until the spring of 1973 at which time the acreage diversion program would be discontinued.

The cost of the wheat acreage diversion program should be covered by the discontinuance of the Temporary Wheat Reserves Act (over \$60 million in 1969-70) and the Prairie Grain Advance Payments Act (which could cost approximately \$14 million in 1969-70) and the Prairie Farm Assistance Act (average subsidy of about \$6 million per year). The net cost of the wheat acreage diversion program to the Federal Government would be minimal.

Producers should be given the opportunity to apply for the maximum allowable diverted acreage under the Transition Policy up to March 31, 1970.³⁷ Initially, the maximum amount of wheat acreage that any one producer can divert for payment under the program should be 44 per cent of his average 1968-69 wheat acreage. If, by March 31, 1970, insufficient acreage has been diverted under the program (i.e. the wheat acreage had not been reduced to 15 million acres), farmers so inclined should be permitted to reapply for a diversion of their entire wheat acreage to the program in 1970.

While participation in the wheat acreage diversion program would be voluntary, an essential feature of the program must be to establish wheat delivery quota acreage on each farm equal to 56 per cent of its average 1968-69 wheat acreage. The amount deliverable under this quota acreage would be set by the Wheat Board and should be equal for each acre of the quota acreage by the end of the crop year. During the course of the year, however, the Wheat Board could vary the amount delivered per quota acre among delivery points, as it does now, in order to obtain the grades desired from particular locations, but by July 31 it should have accepted the same number of bushels per wheat quota acre in the entire C.W.B. designated area.

This feature of the Transition Policy is essential to ensure that acreage is diverted from wheat, to discourage producers from attempting to circumvent the acreage diversion program by increasing yields (as has occurred in the United States) and to provide equitable treatment of all producers during the Transition Policy period. It has the disadvantage that it makes no distinction among farms with different wheat yields, and it may, perhaps, result in the delivery of grades of wheat which are in less demand than the C.W.B. would desire. Nevertheless, the Task Force is of the view that, given the present crisis situation, these disadvantages of the proposal are greatly outweighed by its advantages during the projected three-year life of the Transition Policy.

³⁷ See Footnote 34.

An example of the operation of the wheat delivery quota acreage is given in Table 30. Producer A and Producer B have been operating almost identically in 1968-69 in regard to wheat acreage and production. Both receive the same quota acreage, but A adheres to his and B does not elect to participate in the program, and, in fact increases his yield. The result is that both can deliver the same number of bushels, but Producer B finds that he has no outlet for his excess production, and he receives no acreage diversion payment.

TABLE 30
Example of Operation of Transition Policy for Wheat

	Producer A	Producer B
1. Wheat acreage 1968.....	600	600
2. Wheat acreage 1969.....	400	400
3. Average wheat acreage 1968-69.....	500	500
4. Bushels of wheat produced, ave. 1968-69.....	10,000	10,000
5. Delivery quota acreage 1970 (56% of average acreage 1968-69)	280	280
6. Acres sown to wheat 1970.....	280	500
7. Yield 1970.....	20	25
8. Bushels produced 1970.....	5,600	12,500
9. C.W.B. delivery per quota acre, 1970*.....	28	28
10. Wheat delivered by producers 1970.....	7,840	7,840
11. Change in stocks held by producer 1970.....	- 2,240	+ 4,660
12. Diversion payment received.....	\$ 1,540	0

*Delivery quota determined by C.W.B. and based on C.W.B. sales.

Barley

At the end of the 1968-69 crop year, the carryover of barley amounted to 197.7 million bushels (Table 31). This carryover together with an estimated production of 378.4 million bushels will yield a total supply of 576 million bushels to be disposed of during the 1969-70 crop year. The Task Force estimates that the barley carryover at the end of the 1969-70 crop year could amount to approximately 267 million bushels. In order to reduce this carryover to a more manageable quantity the Task Force recommends that the Federal Government provide a further \$21 million to be used to divert barley acreage to forage or summerfallow in 1970. If an acreage diversion payment of \$7 per acre were used, it is estimated that the average 1968-69 barley acreage of 8.7 million acres could be reduced by approximately 3 million acres. If barley acreage for 1970 were reduced to 6 million acres, and if 100 million bushels of barley were exported, it is estimated that barley carryover by the end of the 1970-71 crop year could be reduced to approximately 140 million bushels, still a large carryover but a manageable one under the more competitive pricing system recommended above. A quota policy on the reduced barley acreage should be developed similar to that proposed above for wheat. During the 1970-71 crop year, the amount deliverable under the

TABLE 31
Total Supply and Disposition of Canadian Barley

	1967-68	1968-69	1969-70*	1970-71*
	(million bushels)			
<i>Supplies</i>				
Carryover (beginning of crop year).....	131.8	130.9	197.7	267.0
Production.....	248.7	325.4	378.4	240.0
Total Supplies.....	380.4	456.3	576.1	507.0
<i>Exports, barley and products.....</i>	<i>41.4</i>	<i>26.4</i>	<i>60.0</i>	<i>100.0</i>
Human Consumption.....	0.1	0.1	0.1	0.1
Seed.....	14.5	15.6	16.0	16.0
Industrial Use.....	17.0	17.3	18.0	18.5
Residual Item (livestock feed and waste)....	176.5	199.2	215.0	230.0
Carryover at end of crop year.....	130.9	197.7	267.0	142.4
Total Disposition.....	380.4	456.3	576.1	507.0

*Estimated

SOURCE: *Coarse Grains Quarterly* August, 1969. The figures for disposition for the crop year 1969-70 and all figures for the crop year 1970-71 were estimated by the Task Force.

quota on the reduced barley acreage should be set by the Wheat Board in a manner similar to that described above for wheat. A restriction of this type would be necessary if excessive production on the reduced barley acreage is not to be encouraged thus frustrating the attempt to reduce the current barley surplus.

The Transition Policy should be administered by the Agricultural Stabilization Board of the Department of Agricultural Industry (now the Department of Agriculture). In summary, the recommended Transition Policy is as follows:

1. Wheat acreage diversion payments amounting to \$81 million for 1970 and \$58 million for each of the two following years.
2. Wheat acreage in the Prairies would be reduced to about 15 million acres for a period of three years.
3. A barley acreage diversion payment of \$21 million for the 1970-71 crop year only.
4. Barley acreage in the Prairies would be reduced to about six million acres in 1970.
5. During the period when acreage diversion payments were being made, the farmer's delivery quota for wheat and barley would be set by the C.W.B. and based on his delivery quota acreages.

At the end of the Transition period (July 31, 1973 for wheat and July 31, 1971 for barley) the Transition Policy would be discontinued and the longer-run New Marketing Guidelines and the Prairie Grain Price Stabilization Program described above would be initiated.

Part of the necessary funds for the Transition Policy would be obtained through the discontinuance of the Temporary Wheat Reserves Act and the Prairie Grain Advance Payments Act with the remainder coming through a special appropriation from the Federal Government, as discussed above. In addition to providing a form of immediate financial assistance to Western Canadian grain producers, the Transition Policy would help to reduce the grain surplus in the Prairies. At the same time, of course, every attempt should be made to reduce the present carryover of grain by a thoroughly aggressive export program. The present situation is not any less serious than the conditions which prevailed in the early 1930's when the Federal Government had to intervene in a very decisive way to assist in the disposal of surplus wheat stocks.

The Transition Policy should definitely be regarded as a *short-run, stop-gap measure*. The Task Force feels that it would be disastrous for Prairie agriculture if the Transition Policy were to become a permanent policy. There is an urgent need in the longer-run to have agricultural policies which will permit the farmer to respond to the market forces of demand and supply. Much of the current difficulty in the grain industry arises from the fact that several policies have had the effect of insulating farmers from the market place. At the same time, however, the Task Force does recognize, and has recommended, that the grain farmer should be given some protection against disastrous and sudden drops in grain prices.

If the proposed Transition Policy appears to be drastic and relatively costly, it is because the immediate problems to be solved are extremely serious. The realities to be faced are the colossal grain surpluses, the critical income position and the growing debts of the Prairie grain farmer, and the generally depressing effect on the Prairie economy of reduced farm income. The Task Force believes that longer-run policies for the Prairie grain industry cannot be developed until the current grain surpluses have been eliminated.

The Task Force is convinced that the costs involved in a continuation of the present situation far exceed the costs associated with the Task Force proposals above. Never again should a grain surplus of the magnitude which occurred during the 1969-70 crop year be allowed to develop.

RECOMMENDATIONS

The Task Force recommends the following with respect to wheat, coarse grains and oilseeds:

1. That the marketing of wheat remain under the jurisdiction of the Canadian Wheat Board.
2. That the Canadian Wheat Board be placed under the jurisdiction of the Minister, Department of Agricultural Industry.
3. That Canada make no further concessions under the International Grains Arrangement until they are matched in full by other countries.

Canada has suffered serious losses since the summer of 1967 by making unilateral sacrifices to bring into being and to sustain the International Grains Arrangement.

4. That a Transition Policy be established for wheat and barley commencing in the spring of 1970; that wheat acreage diversion payments amounting to \$81 million for 1970 and \$58 million for each of the two following years be used to reduce wheat acreage in the Prairies to 15 million acres until 1973; that a barley acreage diversion payment of \$21 million be used for one year only to reduce barley acreage to six million acres in 1970; that delivery quota acreages be set at 56 per cent of the average of 1968-69 acreage for wheat and 65 per cent of the average 1968-69 acreage for barley for the period during which the Transition Policy operates; that the program be administered by the Agricultural Stabilization Board.
5. *New Marketing Guidelines for Coarse Grains.*—That the Canadian Wheat Board continue to be responsible for all commercial purchases of barley and oats from the primary producer but that:
 - (a) each purchase by the Wheat Board should be hedged in futures market at the time of the purchase or as an alternative, provision should be made by the Board to hedge daily a certain quantity of coarse grains in the futures market.
 - (b) all coarse grains produced in a given crop year should be sold during that period with the exception of a normal Wheat Board operating carryover, the size of which should be announced each October by the Wheat Board.
 - (c) all oats and barley delivered by the farmer should be accepted by the Wheat Board whenever offered except where delivery quotas are used in which case such quotas should be lifted entirely in May of each year.
 - (d) the price paid to the producer should be a monthly pooled price.
6. *New Marketing Guidelines for Wheat.*—That at the termination of the Transition Policy all wheat produced in a given crop year should be sold during that crop year with the exception of a normal Wheat Board operating carryover, that the C.W.B. follow a more flexible pricing strategy, that "initial" prices be set low enough to permit price flexibility throughout the crop year; that prices paid to the producer for wheat should continue to be annual pooled prices; that delivery quotas continue to be used to provide for the orderly flow of wheat to the market throughout the crop year; that the basis for the delivery quotas be "wheat acreage" rather than "specified acres" as used at present.
7. That the practice of setting initial prices for barley and oats should be discontinued as soon as the proposed Prairie Grain Price Stabilization Program is introduced.

8. That a Prairie Grain Price Stabilization Program be instituted as soon as the current grain surpluses have been reduced to manageable proportions under the Transition Policy; that grain producers be provided under the Grain Price Stabilization Program with a minimum price support at a level equivalent to 80 per cent of the average of the local Wheat Board final prices for the preceding ten-year period; that the prescribed price support be applied to a calculated yield of wheat, oats and barley on one-half of the farmer's base acreage (average for the preceding three years) for each of those crops; that a revolving fund in the amount of \$100 million be available for payments under the Program if prices fall below the prescribed minimum price support.
9. That the Temporary Wheat Reserves Act, The Prairie Farm Assistance Act, and the Prairie Grain Advance Payments Act be discontinued and that the monies normally used under these Acts be used to help underwrite initially the Transition Policy and following that the Prairie Grain Price Stabilization Program. The Program should make any future emergency programs unnecessary.
10. That the grain delivery quota system be used, if used at all, primarily as an instrument to facilitate the movement (within a given crop year) of grades of grain required by the market and to provide for the equitable treatment of farmers unable to deliver grain during any specified period of time within a given crop year.
11. That a protein-system of grading for wheat be established as soon as feasible that a market-justified price premium for protein content be established; that guaranteed protein levels be established for export wheat; that land-use policies be developed to encourage the production of high protein quality wheat.
12. That the freight subsidy of feed grain movement from the Montreal freight zone into Eastern Quebec and the Atlantic Provinces be discontinued by August 1, 1970; further that the Federal Government make direct payments to the five provincial governments i.e. Quebec, Prince Edward Island, New Brunswick, Nova Scotia and Newfoundland of the equivalent of the average payment made over the past three years on all shipments beyond the Montreal freight zone. These payments should be used on projects designed to strengthen the agricultural sector in whatever way the five provincial governments see fit, e.g. transportation or adjustment subsidies. These payments to the provincial governments should be a fixed annual sum for a period of five years commencing in 1970 and should then be gradually reduced for a further period of five years with a complete discontinuance of the subsidies by 1980.
13. That the feed freight subsidy from the Prairies into British Columbia and as far as the Montreal freight zone be removed by August 1, 1970. The same recommendations should also apply to Ontario corn.

14. That the tariff on American corn be replaced by a variable import levy which would apply whenever free market corn prices in the United States fall below the United States floor price. If the support price were \$1.05 and the free market price 95 cents per bushel, the variable import levy would be 10 cents. This would provide protection against serious distress prices for Canadian corn growers.
15. That the present marketing system for flaxseed, rye and rapeseed be maintained and that more flexibility be provided for storage of rapeseed at the Vancouver port.
16. That the Federal Government and the three Prairie Provinces jointly review the policies relating to the development of new lands and land clearing projects with the objective of preventing, wherever possible, the introduction of new lands for agricultural production at least until 1980.

APPENDIX A

THE WHEAT BOARD GRAIN DELIVERY QUOTA SYSTEM

One of the best descriptions of the Wheat Board grain delivery quota system was included in the August 1969 issue of the *Canadian Farm Economics*.¹ We quote at length from this article.

The Wheat Board administers a system of quotas whereby grain producers within the area of jurisdiction of the Board are limited to a set pattern of grain marketing with special reference as to where, when, what and how much grain may be marketed. The quota system applies to those grains marketed by the Board (wheat, oats and barley) and also the grains which are not marketed by the Board (rye, flax and rapeseed). The main objectives of the quota system are:

1. To facilitate the orderly marketing of grain by producers and in turn to enhance the efficient use of grain marketing facilities (handling, storage and transportation);
2. To reflect market demand or sales opportunities back to producers and by so doing act as an indirect regulator of aggregate production;
3. To make the management of marketings by the Board acceptable to producers through close adherence to the principle of equality.

As far as it is practicable, given the physical restraints of the handling, storage and transportation system, all producers are permitted over a crop year to share equitably (in relation to the specified acreage or in some instances seeded acreage) in marketing opportunities and in the use of marketing facilities.

The system of quotas administered by the Board consists of the following components:

1. Unit Quota: Also known as the Initial Quota because it is operative throughout the designated area immediately on commencement of the crop year, the unit quota consists of 100 units, each unit having a quantitative value in bushels when applied to wheat, oats, barley or rye. For the crop year 1968-69 these unit values were as follows: 4 bushels wheat or 10 bushels oats or 6 bushels barley or 6 bushels rye. Producers may deliver any one or a combination of these grains provided the total bushels expressed in units do not exceed 100. This quota ensures that all producers may deliver grain without regard to the size or location of their farms and since it is not based on acreage, it is of the greatest benefit to small producers.
2. General Quota: The general quota applies to wheat, oats, barley and rye and is based on specified acreage. Specified acreage consists of acreage seeded to wheat (including durum), oats, barley and rye, the summerfallow acreage and the acreage seeded to eligible grasses and forage crops. For example, a one bushel quota means that a producer may deliver a quantity not exceeding one bushel times his specified acreage. The total quantity may consist of one grain or a combination of grains. Space permitting, this process is repeated throughout the crop year, each successive round of deliveries after the first (one bushel quota) being designated as a 2, 3, 4, 5, bushel quota etc.

¹ *Canadian Farm Economics*, "The Grain Delivery Quota System of the Canadian Wheat Board", Vol. 4, No. 3, August, 1969, pp. 22ff.

although deliveries for each quota level are restricted to one bushel per specified acre. The quota level may vary according to location throughout the year although every effort is made to equalize the level throughout the designated area by the end of the crop year. Under this quota, the larger producers can avail of a proportionately greater volume of available elevator space.

3. **Seeded Acreage Quota:** This is applied in the case of special crops such as flax and rapeseed (in some years durum wheat) and is defined as so many bushels per seeded acre of the particular crop or a specified quantity whichever is larger.
4. **Supplementary and Over Quotas:** These are used to call forward specified grains for sales commitments that are not being delivered in sufficient quantity under general quotas. They are therefore additional to any previously declared quotas and are normally defined as for seeded acreage quotas although a specified quantity alone may also be called for, for example, an over quota of two carlots.
5. **Special Quotas:** These may be declared to meet a particular set of circumstances as during the 1968-69 season when an "advance" quota was declared for the delivery of high-moisture grain and a special quota was granted certain producers in the Red River Valley area who were threatened with flood damage. Other examples are quotas granted to the estates of deceased producers or to retired producers . . .

The present quota system constitutes a producer sales quota. It is not a production quota system. With the exception of a special policy permitting sales of feed grains to feed mills on a non-quota basis (Feed Mill Policy), producers only make a sale on delivery of their crop to the country elevator. In any given crop year production is completed before the restrictions or demands of the quota system are felt by the producer. If his production turns out to be untailored to market demand, it is only possible for the producer to be wise after the event and there is a time lag of up to one crop year before he can implement any consequent decisions.

Low quotas are said to provide a signal for a cutback in production. The quotas are not the causative factor in this cutback, however, and producers would also feel the basic market pressures without a quota system. Under these circumstances, such pressures would bear more unevenly on individual producers.

The system has been criticized as being inflexible and unable to reflect market demand. Given that the required grades and grains are in farm storage, there seems to be adequate provision in the system through supplementary and seeded acreage quotas to meet market demands of a current season. Whatever the system, there will be a natural tendency for producers to deliver the higher value grains as the opportunity arises and surely the value of the grain is a reflection of market demand. As mentioned earlier, the quota system is not a production quota system and in this sense may be considered inflexible.

Fundamental to the system is the concept of equality of opportunity to deliver, that is, allocation of available space on as equitable a basis as possible. In practice, however, it is almost impossible to design a system which is equitable for all producers. The unit quota for example puts the concept into action but is of most benefit to small producers while the general quotas benefit larger producers. Seeded acreage and other quotas tend to benefit producers of the particular commodity at the expense of other producers. It is also true that the system is biased towards wheat

production. For example, oats and barley consistently out-yield wheat in terms of bushels per acre, and with the exception of the unit quota, there is no provision for this in the system. (To some extent this is compensated for by the fact that a considerable portion of feed grain supplies are consumed on the farm.) In more general terms, the system is biased in favour of low-yield or extensive production. It has been said that the effort to achieve an equitable system has led to inefficient handling and marketing but it may also be true that such inefficiency where it exists, is part of the related problem of transportation.

In an attempt to bring about greater co-ordination between grain shipments from country elevators and requirements for terminal sales and inventory build-up, a Grain Transportation Technical Group² was established to study and to make recommendations on the overall grain marketing and transportation system in Western Canada. In October, 1968, this group submitted proposals for a new Block Shipping System. Two test shipping blocks were established in February, 1969, and by the end of June, nine additional shipping blocks were brought into operation. By October, 1969, all country elevators shipping to the West Coast terminal elevators plus two areas shipping to the Lakehead were included in the Block Shipping System.

The new shipping system is based essentially on a geographic classification of the CNR and CPR train runs into separate blocks. Each block consists of from 40 to 50 grain loading points or up to 100 country elevators situated at intervals of several miles on a common rail line.

Under the block shipping system, the Wheat Board and the private and co-operative grain organizations forecast their sales several months in advance and attempt to designate for each week the type, amount and grade of grain which is to be delivered to domestic or export customers. This information is compiled for each block and forwarded to the Wheat Board.

The Canadian Wheat Board, accordingly, advises each of the private or co-operative grain companies of the number of carloads, by type of grain, grades and destination which each company will be allowed to ship out of each block during any designated week or specific period of time. The railways are committed to spotting a certain number of cars to specific elevators for any designated week and are expected to move the cars, once loaded, to given destinations on the basis of a pre-arranged schedule. Appropriate incentives and penalties are built into the system to encourage the most efficient and predictable use of the marketing and transportation facilities.

In general, the Block Shipping System is designed to make sure that the right type and grade of grain is available at a given destination at a specified time. If this goal is to be accomplished many changes may have to be made in existing policies such as the delivery quota system and cash advances, as well as policies and programs which have tended to encourage stock building and the clogging of the market system by burdensome surpluses.

²The Grain Transportation Technical Group is comprised of representatives from the Canadian Wheat Board, the Board of Grain Commissioners, grain handling companies and the railways.

APPENDIX B

Seminar on Wheat—December 3, 1969

Department of Agricultural Economics and Farm Management
University of Manitoba, Winnipeg

TECHNOLOGICAL ADVANCES IN THE MILLING AND BAKING INDUSTRIES AND THEIR EFFECT UPON MARKETS FOR CANADIAN WHEAT

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One of the major factors which led to the rise of Western Canada as a prime wheat exporting area was the development of the roller mill in Europe about the middle of the nineteenth century. Prior to that time milling was done on stone mills, mostly operated by wind or water power. With stone mills, the whitest flour was produced by soft wheats, which readily released flour under the grinding action of the mill stones and the tough, relatively thick bran, characteristic of these wheats, did not break down too readily and contaminate the flour. Hard wheats were heavily discounted in those days as they were very difficult to reduce to flour and the relatively thin bran broke up in the process and heavily contaminated the flour. Thus hard wheats produced a dark coloured, specky, coarse flour while soft wheats produced a whiter, cleaner, finer flour. The development of the roller mill reversed this situation and led to the production of higher yields of very fine white flour from hard wheats that could not be matched using soft wheats either on roller mills or on stone mills. The addition of the Purifier to the roller mill capped the development and led to the production of such excellent flours from hard wheats that they were and still are referred to as Patent flours (referring to special flours made by the newly patented process). At the time the roller mill was developed, primarily in Hungary, that country happened to have a high percentage of hard wheat as the indigenous wheat. For many years—until the First World War—Hungarian Roller mill flour set the standard for European bakeries. Roller milling caught on very quickly—especially in the Upper Midwestern United States and shortly after in Western Canada; by the turn of the century the United Kingdom and other European countries had largely changed over to the new system.

Thus Canadian export flour was on its way, and with it, the wheat from Western Canada which produced the great roller mill flour. There were some basic differences, however, between flour milling in Western Canada and flour milling in Europe. In most areas of Europe there was a substantial local production of soft wheat which had to be utilized one way or another by the milling industry and so the roller milling system was designed to mill blends

¹ Director, Grain Research Laboratory, Board of Grain Commissioners for Canada.

of soft wheats and imported hard wheats; to get the most effective results a compromise was necessary and the systems developed were every long, employing a very gentle reduction of the flour by numerous passages through reduction rolls—the so-called gradual reduction system. In North America, where only hard wheats were milled for bread flours, the milling system used was much shorter and the technology much simpler. In the gradual reduction system, used in Europe to get the best possible results from the soft wheat component of the grist, very little damage to the starch occurred and it is now known that starch damage is one of the major factors producing the high water absorption in baking which is one of the major features of hard wheat flours milled on the shorter systems of the U.S. and Canada.

From the turn of the century to the end of World War II there was little change in the European milling industry. The value of the high protein hard wheats in an otherwise domestic soft wheat grist came to be generally recognized, although during the thirties protectionist policies in most European countries led to a drastic restriction on the amount of imported wheat used in the grist. This situation was much improved however as Europe gradually recovered from World War II. There was much new mill construction in Europe in the nineteen-fifties but the only basically new development, which did not really change the system of milling, was the introduction of pneumatic conveying of the products in the mill. During the late fifties and early sixties, however, first in eastern Europe and later in Western Europe and the United Kingdom, the possibilities of increasing productivity without adding equipment led to the redesigning of existing mills to greatly shorten the flow. With heavier loading of the rolls, more starch damage was produced with a resulting increase in water absorption of the flour. This was probably first noted in the United Kingdom where the percentage of hard wheat in the grist was much higher than elsewhere in Europe, normally fifty per cent or more. This development was well timed to take advantage of the next breakthrough in technology which was about to occur in the baking industry.

The European baking industry had long been accustomed to relatively weak, low protein flours and had adopted baking systems which appeared to be best suited for this kind of flour; mixing was very gentle and fermentation times were relatively short. The bread produced was usually heavy, with quite coarse texture and had poor keeping quality but was generally tasty. In the U.K. with stronger, higher protein flours, fermentation times were longer and mixing was somewhat more vigorous but not nearly as vigorous as in Canada and the U.S. Here the flours were considerably higher in protein and stronger because they were made from an all hard wheat grist. We had known for a long time that Canadian bakers got much better loaf volume and hence better texture and better keeping quality, than bakers in the U.K. using the same flour. In other words we knew that the protein content and general strength of bakery flours used in the U.K. were really better than they needed to produce the quality of bread that they turned out on their baking system.

In the middle fifties the baking revolution began in the United States with the introduction of the Baker process—a completely continuous automatic bread making system which did away with the traditional bulk fermentation stage, thereby greatly speeding up production and achieving great savings in space and staff required for a given level of production. This process swept the United States and within ten years of its introduction, over fifty per cent of the industrial bread production in the United States was made in this way. One of the major advantages of the process was a substantial increase in the amount of water which could be used—thereby very significantly increasing the amount of bread which could be produced from a bag of flour. There was one drawback however; the process produced a different type of bread from the conventional systems—it had the texture of angel cake and was very soft; the crust was somewhat different as well, the flavour suffered as a result. These changes were, by and large, accepted in the U.S. although the acceptance appears now to have levelled off at about 60% of total bread production. The new system was tried in Canada and in the U.K. but the new type bread did not gain consumer acceptance. In the U.K. it represented a very drastic departure from the normal bread and the system was quickly abandoned. However researchers at the British Baking Industries Research Association had obtained a custom built pilot unit for the Baker process and had done some experimenting with it. One of the major features of the process was that the dough was developed very rapidly and with a relatively colossal power input. This power requirement seemed to be relatively constant and more or less independent of the type of flour being used. Further work was done at BBIRA looking at this power input factor with a number of experimental mixers. The key operation was to get the work in quickly and only one mixer at the time seemed capable of doing this easily and at the same time offering the possibility of being scaled up for commercial bread production. Following a batch procedure, rather than a continuous operation, they found that with a power input of 5 watt hours per pound of dough, put into the dough in less than five minutes, they could completely eliminate the bulk fermentation stage and produce normal type English bread, indistinguishable in all essentials from that produced by the conventional process. This was the birth of the Chorleywood Bread Process or CBP as it is now known. The original mixer had been designed for mixing pigments, cement and other powders, certainly not for bread, but the company recognized the potential it had and quickly scaled it up and automated it for use in the Baking Industry. Within eight years about 70% of all British plant bread was being produced by this system. There are now a number of other mixers being manufactured for the process and it is beginning to spread rapidly beyond the shores of the U.K.; it has already become established as far away as Singapore, Malaysia and the Philippines.

The Chorleywood system is less elaborate than the American Baker process and is much more adaptable to the production of different types of breads; it retains the advantage of the high water absorption, characteristic of

the Baker process, and has *one very significant advantage* to the milling and baking industry of the United Kingdom; it permits the use of a considerably weaker flour without sacrifice to normal bread quality. The same bread can now be produced from 75% soft wheat and 25% hard wheat that formerly required 60-75% hard wheat. If the protein content of the flour is reduced, however, the amount of water the flour will hold goes down somewhat. The British milling industry responded quickly to this situation; they had already had some experience with increased starch damage, which favours higher water absorption, with their move to shorter milling systems. Now they turned their attention to starch damage production in earnest and quickly developed the necessary technology to produce lower protein flours for the Chorleywood process without losing out in water absorption.

Since 1960 when the Chorleywood Baking Process was first developed, sales of Canadian wheat to the U.K. have dropped quite steadily from 78 million bushels to 55 million bushels this past year. A significant factor in the speed with which the Chorleywood process took over plant bread production in the U.K. was the contemplated entry of the U.K. into the Common Market. Acceptance, by the British, of the Treaty of Rome would mean a fairly drastic change in the cost of flour and bread in the U.K.; the CBP offered an immediate opportunity to reduce the imported strong wheat component of the U.K. bread flour grist, and this point was not lost by the milling industry who by that time owned or controlled about 80% of the plant bread capacity in the U.K. Thus the decision to change over to the new process was not made by thousands of individual bakeries, but was a politically expedient decision taken by the two largest milling groups with the others forced to follow soon after. Should the U.K. join the Common Market, there is no doubt that the consumption of imported hard wheats will decline further.

The baking revolution has not yet gathered the momentum in Europe and in Japan that it has in the U.S. and the U.K.: however, it is coming. In neither Western Europe nor Japan have the bakeries come under the direct control of the milling industry, thus change will be much slower. In Eastern Europe, the advantages of the new systems in the elimination of night work in bakeries are most attractive and the problems of conversion are largely economic. Interest from this area is great however, and is bound to be further stimulated at the Fifth International Cereal and Bread Congress to be held next May in Dresden, East Germany. There will be a bakery machinery exhibition in conjunction with the Bread Congress, and for the first time it is expected that hundreds of mill and bakery technicians from the Iron curtain countries will attend the Congress and have an opportunity to measure progress made in the Western world.

The Grain Research Laboratory of the Board of Grain Commissioners has been working with both the Chorleywood process and with the American continuous systems since they were originally developed. We probably have as much experience with both systems as anyone in the world. Our results

indicate three things: first that the British system and the further future development of it, is adaptable to the production of leavened breads of the Western type as produced in any area of the world; secondly, that the quality of protein is not as important as it has been in the past with the various conventional baking systems, and that quantity of protein becomes more important as the over-all level is reduced in bakery flours; thirdly, that the bottom has not yet been reached in probing for the minimum flour quality that can be used successfully in the process. Thus, based on our experience, we can conclude that the use of imported strong wheats will diminish in countries which already produce a surplus, *over their present needs*, of soft wheats.

The problems of wheat gristing for the British miller have for many years been very complex. From well back into the last century the U.K. has had a "cheap food policy" based on free entry of raw food materials such as wheat. As a result of this policy the U.K. has been the main competitive battle ground for anyone with a surplus of wheat to export. The larger British mills long ago became experts at achieving lowest cost grists which could still meet a minimum quality standard. However, over the years the task has not been without its frustrations! The smaller mills could not afford the risks associated with this exercise and generally lacked adequate storage capacity to carry very many wheat types; they tended to rely basically on Canadian wheat as the backbone of their grist from the early years of this century and up until very recent years. They also had their headaches in attempting to maintain a constant flour quality. Until the advent of the Chorleywood Bread Process it was inevitable that the protein level in bakery flours varied somewhat from year to year; however with a large component of Canadian wheat in the bread grist and with the bakeries, as noted earlier, working well below the optimum for the quality of the flour, they managed to put up with this variation reasonably successfully. With the Chorleywood Process, however, bakers are now working much more closely to the optimum of the flour and that is why protein levels and strength can be reduced with no ill effects on bread quality. Under these conditions however, there is little margin of safety. Before CBP, flour protein levels were about 12% and, using 100% Canadian wheat this would require a wheat protein level of at least 12.8%. It will be apparent from Table I that this was just not available from Canada during the period from 1952-53 until 1958-59. It was during this period that the first high protein guaranteed wheats began to appear in the U.K. market from the United States. These were mostly U.S. Hard Winters guaranteed 14.5% protein. During this period also, production of home-grown wheat in the U.K. was increasing and, by using a deficiency payments system to subsidize the British farmer, the British government made English wheat very attractive at times to the British miller. Under this scheme, wheat was sold to the mills at whatever price it would fetch and the government made up the difference to guarantee a certain minimum return to the farmer. Thus prices were often as low as 19 pounds a ton, with imported wheats in the range of 28 to 35 pounds

TABLE I
Average Protein Levels of No. 2 Northern Wheat

Crop Year	Atlantic	Pacific	Churchill	Western Domestic
1951/52.....	13.1	13.8	14.5	14.2
1952/53.....	12.7	12.6	13.6	13.7
1953/54.....	12.6	12.5	13.7	14.0
1954/55.....	12.4	12.5	13.3	13.8
1955/56.....	12.3	12.4	13.3	13.7
1956/57.....	12.3	12.4	12.6	13.3
1957/58.....	12.4	12.7	12.8	14.0
1958/59.....	13.1	13.2	13.2	14.5
1959/60.....	13.7	13.7	14.0	14.6
1960/61.....	13.8	14.3	14.3	14.4
1961/62.....	13.9	14.2	14.2	14.4
1962/63.....	13.8	14.4	14.2	14.4
1963/64.....	14.1	14.3	14.6	14.4
1964/65.....	14.5	14.8	14.5	14.6
1965/66.....	14.4	14.7	14.9	14.5
1966/67.....	13.8	13.4	14.1	14.2
1967/68.....	13.8	13.6	13.4	14.3
1968/69.....	13.8	13.4	13.8	14.4

a ton. Heretofore little or no English wheat had gone into the bread grist but the temptation was now irresistible. By the 1959-60 crop year the protein in Canadian wheat had returned to a more reasonable level and the grist makers began to sharpen their pencils. Our protein levels remained high until 1966-67 and during this period the Chorleywood process swept the country; as it did so, flour protein levels gradually decreased as experience indicated that the former 12% protein level was no longer necessary. Presently protein levels for Chorleywood flour are in the range 10.5 to 11.0%. During this period the large British millers were very active developing the technology associated with supplying flours for the new process. Amongst other things, they applied computers to the least-cost grist question. These studies appear to have indicated that least-cost grists are composed of two principal elements: low-cost soft wheats, both English and Continental, and high protein hard wheats. The soft wheats don't vary too widely in protein from shipment to shipment and accordingly, to allow computer programming of wheat imports, the protein levels of the hard wheats have to be known to a close tolerance and the higher the better! Thus we now have U.S. Northern Springs of 14% and 15%, Russian SKS 14 and SKS 15, and Australian Prime Hards 14.5% all being offered in the U.K. on a guaranteed protein basis and, at present, supplanting a good deal of Canadian wheat in this market.

Let us have a look at a simplified version of a gristing exercise by comparing the economics of producing a 12% protein grist and an 11% protein grist from English wheat at 9% protein and various levels of protein

in Canadian wheat—such as can occur over any long period of time. Assuming a cost to the British miller of \$58 a ton for British wheat and \$80 a ton for Canadian wheat we have the situation shown in Table II. You will notice how grist cost decreases with increasing protein levels in the Canadian component, and is considerably less for the 11% grist than for the 12%. Perhaps of even greater importance politically, however, is the precipitous drop in the grist cost in terms of hard currency expenditure. Now let us calculate the value to the various hard wheat components using the reduction in cost divided by the percentage of hard wheat required. In going from 12.5% to 14.5% at the 12% grist level, the 14.5% protein wheat shows an increased value over 12.5% of 23 cents per bushel with a foreign exchange difference of 35%. At the 11% grist level in increased value of the 14.5% protein is 34 cents per bushel and the foreign exchange difference is 37%. Thus the lower the protein level of the U.K. grist, the more valuable high protein wheat becomes to the British miller and to the British economy. Now let's glance at the recent situation with Canadian wheat going into the U.K. at about 13% as against Russian SKS 15 at the same price level. Grist cost is \$68.75 with Canadian of which \$40.00 is hard currency and \$64.95 with Russian, of which \$26.45 is hard currency. Now one might argue that Canadian wheat gives a better yield of flour or is lower in ash, etc., but with the much smaller percentage of hard wheat in the grist these factors tend to lose their importance. I think it is now difficult to see why some British mills have shifted almost entirely from Canadian to Russian or Australian wheat for gristing.

It is my opinion that this general lowering of the protein in the U.K. bread grist is the reason for the change in the British view of protein levels in Canadian wheat. Formerly they indicated little interest in Canada adopting a

TABLE II
U.K. Grist Cost Relative to Protein Content of Canadian No. 2 Northern Wheat

	Ratio Can/Eng.	Total Grist Cost (Can. \$)	Cost Represented by Hard Currency (Can. \$)
12% Protein Grist			
2 Northern wheat at 12.5%.....	85/15	76.70	68.00
13.0%.....	75/25	74.50	60.00
13.5%.....	65/35	72.35	52.00
14.0%.....	60/40	71.20	48.00
14.5%.....	55/45	71.10	44.00
11% Protein Grist			
2 Northern wheat at 12.5%.....	57/43	70.50	45.50
13.0%.....	50/50	69.00	40.00
13.5%.....	45/55	67.90	36.00
14.0%.....	40/60	66.80	32.00
14.5%.....	36/64	66.00	28.80

ASSUME: English wheat at \$58.00 per ton, 9% protein.
Canadian wheat at \$80.00 per ton, varying protein.

system of protein grading; at the present time they are indicating that if we cannot supply high protein wheat with guaranteed minimum levels they are not interested in using our wheat. So long as the U.S., the U.S.S.R. and Australia can supply what they want, we will have to compete or ultimately lose the business. This situation in the British market is repeated to a greater or lesser extent in Germany, Holland, Belgium and France, and most other areas where protein levels in bread flours are normally quite low, i.e., those countries where a high percentage of the bread flour grist is made up of domestic soft wheat.

There is another series of markets, increasing in size, which also requires guaranteed high protein hard wheat. These markets are in the former colonial territories of Africa, Asia, the Caribbean area, and most of the Latin American countries of Central and South America. These are areas which grow no wheat, or where wheat growing is of fairly recent origin and is, as yet, on a fairly small scale. Formerly all were importers of flour to supply their baking industries and most were importers of Canadian Hard Red Spring wheat flour. In the heyday of our flour export markets, the "edge" that our salesmen capitalized on was high protein content. Competition amongst Canadian mills and with American mills led to a steady rise in export flour protein over the years and in making their sales pitch on a flour protein basis they created a genuine need for it. That is, bakers in these areas found that the higher the protein, the more foolproof the flour was in the bakery. In the past 15 years or so this flour export business has disappeared, as mills have been built in virtually all of these areas. In return for tariff protection against imported flour, the mill usually undertakes to produce a flour as good as that formerly imported—usually high protein Canadian flour; the protein level in these Canadian flours was usually about 14% or sometimes higher. To mill a flour of this protein level requires a wheat with about 14.6% protein; in many cases while the mill is being built, representatives come to Canada to make arrangements for a supply of Canadian wheat to make such a flour. Alas, in only two years during the past 25 have our average protein levels been this high. For many years the Canadian mills, especially those in Western Canada, have been selecting high protein wheat for their grists. While during the past 25 years the average protein level of No. 2 Northern has averaged 14% or better only in three years at the Atlantic coast and six years at the Pacific coast, the average protein of this grade used by Western Canadian mills has dropped below 14% only four times and on each of these occasions it was at least 1% higher than that exported during the same year. While this selection enabled the mills to do an excellent export business, it now comes home to haunt us, as we have no mechanism to supply these markets with the high protein wheats they need. And so in these areas as well we need selected high protein wheats at guaranteed protein levels to compete in the market.

This situation is however an interim one; the interim may be fairly long but there is little doubt that eventually the baking revolution will take hold in these areas as well. When it does, the need for high protein flours will

disappear and these markets should eventually be well satisfied with a wheat protein level of about 13%, provided they do not get into the business of growing their own soft wheat! Already the CBP has taken hold in Singapore and Malaysia—formerly good markets for high protein Canadian flour. Before CBP, a domestic milling industry was established and we managed, during our high protein years, to sell a fair volume of wheat. But with the introduction of the Chorleywood Bread Process the wheat flour grists are now almost 100% Australian FAQ wheats, as flour protein levels are down to about 11%. There seems little doubt that this is the direction of the future in most of these areas.

In the past the Canadian milling industry has claimed, and quite justifiably, that the sale of export flour sold Canadian wheat at home. Now that the export flour markets have all but disappeared we should be prepared to make the same selection of high protein wheat to offer to our potential customers as was formerly made by the Canadian milling industry for use in the manufacture of export flour.

To summarize briefly, the major technological change affecting sales of our traditional grades of Canadian wheat, and likely to have an increasing impact in the future, is the revolution in the baking industry. The milling industry, in the U.K. and increasingly elsewhere, is learning to cope with the changed situation, reducing the protein content of the bread flour grist and increasing the extent of starch damage in the flour so that bread yields are maintained. In countries where there is a high production of soft wheat the requirements are for imports of high protein hard wheats of maximum protein uniformity; over-all quantities of imported wheats will decrease but the business will go to the countries able to supply the right type of wheat. Not only does the use of high protein wheat result in minimal grist cost but foreign exchange requirements are minimized as well.

The revolution has not yet swept many of the underdeveloped areas of the world and these markets will continue to require high protein wheats for some time. Even when the revolution arrives it may still turn out that in some areas the most economical grist will be one made up of a combination of cheap imported soft wheat and high protein hard wheat.

Chapter six

LIVESTOCK AND POULTRY

INTRODUCTION

The livestock and poultry industries exhibit a combination of healthy trends the growing challenges. Consumption of red meat and poultry meat has expanded remarkably on a per capita basis from 154 pounds in 1953 to 195 pounds in 1967 and is projected to be 217 pounds in 1980. The red meat industry has not grown up behind high protective walls but operates as part of a continental market interrupted by modest Canadian and American tariffs. The poultry meat industry has experienced amazing expansion in output and consumption largely as a result of greatly reduced costs of production and processing. Canadian pork is of such quality that about 50 million pounds of it can be exported every year at prices well above American pork prices.

On the other hand, these industries have immediate and long-run problems. With record stocks of unsold grain accumulating, what has prevented Canadians from producing far more livestock and poultry and exporting them to the huge American market? Obviously the levels of expected costs and returns have led farmers to produce more and more wheat rather than to increase output and exports of livestock. A crucial question is whether we are remaining competitive in beef production especially with the huge American feedlots. Vertical integration has brought such efficiency or low margins (or both) in the United States broiler and turkey industries that our industries are threatened, even behind present tariff walls of two cents per pound on live birds and five cents or 12½ per cent on dressed birds. Can we afford

marketing board policies aimed at quota production and elimination of vertical integration when there are such powerful competitors just south of the border? Why has Canadian egg consumption increased by only a total of six per cent in the nine year period from 1956-60 to 1966-68? Are we operating wasteful and contradictory feed grain programs through feed-freight assistance and Wheat Board pricing? Are we sufficiently aware of regional problems of production, marketing and income? While it is true that the Canadian and American markets for beef are expanding rapidly (both per person and in total) there is a threat that the huge stocks of grain and the enlarging grain production potential both north and south of the U.S.-Canadian border could produce such volumes of beef and pork as to undermine prices in the continental meat market.

These are some of the crucial questions which must be taken up here and in the chapter on Wheat, Feed Grains and Oilseeds. In this chapter we must consider in particular the possibility of increased exports of beef to the United States and the most appropriate form i.e. feeders, slaughter cattle or dressed beef—in which increased exports might occur.¹

BEEF CATTLE

An outstanding feature of the beef cattle industry has been the remarkable growth of consumption in both Canada and the United States. Beef is one of the few farm products for which higher incomes lead to higher per capita consumption; for most farm products expanded consumption comes almost entirely as a result of increases in population. Table 1 shows consumption trends and projected levels in 1980. The estimate of 100 pounds of beef consumption per capita² in Canada may well be low by as much as ten pounds but we have accepted the more conservative figure for our "materials balance" calculations for 1980.

Canadian output of beef and veal (excluding exported live cattle and calves) increased by 50 per cent between 1959 and 1968 (Table 2). Exports in all forms (live or dressed, cattle or calves) have varied widely from year to year in volume and composition yet there is no apparent trend toward either an increase or a decrease. In the period 1961-67 exports of live cattle were 7.6 per cent of Canadian output and exports of live calves were 13.6 per cent of output. Exports and imports of dressed beef and veal were in balance over the period 1958 to 1968 but varied from year to year, probably on the basis of variations in cow slaughter in Canada.

¹ This chapter draws heavily on a study undertaken for the Task Force "An Assessment of Current and Prospective Trade Patterns, Supply and Demand Situations for Cattle and Beef, Hogs and Pork, with Reference to Canada's Competitive Position in the North American Market" by R. G. Marshall of the University of Guelph. In this Chapter we have made no effort to provide descriptive material and statistics except where they have immediate bearing on the problems and policies under discussion. Excellent description and statistics are to be found in Canadian Agricultural Outlook Conference 1969, Canada Department of Agriculture.

² From *Supply-Demand Projections for Canadian Agriculture—1980*. See also Chapter 10, Canadian Agriculture in 1980—A Materials Balance Approach.

TABLE 1

Per Capita Consumption of Meats, Poultry, Eggs, Canada, 1961-68 and Projected 1980

	Beef	Pork	Veal	Mutton and Lamb	Other Meats	All Red Meat	Poultry Meat (Evisc.)	Eggs
	(pounds)							(doz)
Av. 1951-55.....	61.6	51.6	7.9	2.3	10.4	133.8	—	—
Av. 1956-60.....	69.3	50.5	7.7	2.8	10.1	140.4	—	—
1961.....	70.5	50.3	6.8	3.5	8.8	139.9	31.1	22.6
1962.....	71.1	50.1	7.1	3.8	8.5	140.6	31.0	22.5
1963.....	74.3	50.7	6.5	4.0	8.4	143.9	33.0	21.5
1964.....	79.4	51.8	7.2	3.4	8.4	150.2	35.0	21.5
1965.....	83.6	47.9	8.3	2.8	7.8	150.4	36.6	21.3
1966.....	84.1	46.9	7.0	3.4	7.8	149.2	39.3	20.5
1967.....	84.0	53.8	7.2	3.6	8.6	157.2	40.7	21.2
1968.....	86.8	53.6	6.4	4.2	8.5	159.5	39.7	21.3
1980*.....	100.0	50.0	6.9	3.3	8.0	168.2	49.0	19.1

*Projected

SOURCE: Columns 1 to 6—*Canadian Livestock & Animal Products Statistics* Cat. No. 23-203 DBS 1969.Columns 7 and 8—*Production of Poultry & Eggs 1968* Cat. No. 23-202 DBS 1969Projected 1980 from *Supply-Demand Projections*, op. cit.

TABLE 2

Beef and Veal, Prices and Exports of Cattle, Calves and Beef, Canada, av. 1955-57 to 1968

	1	2	3	4	5	6
	Animals 1 June	Beef and Veal Output	Av. weighted prices	Live exports		Net exports of beef
	thous. head	million lbs.	\$.cwt	thous. head	million lbs.	
Av. 1955-57.....	10,956	1,332.9	14.60	120.3	6.6	-17.6
1958.....	10,990	1,321.6	19.21	611.4	12.4	+24.2
1959.....	11,058	1,273.5	20.32	275.2	30.3	-24.0
1960.....	11,337	1,391.4	18.50	204.5	30.7	-23.1
1961.....	11,934	1,444.7	18.75	430.0	28.8	-18.0
1962.....	12,067	1,446.6	20.90	416.0	36.6	-29.6
1963.....	12,365	1,549.8	20.20	208.7	35.3	-38.2
1964.....	12,994	1,714.5	18.45	135.2	48.9	- 5.0
1965.....	13,260	1,912.5	18.45	498.9	60.9	+63.6
1966.....	12,879	1,898.0	21.80	377.1	106.0	+33.6
1967.....	12,781	1,887.4	23.25	138.3	86.3	-25.3
1968.....	12,566	1,990.1	23.20	171.5	137.4	+26.2

Col. 1 Number of cattle and calves on farms.

4 Over 200 lbs. and other than dairy and purebred.

5 Under 200 lbs.

6 Export is + and import is —.

SOURCE: *Livestock and Animal Products Statistics* and Catalogue No. 32-220, D.B.S.

"Output" of beef refers to the number of animals exported live along with those actually slaughtered domestically and made available to consumers; "inventories" refer to numbers on farms. For some years the rate of growth in beef output has been greater than that in inventories because animals have been fed to heavier weights before slaughter and have been fed more heavily and therefore reached a heavier slaughter weight at an earlier age.³ While both of these trends are likely to continue, any substantial increase in beef output will require an expansion in the breeding herd, i.e. an expansion in cow-calf operations.

SHOULD FEEDER CATTLE OUTPUT BE GREATLY EXPANDED

This question is one of the most important and also one of the most complex that faces Canadian agriculture. It is important because it could represent a major alternative use for those prairie acres which the Task Force has recommended (in Chapter 5) should be diverted from wheat. One possible use of this land is in barley production for feeding in Canada and for export. This use of prairie land is promising, given the expected large increases in barley exports to Japan in particular. However there are limits to what can be exported because of policies in the United Kingdom and European Economic Community. The United Kingdom has subsidized barley production until she is almost self-sufficient and is likely to continue to do so. The European Economic Community has established a corn-barley price ratio that favours corn imports over barley and leads to subsidized exports of barley by France. The Task Force has given considerable emphasis to increased barley production on the prairies and foresees exports of 100 million bushels in 1980.⁴ Yet increased acreage of barley to satisfy domestic and foreign demands will not use up all the acres which must be withdrawn from wheat.

Rapeseed, too, offers real promise of becoming the wonder crop on the prairies and will account for a substantial diversion of land from wheat. As with barley, however, rapeseed is unlikely to be a complete answer to the wheat diversion problem.

Thus "Should cattle production be greatly expanded?" becomes crucial as a possible answer to the wheat surplus problem. As will be apparent in this document, the Task Force concluded that all three—beef exports, rapeseed exports, barley exports—will share more or less equally in contributing to a solution to the wheat surplus problem.

³ A recent study estimated that through 1954-59 to 1960-62 over one-half of the increase in farm output of beef arose from heavier carcass weights but that this proportion declined to less than 10 per cent in 1960-62 to 1965-67. The study indicates that Canadian growth in beef output through most recent years has been to a considerable extent sustained by a depletion of the breeding herd—a process that of necessity can be but a short-run phenomenon. See Lohar, J. S., "Prospects for Increasing Beef Supplies in Canada", *Canadian Farm Economics*, C.D.A., April 1969.

⁴ See Chapter 5, Wheat Feed Grains and Oilseeds and Chapter 10 Agriculture in 1980: A Materials Balance Approach.

The question "Should cattle production be greatly expanded?" raises a host of sub-questions: What would be the source of feeders and the cost of raising them? What are export prospects for feeders? Should we feed more cattle and try to export fed cattle or dressed beef rather than feeders? Assuming a particular development is desirable, should governments merely encourage farmers to follow it or should they provide financial assistance or guarantees for desirable kinds of adjustment?

Sources of Expanded Feeder Cattle Numbers

In Canada a much smaller proportion of calves dropped per year become feeder cattle than in the United States. Calves slaughtered or exported as veal account for 24 per cent of all calves born in Canada and for only twelve per cent in the United States. Both countries were similar in their proportions (at about 28 per cent) in the early 1950's but producers in the United States have changed their practice while Canadians have not. Column 4 of Table 2 shows the dramatic increase in Canadian exports of calves, from less than 7,000 per year in 1955-57 to 137,000 in 1968. These exports consist mostly (if not entirely) of calves from dairy herds in Eastern Canada, mainly Quebec. In 1968, 75 per cent of the 137,000 head exported moved in April to June; during the year 96,000 were sold directly into export from Quebec and 22,000 from Ontario. Exports of veal calves were the equivalent of 18 per cent of inspected Canadian calf slaughter in 1968.

These veal calves are mostly dairy calves, sold shortly after birth and slaughtered soon thereafter to satisfy a specialty market on the eastern United States seaboard. They could be retained in Canada and subsequently become part of the feeder cattle or fed cattle supply. Quebec dairy farmers are opting to breed their dairy cows to dairy bulls and sell many of the calves as veal. Other alternatives would be to raise the calves and sell them as feeders or feed them at home or alternatively, to breed some of these dairy cows to beef bulls and enter the dual business of milk production-feeder cattle production.⁵ Such alternatives deserve attention by those farmers who seek to increase total revenue per farm. Yet, given the extra technical knowledge required, it is probable that there will be only a modest trend in this direction so long as current relative prices for feeders, New York veal and industrial milk prevail.

Industrial milk production is popular largely because of current heavy rates of subsidy but feeder cattle production is unsubsidized. Some of the proposals made later in this chapter and in that on Dairy would lead to considerable expansion of feeder cattle production in what are presently industrial milk producing areas of Ontario and Quebec. In a few cases it might mean complete change-over from a dairy herd to a beef herd but generally it would occur at the margin on individual farms whereby the farmer would continue to produce milk but also produce beef from dairy-beef steers and heifers.

⁵ These latter alternatives have attractive possibilities discussed in Chapter 7 on Dairy. See also the article by Pigden and Lister on this subject in the *Agricultural Institute Review* of Nov-Dec 1968.

In South-western Ontario there may well be a trend toward producing calves from cows kept as a complement to a regular beef feed lot operation, with the cows frequently acting as scavengers. In the more extreme case there may be confinement handling of beef cows. This would provide a whole new dimension to beef production and deserves considerable attention. At this point it is still tentative and its future impossible to predict.

While there may be considerable growth in feeder production in the eastern dairy areas and possibly in corn producing areas, the major potential for any large increase in feeder cattle production must be on the Prairies. In the traditional areas of feeder cattle production (such as the rangeland of Alberta and the interior of British Columbia) expansion in output would encounter rapidly increasing costs; it would be expensive to up-grade the carrying capacity of rangeland now in use. Thus one must turn to the possibilities of converting prairie grain-growing land into tame hay and grass and of replacing grain growing operations in some prairie areas by cow-calf operations.

If 4 million acres of prairie cropland were converted to tame hay and grass and used in cow-calf operations the output would be about 720,000 feeders per year once the operations were in full production. The basis of this calculation is as follows: assuming that four acres are required for a cow (year round) plus its calf (spring to late fall) plus bulls and female replacements, 4 million acres could accommodate 1 million beef cows. With calf crops at about 85 per cent, the 1 million cows would produce 850,000 calves per year. About 15 per cent of these would be retained as replacements leaving 720,000 feeders for sale per year. If these estimates are correct it would require 5.5 acres to produce one feeder for sale. In addition there would be a flow of discarded cows entering the lower quality beef trade largely in competition with imports. It is recognized that these are rough figures and the realism of them will depend in particular upon the kind of soil converted to hay and grass. In the park land this figure of 5.5 acres (to produce a feeder) may be somewhat high but should be about right on average.

The Export Market for Feeders

The United States tariff structure on cattle and beef is a peculiar one, putting a heavier tariff on feeders (2.5 cents per pound) than on fed cattle (1.5 cents) as shown in Table 3. This is exactly the reverse of usual U.S. tariffs, which place lower tariffs on unfinished than finished goods. Task Force discussions in Washington indicate that this structure is the result of historical accident rather than conscious policy. It appears too that very little attention was paid in the Kennedy Round of tariff negotiations to the possibility of lower tariffs on cattle and beef. Canada and the United States did agree at that time to reduce their tariffs on hogs and pork.

Given that 100,000 to 350,000 Canadian feeder cattle are exported annually in spite of a 2.5 cent per pound U.S. tariff, it appears that Canadian

TABLE 3
Canadian and United States Tariffs on Livestock, Beef and Veal

	Canadian rate on Imports		U.S. rate on Imports
	from USA	from Australia, N.Z.	
	(cents per pound)		
Purebreds for breeding.....	free	free	free
Dairy cows over 700 lbs.....	1.2	"	1.3
Calves under 200 lbs.....	1.5	"	1.5 on first 200,000 per fiscal year
			2.5 thereafter
Calves 200 to 699 lbs.....	1.5	"	2.5
Cattle 700 lbs. and over.....	1.5	"	1.5 on first 120,000 per quarter and 400,000 per fiscal year
			2.5 thereafter
Beef and veal, fresh, chilled, or frozen...	3.0	3.0	3.0 subject to quota

cattle feeders have been favoured by the relative U.S.-Canadian prices of feeders and slaughter cattle.⁶ This may be explained as follows: because we are consistent exporters of feeders, the price of Canadian feeders must be less than that of similar U.S. feeders by approximately the cost of the tariff (2.5 cents) and transportation to U.S. markets. We are exporters of slaughter cattle on a contingency rather than a consistent basis and in fact are on occasion importers. Thus our prices of slaughter cattle are usually well above the "export floor" price, which would be the U.S. price of slaughter cattle minus tariff (1.5 cents) and transportation to U.S. markets.

This line of reasoning is partially borne out later in this chapter, where it is estimated that Canadian slaughter cattle prices would have to decline by \$2.00 or more and feeder cattle prices by only \$1.00 relative to average 1965 to 1968 prices in the United States in order to expand Canadian exports considerably. Because of the decline in Canadian cattle inventories during 1965-68 and the high demand for feeders in 1969 (accompanying the build up of prairie grain stocks) Canadian feeder cattle prices have risen and exports have almost disappeared in 1969. Thus the price of feeder cattle would have to decline much more than \$1.00 per hundredweight from 1969 price levels in order to expand feeder cattle exports. Relative Canadian-U.S. feeder cattle prices are by no means "normal" in 1969.

⁶While all cattle weighing over 700 lbs. have been categorized as "slaughter cattle", a considerable number of cattle in this weight range consist of heavier weight feeder cattle. For example, in 1968, of the 54.3 thousand head exported and falling in this category about 21.5 thousand moved as feeders with 32.8 thousand listed as export for immediate slaughter. Since the tariff rate on cattle in this weight range is 1.5 cent/lb. rather than the 2.5 cent/lb. applicable to cattle 200-700 lbs., a tariff advantage is given to feeder cattle of heavier weights. Probably also included in this category are some cows for slaughter purposes.

Table 4 indicates the wide variation in feeder cattle exports to the United States, a variation which has arisen largely because of discrepancies in the Canadian and American cattle inventory and feeding cycles. The price differentials of Table 4 fit well with the changes in volume of exports. While price comparisons are hazardous,⁷ it appears that very large exports can occur if the differential widens to about \$2.00 per hundredweight and smaller but substantial exports if the differential were \$1.00.

TABLE 4
Exports of Feeder Cattle (200-700 lbs.) Feeder Cattle Prices Kansas City and Calgary—
1959-1968

	Can. Feeder Cattle Exports 200-700 pounds	Good Stocker Steer Prices		
		Kansas City	Calgary	Price Differential Kansas City- Calgary
	(thous. head)	(Can. \$ per cwt)		
1959.....	183.2	24.62	23.08	1.54
1960.....	138.9	22.26	19.90	2.36
1961.....	332.5	22.62	20.50	2.12
1962.....	342.9	26.38	24.20	2.18
1963.....	156.0	24.67	23.25	1.42
1964.....	88.0	21.27	20.70	.57
1965.....	357.0	24.19	21.95	2.24
1966.....	282.3	27.32	24.50	2.42
1967.....	102.8	26.49	26.40	.09
1968.....	108.8	27.82	26.40	1.42

SOURCE: Catalogue No. 32-220, D.B.S.

Column 1 of this table differs from Column 4 of Table 2 because the latter includes animals weighing more than 700 pounds, many of them destined for immediate slaughter and the remainder for short term feeding and slaughter.

Exports of feeders (200-700 pounds) and slaughter cattle (over 700 pounds, but note Footnote 6) have been the equivalent of 8 to 30 per cent of Canadian commercial steer and heifer marketings over the past 10 years (Table 5). This large proportion emphasizes the great importance of the U.S. market to the Canadian cattle industry. By contrast, imports of feeders into the United States have varied from 2.3 to 6.5 per cent of cattle placed on feed in the United States and have averaged about four per cent (Table 6).

⁷ In Table 4, for example, we present the prices of Good Stocker Steers in Kansas City and Calgary, taking these prices as more or less representative of feeder cattle prices. However Good Stocker Steers are assumed to represent yearlings of 600-700 pounds whereas most Canadian feeder cattle exports are calves of 6-8 months of age weighing 400-500 pounds sold at higher prices. Heifer prices also vary from steer prices. Thus Good Stocker Steer prices do not necessarily reflect the price of "feeder cattle" since the latter includes calves, yearling steers and heifers in varying proportions and somewhat varying relative prices.

TABLE 5

Exports of Canadian Slaughter and Feeder Cattle to the U.S. Average Annual Prices of Choice Steers—Chicago and Calgary, 1954 to 1968

	1	2	3	4	5	6
	Exports		Exports as % of Canadian Marketings	Average Prices Choice Steers		Price Differential Chicago- Calgary
	200—700 lbs.	over 700 lbs.		Chicago	Calgary	
	(thous. head)		%	(Can. \$ per cwt.)		
1954.....	3.6	49.0	4.2	24.18	19.94	4.24
1955.....	1.9	20.0	2.0	23.70	19.60	4.10
1956.....	1.3	3.0	0.4	22.35	19.50	2.85
1957.....	139.5	195.4	14.2	23.08	18.50	4.58
1958.....	370.1	241.3	26.2	27.30	22.93	4.37
1959.....	183.2	92.0	29.5	27.31	24.30	3.01
1960.....	138.9	63.6	16.0	25.77	21.85	3.92
1961.....	332.5	97.6	14.7	25.38	21.75	3.63
1962.....	342.5	73.1	23.6	29.41	25.60	3.81
1963.....	156.0	52.7	21.4	26.14	23.25	2.89
1964.....	88.0	47.1	10.8	24.85	21.95	2.90
1965.....	357.0	141.9	11.6	27.74	23.60	4.14
1966.....	282.3	94.4	20.2	28.22	25.50	2.72
1967.....	102.8	16.9	13.7	27.76	26.65	1.11
1968.....	108.8	54.3	7.7	—	—	—

SOURCES: Columns 1 and 2 from *Livestock Market Review*, C.D.A., Annual Issues 1954-1968
 Column 3 Exports as percentage of Canadian commercial marketings of steers and heifers and calculated with 200-700 lb. cattle entered with a one-year lag.
 Columns 4, 5 & 6 *Livestock and Animal Products Statistics*, D.B.S. Annual Issues 1954-67.

Of this four per cent Mexico now provides about three per cent and Canada the remaining one per cent. Our exports are of minor importance to the U.S. market. It appears that no increase can be expected from Mexican sources given a continuation of recent conditions in that country.

It is important to note that efforts to expand the export of Canadian feeder cattle to the United States might encounter two major snags. One is that U.S. production might itself increase to such an extent that feeder prices would fall. In 1966, a total of 63 million acres of American cropland were reported as being retired from production⁸ because of acreage diversion payments and allotment programs such as that for wheat. About three-quarters of this land could easily be used for pasture and thus for cow and calf operations but the U.S. Department of Agriculture and most U.S. farm organizations are opposed to such use. A remarkable number of feeders could be produced on these 45-50 million acres.

The second possible obstacle to increased exports of Canadian feeder cattle might be the imposition of quotas on imports of feeder cattle. Past experience has shown that the U.S. Government is quite willing to take such action in

⁸ See *Productivity of Diverted Cropland*, ERS 398, U.S. Department of Agriculture, 1969.

TABLE 6

Live Cattle Imported into the USA Compared with Placements of Cattle on Feed, 1955 to 1968

	1	2	3	4	5	6
	Total Imports Live Cattle		Placements of Cattle on feed	Imports as percentage Placements	Imports from Canada of Cattle over 200 pounds	
Year	200-699 lbs.	700 lbs. and over			as % of US Placements	
	(thous. head)			%	(thous. head)	%
1955.....	191.8	73.7	10,904	2.4	22.2	0.20
1956.....	97.9	14.0	11,534	7.2	4.4	0.04
1957.....	434.9	230.3	11,051	6.0	346.5	3.14
1958.....	776.8	311.7	12,528	8.7	615.0	4.90
1959.....	503.7	136.0	13,465	4.8	278.6	2.07
1960.....	509.6	80.5	13,534	4.4	206.1	1.52
1961.....	835.5	125.1	14,375	6.7	435.1	3.03
1962.....	1,041.6	108.5	15,960	7.2	424.4	2.66
1963.....	688.9	69.2	16,275	4.7	201.2	1.24
1964.....	403.4	47.7	17,711	2.5	133.7	0.76
1965.....	863.8	150.6	18,763	5.4	500.6	2.67
1966.....	828.1	105.4	20,500	4.6	375.3	1.83
1967.....	608.0	21.9	21,700*	2.9	140.1	0.45
1968.....	803.0	59.0	22,780*	3.8	171.5	0.75

SOURCES: *Livestock and Meat Situation* USDA, various issues.

Col. 4 = Cols. 1+2 as % of Col. 3. Note Footnote 6 however which indicates that many of cattle in Col. 2 are slaughtered not fed.

Col. 6 = Col. 5 as % of Col. 3

*Estimated

regard to other products regardless of the consequences on foreign exporters. In this case however the Canadian component of American cattle placements is so small, (one per cent) the U.S. fed beef market is expanding so rapidly, pressures from U.S. feeder producers (wanting import restrictions) would be countered by U.S. cattle feeders (wanting lower priced feeder cattle) and demands by consumer for lower beef prices are so insistent, that it would appear unlikely that quotas would be imposed.

In summary, then, it appears that Canadian exports of feeder cattle could be increased from about 115,000 head per year in 1967 and 1968 to 500,000 head per year with a decline of about \$1.00 per hundredweight in price relative to recent American-Canadian relative prices⁹ up to 1969 and without affecting U.S. prices to such an extent that barriers would be raised. Even at 500,000 head per year Canadian exports would only equal average Mexican exports to the United States in 1964-68 (Table 6).

⁹ Note that this implies that had Canadian feeder cattle prices been about \$1.00 per hundredweight lower than they were in a particular year, exports could have been vastly increased.

*Should the Emphasis be on Feeding More Cattle
and Exporting Fed Cattle or Dressed Beef?*

The proposed market would be the United States, now the largest importer of beef in the world. In 1968 beef imports by the U.S. were seven per cent of U.S. production and equal to 80 per cent of total Canadian production of beef and veal.

Canadian exports of dressed beef and veal and a heavy cattle are insignificant on the American market. In 1968 Canada exported about 60 million pounds of dressed beef and veal and the equivalent of another 30 million pounds in the form of 60,000 cattle weighing over 700 pounds each. In contrast to this total of 90 million pounds, U.S. total imports of dressed beef and veal were 1,520 million pounds and U.S. domestic production was 21,620 million pounds (Table 7).

U.S. beef imports are mainly of boneless beef in chilled or frozen form from Australia and New Zealand. A survey conducted by the U.S. Tariff Commission indicated that only a very small percentage of imported beef was sold in retail outlets as fresh or frozen table beef cuts but that most of it was sold as hamburger or in processed products such as frankfurters, sausages,

Table 7
United States Domestic Beef and Veal Production, Beef Imports, 1955 to 1968

	1	2	3	4	5
	Beef and Veal Production	Imports	Imports as a % of Production	Imports from Canada	
					% of U.S. Imports
	(carcass weight) (million pounds)			(million pounds)	
1955.....	15,147	229.0	1.5	9.7	4.2
1956.....	16,094	211.0	1.3	16.2	7.7
1957.....	15,728	395.0	2.5	53.0	13.4
1958.....	14,516	909.0	6.3	61.3	6.7
1959.....	14,588	1,063.0	7.3	27.2	2.6
1960.....	15,837	775.0	4.9	22.7	2.9
1961.....	16,344	1,037.0	6.3	34.0	3.3
1962.....	16,313	1,439.8	8.8	24.2	1.7
1963.....	17,357	1,677.5	9.7	21.3	1.3
1964.....	19,459	1,085.2	5.6	34.9	3.2
1965.....	19,744	941.8	4.8	88.1	9.4
1966.....	20,631	1,204.0	5.8	71.0	5.9
1967.....	21,004	1,341.9	6.4	34.6	2.6
1968.....	21,620	1,517.9	7.0	60.0*	4.0

Col. 1 and 2 from: *Livestock and Meat Situation*, E.R.S., U.S.D.A., Various Issues.

Col. 4 from: *Livestock and Animal Products Statistics*, D.B.S., Various Issues.

*Estimated

TABLE 8
United States Beef and Veal Imports by Country of Origin, 1961-1968
Million Pounds (Product Weight)

Year	Canada	Mexico	Argentina ¹	Ireland	Australia	New Zealand	Total
1961.....	32.3	53.4	65.2	64.4	233.9	154.4	689.2
1962.....	19.4	59.3	55.9	70.7	441.7	213.6	967.5
1963.....	17.2	73.0	87.4	72.9	517.0	235.7	1,122.4
1964.....	28.8	48.9	54.4	20.1	377.0	168.1	800.4
1965.....	71.4	46.3	54.8	7.8	307.4	103.6	701.1
1966.....	57.2	57.1	80.5	38.4	404.1	145.0	893.3
1967.....	26.7	47.8	108.1	80.6	474.7	171.0	980.0
1968*	46.7	65.6	132.6	56.3	444.0	203.1	1,128.0

* (preliminary)

¹ The prevalence of foot and mouth disease in South American countries restricts beef imports from Argentina and Uruguay to canned and processed products only.

Note that data of Table 7 are in pounds of carcass whereas data in this table are in pounds of product.

SOURCE: *Foreign Agricultural Trade of the United States*, E.R.S., U.S.D.A. Various Issues.

bologna and other luncheon meats.¹⁰ This pattern still seems to apply. The large imports of boneless beef meet a demand for lower quality beef not satisfied by U.S. output of cow and bull beef. With the declining dairy cow numbers and the increasing proportion of cattle marketed through feedlots it is likely that there will continue to be a substantial American market for low quality imports. Imported beef is in direct competition with U.S. cow beef but does have some effect on the prices of fed cattle and higher quality beef.¹¹

Up to 1964 beef and veal entered the U.S. market subject to the tariff rates given in Table 3 but free of quotas. The heavy beef importation of 1963 together with a decline in cattle prices in the U.S. brought pressure on the U.S. Government to restrain beef imports. In early 1964, the governments of Australia, New Zealand, Ireland and Mexico agreed to limit their annual exports of certain meats (including beef) to the United States. The quota limitations specified for 1964 in the four agreements represented approximately the average annual U.S. imports from the respective countries in the two years 1962-63.¹²

In August 1964, the United States Government took further steps to contain beef imports through Public Law 88-482. Under this law import quotas were provided for any year beginning with 1965 for which the Secretary of Agriculture estimated that imports will equal or exceed 110 per cent of a base quantity. The base quantity specified by the law is 725.4 million pounds of product weight (approximately the 1959-63 average imports). This base quantity would be increased (or decreased) by the same percent-

¹⁰ *Beef and Beef Products*, United States Tariff Commission, Publication No. 128, January 1964, p. 12-14.

¹¹ A U.S. Department of Agriculture study for 1948-62 indicated that a one pound per capita change in the supply (domestic or imported) of cow beef was associated with a decline of 30 cents per hundredweight in the price of choice steers in Chicago.

¹² *Beef and Beef Products*, op. cit., p. 104.

age that the U.S. estimated average annual commercial production increased since the five year base period 1959-1963. In other words, quotas are tied to a calculated share of U.S. commercial output. Imports of beef in the years 1964 to 1967 were well below levels that would have required quotas. In 1968 imports were only 55 million pounds below the adjusted base quota of about 1,056 million pounds (110 per cent of the adjusted base quantity).¹³

The Australian Meat Board imposed voluntary export restrictions in 1968 and 1969 to ensure that they did not trigger the U.S. quota machinery.

It seems obvious from the kind of competition which would be encountered in the American market from lower quality Australian and New Zealand beef that Canadians should not plan to export such beef. Indeed, Canada also imports such beef from Australia, New Zealand and Argentina, an indication that we have few advantages in such a trade. The foregoing analysis indicates that it would be unwise to emphasize the production and export of low quality beef except as it is made available from dairy cows and similar residual sources.

What are the prospects for exporting slaughter cattle or high quality dressed beef? These are alternatives because the finished cattle could be slaughtered in Canada and certain cuts exported or alternatively the fed cattle could be exported for immediate slaughter or for some further finishing and then slaughter. Slaughter cattle are commonly identified in the trade statistics as cattle over 700 pounds (the weaknesses in this definition are given in Footnote 6.) For cattle over 700 pounds the U.S. tariff is 1.5 cents per pound rising to 2.5 cents above 120,000 head per quarter or 400,000 head per fiscal year. Canada's exports in this category have averaged only 78,000 per year in 1965-69 inclusive and total U.S. imports of such cattle have been about 90,000 per year. Thus there is room for considerable expansion before reaching the tariff quota of 2.5 cents. However if exports of fed cattle reached such levels at a time when U.S. prices were low, one might expect agitation by U.S. producers to impose limits on imports. In this case both American producers of feeders and those feeding them would be ranged on the same side. This is in contrast to the division of forces anticipated above in connection with proposals to limit imports of feeders.

In Table 9 periods have been selected to illustrate the two-way flow of slaughter cattle across the U.S.-Canadian border and the corresponding fed cattle price relationships that prevailed during this period. Of importance here is the fact that in recent years the export of slaughter cattle from Canada to the U.S. has not been a continuous process and accordingly the average price received for Canadian fed cattle has averaged above the "export floor" imposed by U.S. fed cattle prices.

The price differential between an "export floor" and an "import ceiling" is around \$4.50 per hundredweight. It appears that Canadian fed cattle prices have averaged about \$2.00 per hundredweight or more above the "export

¹³ *Livestock and Meat Situation*, February 1969.

TABLE 9
Canadian Cattle¹ Exports-Imports and Average Prices

	Average Weekly		Average prices choice steers		
	Exports	Imports	Chicago	Calgary	Differential
	(number of head)		(Canadian \$ per cwt)		
<i>1964 Period</i>					
May-June.....	390	3,440	22.73	22.98	-0.25
Oct-Nov.....	3,697	—	26.17	21.17	5.05
<i>1965 Period</i>					
Aug-Nov.....	6,458	—	28.49	23.92	4.57
<i>1966 Period</i>					
Mar-Apr.....	2,193	—	30.57	26.07	4.48
Nov-Dec.....	1,031	954	26.66	25.80	0.86
<i>1967 Period</i>					
Oct-Dec.....	748	1,546	28.41	28.23	0.18

¹ Over 700 pounds

SOURCE: *Livestock and Meat Trade Reports*, Various Issues, Market Information Section Production and Marketing Branch Canada Department of Agriculture.

floor". Expansion of output would lower the Canadian price by at least \$2.00 and probably \$2.50 per hundredweight relative to U.S. prices from the average relationship of recent years.

In recent years Canadian feeder cattle prices have been closer to a full scale "export floor" than have slaughter cattle prices. Expansion of exports would likely result in a decline from past average U.S. Canadian price relationships of about \$1.00 for Canadian feeder cattle and \$2.00 or more for Canadian slaughter cattle. These relationships together with the price effect of the higher tariff on feeder cattle indicate that trade patterns have given the Canadian feedlot operator a favourable position relative to his U.S. counterpart. In other words there has been a higher average fed cattle-feeder price differential in Canada than in the United States.

It is unlikely that our feedlot industry will find profitable markets for slaughter cattle or dressed beef in the United States on a consistent basis. Over the next two or three years Canadian feedlot operators will have to outbid U.S. buyers for feeder cattle and then compete on an export basis with their slaughter cattle. This would not appear to be a profitable situation.

Where Will Canadian Feeder Cattle Be Fed?¹⁴

Most of the feeder cattle will continue to be produced in the West. In 1968, 83 per cent of all beef cows were in the four western provinces

¹⁴ For further treatment of this question see the Canadian Agricultural Congress supplementary paper "The Position of the Canadian Beef Producer Operating on the North American Economy" March 1969.

(Alberta 37.1 per cent; Saskatchewan 28.7 per cent; Manitoba 11.2 per cent; British Columbia 5.6 per cent). Given the need to convert land from wheat to grass, the predominance of the West in feeder cattle production is likely to continue and even to increase. Location of feedlots, however is a different thing.

Because of severe winters Saskatchewan and Manitoba farmers will find it more difficult to develop feedlots in spite of their proximity both to feed and feeders. Quebec and the Maritimes are deficient in feed and also in the know-how of operating feedlots. Thus the main areas are likely to be Southern Ontario and South-Central Alberta, with considerable development also in British Columbia.

The price of Choice Steers in Toronto has averaged about \$2.00 per hundredweight more than in Calgary since 1960. Steers gaining 500 pounds, thus bring \$10 more per animal if fed in Ontario than fed in Alberta. Ontario producers have the important advantage that they produce corn silage and grain corn. Alberta feeders currently have the advantage of being able to buy non-quota grains at very low prices compared with the prices Ontario producers would have to pay for the same quality of grain (even after Feed Freight Assistance). This advantage to prairie feeders cannot be expected to persist indefinitely if the Task Force recommendations on feed grain marketing are implemented. Thus, both Southern Alberta and Southern Ontario will experience considerable growth in feedlot operations to meet the rapidly rising domestic demand.

World Projections

There have been several studies of projected world supply and demand for beef and all of them foresee growing shortages of beef and veal. As can be seen from Table 10 the expected deficit in OECD countries¹⁵ is expected to rise from 800,000 tons in 1961-63 to 3 million tons¹⁶ in 1980. Most of the projected deficit in beef and veal will occur in North America (primarily the U.S.A.) and will be met mainly by shipments from Australia, New Zealand and Argentina. These studies project rising world prices for beef. It is better to be associated with an expanding industry than one with stagnant markets and world over-production.

Grades and Grading

These subjects are under discussion at present by representatives of producers, the trade and government. The Task Force commends these groups for their attempts to improve beef grading which has long been in striking contrast to the excellent grading system for hogs in Canada.

Summary of Analysis

1. Per capita Canadian consumption of beef will be at least 100 pounds in 1980 and could be 110 pounds.

¹⁵ Canada, U.S.A., Japan and countries of Western and Southern Europe.

¹⁶ Canadian beef consumption in 1964-65 was about 800,000 tons.

TABLE 10
Projections of Beef and Veal Production, Consumption and Balance for Major Trading Nations

F.A.O.	1961-1963			1975 (low income)			1975 (high income)		
	Prod'n	Cons'n	Net Trade Exp. +, Imp. -	Prod'n	Demand	Net Trade	Prod'n	Demand	Net Trade
				(thous. tons)					
North America.....	8,196	8,848	-652	11,468	12,289	-821	11,840	12,701	861
E.E.C.....	3,570	3,854	-284	4,555	5,093	-538	4,760	5,398	-638
N. Europe.....	1,226	1,806	-580	1,504	2,121	-617	1,582	2,192	-610
Total all Importers.....	17,369	19,076	-1,707	23,789	26,438	-2,649	24,734	27,736	-3,002
Exporters.....	5,551	3,776	+1,775	7,159	4,955	+2,204	7,507	5,190	+2,317
Total of all Countries.....	22,920	22,852	+68	30,948	31,393	-445	32,241	32,926	-685

SOURCE: Monthly Bulletin of Agriculture Economics and Statistics, F.A.O., March 1968.

O.E.C.D. (O.E.C.D. Countries only)	1961-1963			1975			1985		
	Prod'n	Utiliztn.	Net Trade	Prod'n	Utiliztn.	Net Trade	Prod'n	Utiliztn.	Net Trade
				(thousand tons)					
North America.....	8,302	8,652	-368	10,878	12,244	-1,366	13,850	15,391	-1,541
E.E.C.....	3,671	4,114	-431	4,374	5,170	-796	4,924	5,894	-970
N.W. Europe.....	1,882	1,894	-9	2,073	2,115	-42	2,258	2,397	-139
S. Europe.....	593	587	-2	810	1,033	-223	1,039	1,372	-333
Japan.....	164	169	-5	242	346	-104	451	557	-106
O.E.C.D.....	14,612	15,416	-815	18,377	20,908	-2,531	22,522	25,611	-3,089

SOURCE: Agricultural Projections for 1975 and 1985, O.E.C.D., Paris 1968.

2. World demand for beef will continue to rise more rapidly than supply and world prices will be strong.

3. The export prospects for feeder cattle are excellent and very large numbers could be sold if Canadian prices were to fall by \$1.00 per hundred-weight relative to United States prices. If prices fell by between \$1.00 and \$2.00 per hundred the export market would be unlimited up to the capacity of Canadians to produce feeders.

4. There seems little point in counting on exports of low quality beef in competition with Australian beef except as a declining residual from dairy cow slaughter.

5. The export prospects for slaughter cattle are not encouraging since they would require a decline of at least \$2.00 and probably more per hundred-weight vis-a-vis U.S. prices. In the short run Canadian feeders face the dual squeeze that the prices of Canadian feeders have exceeded U.S. feeder cattle prices in 1969 and in order to export, Canadian fed cattle prices would have to decline all the way to the export floor, i.e. below prices in the United States.

6. The export prospects for high quality dressed beef are similar to those for slaughter cattle.

Policy Implications

Several serious farm problem areas and policy matters converge in a discussion of beef cattle production. First, there is the problem to do with at least 10 million acres of prairie land which the Task Force estimates must be removed from wheat production.¹⁷ Some of these can go to increased acreage of rapeseed and some can go to increased barley exports, given more flexible pricing than that of the Wheat Board in the past, but these two outlets are not likely to be enough to accommodate these surplus acres. A good portion of them can be diverted to tame hay, pasture and feeder cattle production.

Second, there is the problem of the continual *expansion* of improved acreage in the West by almost 1 million acres per year. Given the present surpluses of grain, continued expansion seems highly unwise¹⁸ yet it is promoted by ARDA programs, Wheat Board quotas, income tax exemptions and provincial government land-clearing programs. Along with the initiative of individual producers these factors have increased potential production in the form of expanding improved acreage. Because the export markets for rapeseed and barley have definite limits, further acreage expansion may be expected to take the form primarily of increased feeder cattle exports. If the estimate made earlier in this chapter is correct, 5.5 acres of extra prairie land would produce one extra feeder per year. This is in accord with a study

¹⁷ This figure of 10 million acres is the estimated reduction from almost 30 million acres in 1968 to almost 20 million in 1980. There should be an even greater reduction in 1970 to 1972 in the face of a projected carryover of one billion bushels on July 31, 1970.

¹⁸ An analogy would be with a person who tries to mop up the floor without turning off the tap.

done for the Task Force which concluded that for 100,000 feeder cattle exported, the amount of land utilized would be 500,000 acres—the equivalent of approximately 20 million bushels of barley.

Continued expansion in the acreage of improved land at the rate of 1 million acres per year and all used for feeder cattle, would thus imply 180,000 extra feeders per year. The Task Force does not think that 1 million extra acres will be improved each year and it recommends changes to ensure that this does not happen.

The Task Force has assumed that its recommendations in Chapter 5 Wheat, Feed Grains and Oilseeds will be sufficiently implemented that improved acreage (including tame hay and pasture) in 1980 will exceed that of 1966 by no more than 1.6 million acres. Projections as to use of land and number of acres appear in Chapter 10 of Agriculture in 1980: A Materials Balance Approach.

Third, dairy policy converges on the beef cattle industry. A considerable amount of the beef and veal consumed in Canada (much of it of lower quality) originates in dairy herds. The potential for considerably increased beef output by nominal dairy farms is very large in Ontario and Quebec, especially if fewer bob-calves were shipped shortly after birth from Quebec to New York. The Task Force is not, however advocating any wholesale change from selling bob-calves to raising feeders in Quebec. The possibility is there but achieving it will depend upon relative veal-feeder prices. The convergence takes a second form; if the present large dairy subsidies were to be reduced (as is recommended in Chapter 7) and if imports were permitted to increase gradually, many milk producers would convert to the production of feeder or slaughter cattle. Some observers claim that on a small farm acreage in Eastern Canada one cannot afford to leave industrial milk production in favour of cow-calf and feeding operations. This is probably correct but largely so because of the twin facts that milk production is heavily subsidized and protected whereas the alternative of cattle production is neither subsidized nor protected. From the national point of view it appears unwise to subsidize the production of milk, in which we are at competitive disadvantage internationally and thus attract resources away from beef production, in which we have cost advantages and export opportunities. To a considerable extent, milk and beef production are complementary in Eastern Canada and many farmers would find it desirable to maintain their dairy herds and produce beef from some of the offspring.

The fourth policy which converges with beef cattle production is that of international trade. The general objective recommended by the Task Force is to work toward an uninhibited continental market for grains, oilseeds, livestock and potatoes. It would appear to be in the best interest of both Canada and the United States to eliminate all existing tariffs and quotas on cattle, calves, beef and veal.

The results of all of these policies appear in Chapter 10, Agriculture in 1980: A Materials Balance Approach, in which rapid declines in dairy cow

numbers and wheat acreage are offset by increased exports of barley and rapeseed, increased domestic consumption of meats and the export of 500,000 feeder cattle per year to the United States. It is this latter subject which is particularly relevant here.

Changes in production from one product to another come about largely because of the views of producers concerning expected relative prices, costs and returns. If farmers are of the opinion that the prospects for profits in feeder cattle production are less favourable than in milk or wheat production there will be no increase in feeder cattle production no matter what the Task Force or any one else may say. This is as it should be. Thus if in the interest of improved productivity of resources and higher farm income, it is appropriate to try to increase feeder cattle production and to reduce milk and wheat production, then there are two sets of policies which can be employed.

First, some or all of the existing policies which favour milk production (price supports for butter and skim milk powder, direct subsidies for the whole milk used in manufacturing, embargoes on imports of butter and powder) or favour wheat production (Temporary Wheat Reserves Act and C.W.B. quota policy in particular) must be amended to reduce the relative attractiveness of producing milk and wheat. Second, new policies must be developed to provide positive encouragement to beef feeder production. Such policies include using some of the Canadian Dairy Commission funds and some of the funds devoted to the Temporary Wheat Reserves Act to provide adjustment grants to farmers who enter beef production. These are particularly important during the first two years or so required to establish a beef enterprise.

The Task Force commends the action of certain provincial governments which have decided to provide credit incentives to those farmers who convert from grain to grass and livestock production. However the maximum of \$6,000 under the Saskatchewan program seems undesirably low.¹⁹

There are a number of other developments which would operate in the same desirable direction. The Canadian Dairy Commission should work as closely as possible with various credit institutions to promote adjustment from dairy to beef; for a period of three to four years artificial insemination using beef bull semen might be subsidized by federal and provincial governments; the beef equivalent of the very effective Dairy Herd Improvement Associations should be developed in a number of provinces.

Beyond such assistance there is not much which can be done without prejudicing export markets. For example, if there were to be a production subsidy of \$20 or \$25 per animal raised to a specified weight, it is likely that competitors in the United States would object seriously to what might be termed unfair competition.

Some comment is necessary to meet the objections of those currently producing feeder cattle who may maintain that they would be discriminated

¹⁹ Livestock Loans Guarantee Act, of Saskatchewan which went into effect November 1, 1969.

against by such assistance to new or expanding producers. First, existing producers of feeders should also be eligible for assistance in reducing grain production in favour of livestock. Second, there already exist several forms of assistance to some cattle producers and not to others that a differential rate might right some of the current imbalance. Existing forms of assistance include government subsidies which meet the overhead of irrigation projects which produce forage and include also the setting of leases on range land owned by the state at levels far below their market value.²⁰

TABLE 11
Per Capita Domestic Disappearance, Output, Prices, Exports and
Imports of Pork, 1955-57 to 1968

Year	1	2	3	4	5
	Domestic disappearance per capita	Output	Prices Grade A Toronto	Exports	Imports
	(lbs.)	(million lb.)	(\$/Cwt.)	(million lb.)	
1955-57 (average).....	47.6	862.7	28.20	52.6	0.6
1958.....	49.4	973.6	29.13	63.5	1.7
1959.....	56.7	1,237.7	24.80	70.0	1.4
1960.....	52.6	988.0	24.75	67.7	17.1
1961.....	50.3	975.4	28.30	52.4	41.9
1962.....	50.1	784.6	29.60	47.9	35.6
1963.....	50.7	981.0	27.80	47.4	89.5
1964.....	51.8	1,060.1	27.30	54.0	53.8
1965.....	47.9	1,006.5	33.40	58.0	37.2
1966.....	46.9	1,014.3	35.90	48.5	28.3
1967.....	53.8	1,181.5	30.70	59.1	28.8
1968.....	53.6	1,181.3	30.80	60.8	38.5
1969 (estimated).....	49.8	—	—	58.0	61.0
1980 (projected).....	50.0	1,302.0	—	65.0	65.0

SOURCE: Livestock and Animal Products Statistics and Catalogue No. 32-220, D.B.S.
Projection 1980 from *Demand-Supply Projections*.

Hogs²¹

The major question to be addressed in this section is whether Canada can expect to become a major exporter of pork to the United States in future years. The answer to this question will be found partly in the levels of technology and efficiency of hog producers north and south of the border,

²⁰ In British Columbia in 1967, rangeland outside the Peace River area was leased for pasture at the rate of 41 cents per head per month. In the Peace River area, fenced and reserved range was leased for 50 cents per head per month and what was called "Cultivated pasture" for \$1.00. In that year grazing permits were issued for 188,000 cattle by the British Columbia Forest Service.

In Alberta 4.4 million acres were under lease in 1966 by the provincial Department of Lands and Forests. Rates varied from 75 cents in the south to 65 cents in the centre to 45 cents in the north, all per animal unit per month. An animal unit consisted of a cow and calf.

²¹ This section also draws heavily upon work done for the Task Force by Professor Marshall of the University of Guelph.

partly in the efficiency of hog packing plants and to a very considerable extent in the relative prices of feed grains (themselves influenced considerably by government policy). Before turning to this crucial question however, it is necessary to examine the industry analytically.

Per capita consumption of pork over the past eleven years has been amazingly stable with a high of 56.7 pounds in 1959 (a year of very low prices and heavy production) and a low of 46.9 pounds in 1966. (See Table 12, Col. 1) Table 12 also contains a projection that per capita consumption of pork in Canada will be 50 pounds in 1980. This projection deserves comment especially when consumption in 1967 and 1968 was almost 54 pounds. Professor Marshall expects that per capita consumption in 1980 is more likely to be 55 pounds than the 50 pounds The Task Force has used in its projections. He bases his prediction largely on the considerable amount of substitution to be found between pork and other meat. Prices of broilers fell rapidly during the period 1955 to 1961, reducing the consumption of pork as a result. Broiler prices now seem to have stabilized and this depressing effect on pork consumption will no longer be likely to apply to pork in the future. The price of beef fell in 1964 and 1965 (Table 2 of this Chapter) and this also tended to reduce pork consumption in those years. Per capita consumption of pork in the United States was 66 pounds in 1968.

The Task Force has continued to use the Demand-Supply Projections figure of 50 pounds of pork per person and has incorporated this projection into Chapter 10 containing the materials balance tables. Per capita consumption in 1969 is likely to be down considerably from that of 1968, and will likely be just under 50 pounds.

Stable exports of pork have been notable over the last decade (Table 12, Col. 4). Where else would one find a product whose exports had remained within the range of 47 to 70 million pounds per year over an eleven year period and yet whose production and sale has been almost completely on the free market over this period?

Variable imports are another feature of trade in pork products, largely between Canada and the United States (Table 12, Col. 5). In the absence of trade restrictions it would be unlikely that exports would be stable and imports highly variable unless there were considerable differences in the quality of the pork products exported and imported. This, indeed, has been the case. Canadian exports to the United States are primarily hams, back bacon and high quality bellies—all of high quality and bringing a price premium over the American counterpart products. Imports of American pork to Canada are not because of special quality but because of price.

Relative Canadian-American hog prices have an obvious effect on Canadian imports of pork, as shown in Table 13, but little apparent effect on the high quality specialty product exported to the United States. Canadian prices have not fallen low enough relative to U.S. prices to expand exports substantially; a sizeable expansion would come about only through price competition on the common cuts and not just for specialty products.

In the Canada Department of Agriculture "Outlook 1969" a weekly level of Canadian gradings of 157,000 hogs is identified as the level of output which currently satisfies Canadian demand and the consistent level of exports

TABLE 12
Exports and Imports of Pork; Toronto-Chicago Hog Price
Differential by Quarter 1963 to Jan.-Sept. 1969

	Exports to USA	Imports from USA	Toronto- Chicago Price Differential
	(product weight-million lb.)		(Can.\$)
1963			
Jan.-March.....	10.1	26.2	6.91
Apr.-June.....	9.7	24.4	3.74
July-Sept.....	11.3	13.8	3.81
Oct.-December.....	11.3	14.0	4.48
1964			
Jan.-March.....	11.4	12.8	4.83
Apr.-June.....	11.3	13.9	4.09
July-Sept.....	10.8	6.6	4.09
Oct.-December.....	11.2	8.5	4.50
1965			
Jan.-March.....	11.9	7.3	3.81
Apr.-June.....	13.6	4.8	.46
July-Sept.....	12.4	4.3	1.38
Oct.-December.....	11.5	6.0	1.00
1966			
Jan.-March.....	10.6	5.0	.95
Apr.-June.....	11.5	4.0	.47
July-Sept.....	8.9	5.0	-1.64
Oct.-December.....	10.7	10.0	2.37
1967			
Jan.-March.....	11.7	10.0	3.67
Apr.-June.....	13.6	7.2	.71
July-Sept.....	13.1	2.4	-.61
Oct.-December.....	12.5	4.4	1.27
1968			
Jan.-March.....	14.0	3.0	-.51
Apr.-June.....	15.0	2.6	-1.15
July-Sept.....	11.9	12.1	2.53
Oct.-December.....	10.7	16.5	4.78
1969			
Jan.-March.....	13.0	25.1	4.59
Apr.-June.....	14.8	22.4	—
July-September.....	9.4	7.7	—

TABLE 13
U.S. Pork Imports by Origin; Canadian Share of U.S. Imports
1960-1968

	Canada	Denmark	Nethlnds	Poland	Total	Canadian Share
	(million lbs. product weight)					(%)
1960.....	47.3	40.7	42.0	35.1	171.3	27.6
1961.....	44.7	46.2	42.0	34.7	173.7	25.7
1962.....	46.8	63.8	43.4	39.8	203.8	23.0
1963.....	45.9	71.0	42.9	40.0	210.5	21.8
1964.....	50.6	66.4	38.2	43.9	210.6	24.0
1965.....	54.0	85.2	46.2	52.9	262.3	20.6
1966.....	47.5	116.9	65.0	51.6	298.3	15.9
1967.....	54.8	102.3	74.6	57.2	306.9	17.9
1968.....	55.5	111.9	82.2	55.1	324.1	17.1

SOURCE: *Livestock and Meat Situation*, Economics Research Service, U.S.D.A.

to the United States.²² If Canadian output falls short of this level, the CDA authors observe that Canada enters a "net import position". The Task Force is not inclined to attach so much importance to a figure such as 157,000 hogs graded per week, since there is bound to be some part played by price in its effects on Canadian consumption.²³ However the concept is helpful and the figure of 157,000 provides a rough but useful rule-of-thumb.

Competition between Canadian and American producers is obviously direct and intense and it will grow with lower tariffs. The Canadian tariff on U.S. fresh pork was reduced from \$1.25 to 50 cents per 100 pounds in June 1969; the U.S. tariff on Canadian fresh pork was \$1.00 per 100 pounds to December 31, 1969; it will become 80 cents during 1970, 70 cents during 1971 and 50 cents per 100 pounds beginning on January 1, 1972. In contrast to cattle, in which trade is largely in live form, almost all trade in pork is in the form of cuts.

Canadian hog prices, at the farm level, are higher than American hog prices. In the three years 1966-68 the Canadian weighted average price exceeded the calculated average price in eight major U.S. markets by about \$2.00 per hundredweight of dressed pork²⁴ (both calculated in Canadian dollars). The higher price of Canadian hogs may be regarded as an advantage,²⁵ providing it involves producing a high quality product at approximately equal costs. If the higher price is merely the result of different supply and

²² Canadian Agricultural Outlook Conference 1969, CDA, Nov. 24, 25, 1969. Page 62. The 1969 edition was considerably improved over earlier years.

²³ For a figure such as 157,000 hogs per week to indicate the turning point exactly, per capita consumption in Canada would have to be constant. It has not fluctuated greatly, but is not constant (Table 12, Col. 1).

²⁴ "For 1966 to 1968 the National Average Weighted Price in Canadian dollars averaged approximately \$3.95 more than the average price at the 8 markets in U.S. dollars converted to a dressed basis using an arbitrary 75 per cent yield." Outlook 1969, p. 70.

²⁵ It is regarded as an advantage in "Outlook 1969", p. 69, 70.

demand factors north and south of the border then it may be a disadvantage. A definite advantage, however, is that there is a premium market for certain Canadian cuts (hams, back bacon especially) in the United States, whereas there is no such preference by Canadians for cuts from the United States. This advantage is, of course, closely associated with the higher prices in Canada and indicates the higher quality for some Canadian cuts. A second real advantage for Canadian producers is that they enjoy a grading and payment system considerably superior to that in the United States. When consumer preferences are reflected through the grading system to create price differentials at the producer level and when these grade and price differentials are clearly apparent to producers one has a highly desirable grading system. The Canadian system was superior to that in the United States even before the introduction of the new Index Grade producer and packer organizations and government, deserve credit for having produced a good grading system for Canadian hogs.

Canadian producers have suffered from two serious disadvantages in competing with U.S. hog producers and both concern the price of feed grain. The first disadvantage is the generally higher prices for feed which hog producers must pay relative to their competitors in the United States. These differentials arise out of the eight cent per bushel tariff on corn, the tariff on mixed feed and the Canadian Wheat Board policy of maintaining high prices for barley. The second disadvantage is the distorting effects that occur among regions from feed-freight subsidies which give advantages to Maritime producers relative to prairie producers, but which advantages are frequently far more than offset by the availability, on the prairies only, of over quota (CWB) feed grain selling at distress prices. A sound and efficient hog producing industry should have a minimum of dislocation arising out of distorted or panic pricing of inputs.

The September 1969 Quarterly Survey showed that the number of pigs on farms in Saskatchewan was up 26 per cent over the previous year. This, of course, is a direct reflection of the crisis situation in grain marketing. Increases and subsequent decreases, of that magnitude are totally inconsistent with a sound efficient industry and create expensive over-capacity in breeding stock, farm facilities and packinghouse facilities.

For the past 10-12 years there has been a great deal of attention paid to the question of vertical integration in hog and poultry production. The use of teletype systems of selling by producer marketing boards such as that in Ontario (which pioneered in this direction) has made vertical integration impossible between the producer and packer stages. The limited development of vertical integration in the Canadian hog industry compared with the United States may have had some adverse effects on production efficiency but these have been limited. The improvements in price formation and in making hogs available to all bidders has been favourable to efficiency.

Packing house operations become important when considering Canadian-American competition, because the product moves as cuts, not as live ani-

mals. Unfortunately there are no detailed studies which would yield information on the relative efficiency of packing plants north and south of the border.

To export or not to export? The question posed at the first of this section must now be faced. Can Canadian pork be sufficiently low cost that exports will be increased substantially? Expert opinion on this important question is divided. On the optimistic side are those experts who point out that so far as climatic differences between the United States and Canada are concerned, we have no disadvantage in producing hogs and we do have some disadvantages in producing cattle. Therefore produce hogs, especially given our advantages in quality products and in grading—both of which are not present in the case of cattle. Furthermore, so this argument goes, those Ontario farmers who produce corn and feed it to hogs, and those prairie farmers who do the same for barley and oats, can compete with hog producers in the United States.²⁶

Reaching pessimistic conclusions are those (such as Professor Marshall) who point out that is easy for us to export our specialty high quality hams and bacon in total quantities up to 60-70 million pounds but that to increase exports greatly beyond that level would involve really substantial reductions in producer prices. The price reductions would have to be so great, they maintain, that many Canadian hog producers would give up hog production and we would return again to a balance not much different from recent conditions.

There is considerable support for this position. Referring to the fact that hog gradings in Canada were below those of the previous year for the 15 months to September 1969, the CDA Outlook 1969 rightly gave the cause as follows "The main reason for the decline in gradings in Canada was the level of hog prices in the last quarter of 1967 and the first half of 1968 . . . The price of Grade A hogs at Toronto averaged \$28.49."²⁷ The average price for 1966-68 was \$32.47, but when the price fell to \$28.50 production declined substantially.

Further evidence comes from Table 13 which indicates on a quarterly basis the stable flow of Canadian pork exports and the remarkably close relationship of volume of imports and differentials in price.²⁸ What is particularly relevant from Table 13 is that even when the Toronto price fell as much as

²⁶ I wish to be identified with this position. Defensible as stated above, it would apply more strongly if the Task Force recommendation respecting the development of a free market in feed grains (Canada vs. the United States and Eastern vs. Western Canada) were implemented. I do not accept the judgment that Canadian hog production would necessarily be unresponsive to price changes. The remarkable achievement of Denmark and the Netherlands in exporting to the United States (Table 13) is a result of efficiency in production and excellent market development and merchandising. Canada could surely exploit its advantages of higher quality hogs, feed grain surpluses, lower cost feed grains and less costly transport to the U.S. market. Alberta is as close to the rapidly expanding Pacific Coast market as much of the U.S. Corn Belt. Tariffs are low. Hogs should not be excluded from the Continental market concept which runs through most of the Task Force Report. We should not settle for the necessity of having a small, essentially domestic, hog industry. The current and prospective application of advanced production technology also argue against this. (David L. MacFarlane).

²⁷ Outlook 1969, p. 60.

²⁸ Data on an annual basis cover up the relationships. Even these raw data giving quarterly figures, not lagged for price changes, may be slightly misleading.

\$1.00 below the Chicago price (and therefore about \$3.00 to \$4.00 below the normal Toronto-Chicago spread) exports failed to increase appreciably. In other words, prices would have had to fall even more relative to American prices before substantial increases in Canadian pork exports would have occurred.

We estimate that for Canadian pork exports to expand considerably, Canadian prices would have to fall by about \$5.00 per hundredweight below the relationship they "normally"²⁹ have with U.S. prices. Canadian production costs show no signs of decreasing to that extent on a continuing basis. In other words, we cannot cut our costs sufficiently to expand exports greatly, but we will continue to export a specialty product even though our prices are high. Finally, there is an upper level beyond which our prices cannot go without huge imports from the United States. The data of Table 13 show that Canadian prices can rise to \$4.50 above American prices and fall at least to \$1.50 below. Kennedy Round concessions will reduce this range by about \$0.75 on each end. Given the economic relationships previously discussed Canada seems to have gained less by this particular tariff reduction than did the United States. Both countries appear to have gained less by negotiating a lower pork tariff than if they had negotiated lower cattle tariffs. One should not take each tariff concession in isolation, however, because each was presumably part of a package.

Imports of pork into the United States amount to about 3.0 to 3.5 per cent of U.S. domestic production. Canada's share of this import trade has fallen from 27 per cent in 1960 to 18 per cent in 1967 and 1968. Between 1960 and 1968 U.S. imports from Denmark almost trebled and from the Netherlands doubled. These are mostly canned hams, whereas Canadian exports to the U.S. are mostly fresh or frozen hams. We might expect to experience greater competition from European hams in the American and even the Canadian market in the future. Table 14 indicates recent trends in U.S. imports. It is a striking commentary on Canadian livestock production technology that Danish and Dutch farmers and agribusiness can capture a growing share of the North American pork market while Canadian farmers with unprecedented stocks of grain available seem unable to compete.

In summary then, the Task Force is of the opinion that Canada is unlikely to experience major changes in exports or imports of pork with the U.S., however recent developments indicate that there may be a substantial market for pork in Japan.

Consumption and Canadian production, will increase by perhaps 30 per cent between 1964-1966 and 1980. This means steady growth and will require efforts by researchers and farmers to reduce costs and to emphasize quality. But hogs cannot be regarded as a major answer to the question of what to do with prairie ex-wheat acres, or as a major alternative to dairy farming.

²⁹ The average price of Grade A's in Toronto exceeded the average of No. 1, 2, 3, medium weights in Chicago by Can \$2.33 per hundredweight dressed, 1964-1969.

POULTRY AND EGGS

Poultry and egg production has gone through revolutionary changes since the arrival of commercial broiler production technology in Canada in 1950. Dual-purpose breeds for meat and eggs have been replaced by specialized stocks for broiler and for egg production. Broiler, turkey and egg production have become specialized operations. Output has rapidly expanded, scale has increased tremendously, prices for poultry meat have fallen and the number of producers has declined drastically. Vertical integration has occurred in some phases and provinces and provincial producer marketing boards have attempted to control output by allocations quotas. The present state of this completely altered sector will be discussed in turn for each of the major segments.

Breeders

Poultry breeding is highly specialized. A handful of master breeders in the United States, plus one each in Canada for broiler and for egg breeding now supply most of the basic breeding stock in North America and much of it throughout the world. This breeding stock goes to franchised hatcheries (or to intermediate hatchery supply flocks which provide the hatcheries with hatching eggs). Hatcheries produce the commercial chick developed by the breeder, but cannot reproduce the basic stock.

Hatcheries

Hatcheries are franchised by breeders and are therefore loosely integrated by agreement or by contract. Integration may also take the form of the financing of pullet growing operations by breeders. But the extent of actual ownership of hatcheries by breeders is not very great.

Integration by feed manufacturers is more extensive. Feed companies own or control a large number of broiler and turkey hatcheries and also of poultry processing plants. There results a complicated system of contracts and vertical integration, with the hatcheries or processor initiating contracts with growers but often acting as agents of the feed companies. For example, in Ontario, hatcheries have long participated in broiler growing contracts and are involved (sometimes jointly with feed producers and poultry processors) in broiler integration, by quota ownership of about 10 to 15 per cent of the Ontario basic quota. Arrangements to secure chick supply to the grower and payment to the hatchery, are often made by the processor as integrator (often as the agent of the feed company), who agrees to make payment to the hatchery.

Hatcheries themselves have expanded into financing of pullet growers until the product is ready for market and into financing of egg producers until egg returns enable the latter to repay the hatcheries' loans. Chicks are also often grown longer by the hatcheries, instead of being supplied as day-old replacement chicks.

Hatcheries have had to adjust to the mass needs of the modern poultry and egg producing firms and have to be ready to supply large orders (e.g. of 20,000 chicks or more) at one time. In this process of scale expansion, the number of registered hatcheries has rapidly declined (e.g. in Ontario to one-third of the number in 1950), while output has quadrupled. The day of the small hatchery is almost over.

With high volume outputs and specialized facilities, hatcheries face problems of seasonality of hatch and variability of production. These will probably continue unless production of broilers, turkeys and eggs can be stabilized and marketing problems of the latter solved.

Chicken and Turkey Broiler Producers

Commercial broiler production began in Canada in 1950 after the loss of the British market for eggs in 1949. The loss of this market caused a sharp reduction in Canadian egg production, with its poultry meat by-products and opened the way for a Canadian broiler industry. Since 1950, production of broilers and turkeys in Canada has expanded greatly, the number of producers has fallen rapidly and their size has increased correspondingly.

Production of chicken and turkey broilers was introduced as a new form of production and has largely replaced the old dual-purpose chicken enterprises. Thus it has not been a question of the effects of vertical integration upon an established set of producers but the nature of the vertical links developed in the course of establishing a new set of producers. The old set of producers has been largely forced out of production, with resultant problems of losses of farm income and declining numbers of farms. The sectoral problems now to be discussed are those affecting the new set of chicken and turkey broiler producers.

From the start in this new set of enterprises, vertical integration has had an important place. At the very beginning, feed companies sponsored and assisted the development of broiler production with capital assistance, credit for feed and technical assistance and supervision of growers. As broiler production became large volume enterprises, chick supply and processing schedules became important and this led to contracts involving hatcherymen as well as growers and to the acquisition of broiler processing facilities by feed companies. In practice, the processors often arrange the contracts and schedules with growers and hatcheries and are thus regarded as the integrators but many processors are in effect feed company agents.

Integration through ownership of broilers or of broiler production facilities has not become nearly so widespread in Canada, except for Quebec, as it has in the United States. Whether due to the efficiency of totally integrated operations, or to the attempts by marketing boards in less integrated areas to maintain prices at higher levels, output from totally integrated regions is becoming increasingly competitive in other regions. For example, Quebec is supplying increasing numbers of chicken broilers to Ontario and turkeys have been imported in large volume at times from the United States. Table 14

shows the dramatic expansion which has occurred in Quebec chicken broiler production compared with Ontario. In 1957-1961 Quebec broiler production was 60 per cent of that of Ontario. By 1967 it had drawn equal and now it exceeds Ontario by 20 per cent. The interesting feature of this development is that Ontario producers have more than held their own in turkey, hog and beef production relative to Quebec. The answer, of course, is that the quota system of the Ontario broiler board has inhibited growth and turned over a substantial market to Quebec's integrated, low cost producers. This kind of thing must not be allowed to happen on a national scale, with the imports coming from other countries.

TABLE 14
Production of Poultry Meat in Canada, by Province, 1957-61 to 1969¹

	Average 1957-61	Average 1962-66	1967	1968	1969 ²
(thousand pounds eviscerated weight basis)					
<i>Chicken and Fowl</i>					
Canada.....	362,174	490,577	597,340	597,530	680,000
Prince Edward Island.....	2,029	1,114	943	685	1,000
Nova Scotia.....	10,243	15,611	17,986	17,343	20,000
New Brunswick.....	5,529	6,536	10,161	11,262	14,000
Quebec.....	86,912	162,496	215,801	221,442	260,000
Ontario.....	149,416	172,692	202,217	198,962	222,000
Manitoba.....	25,066	27,374	32,645	34,092	40,000
Saskatchewan.....	22,454	22,307	23,570	25,284	27,000
Alberta.....	33,476	44,610	50,729	45,371	47,000
British Columbia.....	27,049	37,837	43,288	43,089	49,000
<i>Turkey</i>					
Canada.....	116,238	171,069	207,639	200,372	202,000
Prince Edward Island.....	288	148	95	56	—
Nova Scotia.....	839	1,004	1,650	1,873	2,000
New Brunswick.....	638	813	1,909	883	700
Quebec.....	14,497	24,094	35,556	35,588	38,500
Ontario.....	42,103	82,241	100,506	99,192	103,000
Manitoba.....	16,844	20,528	19,849	17,775	15,800
Saskatchewan.....	17,809	15,312	10,751	9,846	8,700
Alberta.....	15,612	16,581	19,391	18,453	16,500
British Columbia.....	7,608	10,348	17,932	16,706	16,800

¹ Total production includes output not marketed through registered processing plants.

² Preliminary estimate.

SOURCE: *Canadian Agricultural Outlook Conference 1969*, p. 91

Competition from other provinces and from imports has made provincial supply management through provincial marketing boards extremely difficult. at the same time, rapidly expanding and uncontrolled supply has led to periodic gluts and distress prices throughout the 1960's. The question of supply management is therefore a crucial one for all Canadian broiler producers.

In the case of chicken broilers, where the product is generally sold fresh in ice packs and is therefore protected to some extent from outside competition due to the difficulties of transportation and storage, provincial supply is stabilized and quotas have acquired substantial monetary value. Criticisms have been made of provincial prices and quotas and market demand estimates, but the main criticism is that for one provincial marketing board to attempt to limit output when there are other nearby sources of supply merely results in giving up some of the market to imports. National marketing boards and supply management are considered in Chapter 12 on Marketing Boards.

Egg Producers

Egg production in Canada was combined with poultry meat production and also carried out as a widespread subsidiary enterprise until the egg market collapsed in 1949. Thereafter specialized egg production grew in importance, parallel with the growth in specialized broiler production.

Small-scale egg producers are being replaced rapidly by large-scale producers. Many of these small enterprises were subsidiary enterprises on mixed farms and their loss puts a further squeeze on low farm income. In 1966, 3.5 per cent of the farms with hens had 68.9 per cent of the hens, thus indicating the wide difference between the large-scale and small-scale producers and the potential for further decline in the numbers of egg producers. Similar tendencies exist for egg-grading and packing stations; in 1966 there were only one-third as many stations as in 1951.

The two main problems of egg producers are the rapidly declining number of producers and great instability of prices. These result from a situation in which

- (a) competitive supply is expanding with large increases in scale of operation and internal economies of scale,
- (b) the product is traded both inter-provincially and internationally and
- (c) demand is both stagnant over time and highly inelastic with respect to price.

Consumption and Market Prospects

It is likely that consumption of poultry meats per capita will continue to increase; in fact the Task Force has accepted the Demand-Supply Projection estimate of a 32 per cent increase between 1964-1966 and 1980. The increase in turkey consumption is expected to be particularly dramatic. The Task Force has made the big assumption that Canadian production of broilers and turkeys will be sufficiently competitive that, with the help of the existing tariff, all Canadian consumption can be supplied out of Canadian production. At this point it is by no means clear that this will be the case. Efficiency in scheduling and production in the United States has made such advances as to threaten Canadian markets in spite of the Canadian tariffs. This situation is in marked contrast to those of beef and pork, in the production of which Canadians are competitive without protection.

It is obvious that any move to manage supply which raises costs will not be in the best long run interest of this sector.

At the same time, it is desirable that growers have access to feed grain and protein supplements at prices as competitive as possible with those of poultry producers across the border. The Task Force proposal elsewhere to eliminate the tariff on corn (but to impose "value for duty" when U.S. corn prices fall below the U.S. price support level) would be a step in the right direction. A similar step is the Task Force recommendation to eliminate all tariffs on poultry production and processing equipment.

The Task Force is convinced that, given equal access to feeds and other inputs, with the existing tariff (two cents per pound live weight or five cents dressed) to compensate for the colder climate in Canada, Canadian producers can be fully competitive with their American counterparts.

The situation facing egg producers is less favourable in regard to markets. The Demand-Supply Projections indicate that per capita consumption will fall but that total consumption will rise only modestly. As to production and competition with foreign supplies, the same arguments and conclusions apply to egg production as to broiler and turkey production. There is no reason why egg producers in Canada cannot be as efficient as their counterparts in the United States.

RECOMMENDATIONS

1. Governments and producers should accept as a target the export of 500,000 feeder cattle per year by 1980 and the production of enough beef and veal to meet Canadian consumption demands in full. Federal and provincial programs of research, extension and credit should take this objective into account.

2. Canada should initiate discussions to remove *all* tariffs on cattle and beef in order to achieve a completely free continental market.

3. Dairy farmers in Quebec and Ontario (particularly in Quebec) should consider carefully the desirability of retaining calves which are now sold at low weights in order to produce heavier veal animals or feeders. Which of these alternatives should be followed will vary from time to time and will be determined by relative prices and the availability of other opportunities for income.

4. The Task Force commends the fact that discussions are currently underway concerning beef grading and recommends continuing review.

5. The Federal Government should direct some of the funds currently made available through the Temporary Wheat Reserves Act for payments to encourage diversion of resources from grain to cattle production.

6. The Canadian Dairy Adjustment Commission should include positive incentives for milk producers to move into beef production. These are discussed in greater detail in Chapter 7 on Dairy.

7. There should be no change in tariffs on poultry and eggs.

8. Tariffs on feed and on equipment used in producing and processing livestock and poultry should be eliminated. Details are given in the Appendix to Chapter 4, International Trade.

9. Any moves in the direction of National marketing boards for poultry or eggs must be scrutinized with the greatest care to ensure that it does not reduce efficiency. This subject was discussed in considerable detail in Chapter 12, Marketing Boards.