ABSTRACT

AN ANALYSIS OF DEMAND FOR CANADIAN WHEAT UNDER THE COMMON AGRICULTURAL POLICY OF THE EUROPEAN ECONOMIC COMMUNITY

by

George C. Saba

A thesis submitted for the degree of Master of Arts.

Department of Economics and Political Science,
McGill University.

August, 1967

The adjustments and realignments which have taken place in the agricultural sectors and grain segments in particular of the member countries of the European Economic Community will, in the long-run, eliminate previous outside sources of supply of certain grades of wheat. The stimulation provided in the uniform price and structural policy, coupled with continued advances in technical knowledge are leading towards a situation in which the region will eventually become self-sufficient in soft wheats. Imports of such types will be restricted to periods of crop failures.

However, the unique nature of Canadian hard, red, spring wheats will assure the Canadian farmer of continued access to European markets where they required for blending with domestic soft wheats to produce a finer quality of bread. A development which may eventually curtail this pattern is the trend towards refinement of milling and baking techniques which would abolish the need for quality wheat.

SHORT TITLE

DEMAND FOR CANADIAN WHEAT IN EUROPEAN ECONOMIC COMMUNITY

by

GEORGE C. SABA

AN ANALYSIS OF DEMAND FOR CANADIAN WHEAT UNDER THE COMMON AGRICULTURAL POLICY OF THE EUROPEAN ECONOMIC COMMUNITY

by

GEORGE C. SABA B.A

A THESIS SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS.

DEPARTMENT OF ECONOMICS
AND POLITICAL SCIENCE,
MCGILL UNIVERSITY,
MONTREAL.

AUGUST, 1967

PREFACE

The formation of the European Economic Community (E.E.C.) im 1958 and the subsequent enactment and gradual implementation of the Common Agricultural Policy has resulted in much speculation and debate concerning possible long-run repercussions on traditional agricultural trading patterns between the "Six" and external sources.

This study is concerned with one commodity, wheat, and attempts to discuss the development of the wheat situation in the E.E.C. and the role and significance of wheat as a member of the family of grains, and to examine and evaluate past and present conditions of consumption, production, and trade, the ultimate purpose being to indicate the probable future direction of movement of the relevant variables mentioned above under new conditions, namely the Common Agricultural Policy. The interest will be centered on the possible repercussions on Canadian wheat sales to E.E.C. countries as the changes in the

latters' wheat economies develop and take force.

The approach taken will be to describe and analyse a situation in all its aspects and to construct a framework rather than to indulge in extensive and complex econometric prediction and projection which has already been undertaken to a much more complete extent than would here be possible by the Food and Agriculture Organization of the United Nations (F.A.O.) and by the E.E.C. Commission. A more modest and restricted use of regression equations is contemplated. The analysis of the environment and the changes (direction and degree) in the elements which compose it will be supplemented with simple regressions which will, on the one hand, serve to quantify particular trends and, on the other, to verify certain theoretical hypotheses.

Several people and institutions have been extremely helpful in rendering advice and direction as well as in supplying pertinent material for this study. In particular, I am indebted to my director of research, Dr. C.B. Haver for his invaluable contribution, to Dr. D.L. MacFarlane for certain suggestions on the

approach towards particular problems, to Doctors E.F. Beach and J.C. Weldon for initial guidance which helped get this work off the ground, and to Professor John Kurien for the time which he contributed to advise on the mechanics of his computer program which was used to derive the regression equations in APPENDIX C.

Many competent people of government and private institutions were kind enough to respond to specific requests for information or oblige a personal interview. In this list is included Dr. Stephen C. Schmidt of the University of Illinois; Professor Helen C. Farnsworth of the Food Research Institute, Stanford University; G.N. Irvine, H.D. Swalwell, and W.O.S. Meredith of the Board of Grain Commissioners for Canada; J.L. Leibfried and other officials of the Canadian Wheat Board in Winnipeg and Montreal; Walton J. Anderson, director of the Agricultural Economics Research Council of Canada; G. Hiscocks, F. Shefrin, and E. Jaska of the Canadian Department of Agriculture; Mrs. Ella Krucoff of the European Community Information Service, Washington; and officials and representatives of the Department of Trade and Commerce of Canada, the Dominion Bureau

of Statistics, the International Wheat Council in London, the United States Department of Agriculture, the E.E.C. Statistical Office in Brussels, the Iowa Agricultural Experiment Station, and the Pennsylvania State University College of Agriculture Experiment Station.

Finally, thanks are owed to my sister, Rachel for extensive aid in typing the manuscript.

The contribution of everyone is greatly appreciated.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

THE NATURE AND ECONOMICS OF WHEAT AND THE WORLD WHEAT SITUATION

Within the framework of the Treaty of Rome, the Common Agricultural Policy, and Regulation 19 dealing with grains, what validity can be attributed to the claim that the European Economic Community is approaching a state of self-sufficiency in wheat and hence, outside foreign sources will be relegated to positions of residuals suppliers? In the light of this development, an attempt will be made to examine Canada's future trading relations in wheat with the countries of the E.E.C.

Any discussion of this subject cannot be totally revealing if it is restricted to analysis of trade flows and patterns to the exclusion of vital comment on the nature of wheat - its wide variety of grades and qualities, its consumption pattern developments vis à vis other grains and foods, its production requirements and techniques involved, and its price and cost structure. Therefore, a description

of the commodity, wheat must precede any review of its place in an international trade atmosphere in order to fully rationalize the trade in wheat, in particular, the export of Canadian wheat to the European Economic Community.

General Observations[1]

With all due respect to the rice-eating population of the world, wheat is the principal bread grain used in the occidental world and serves as an important human dietary source of vitamins (B and E), carbohydrates and protein. In this regard, its chief competition among other grains is rye which compares favourably in nutritional content with wheat but which lacks the capacity to retain gases in the baking process to the same extent that wheat does. This property is a function of the protein qualities in the two grains. Further, wheat bread has a much

---

[1]The following exposé is largely suggested by N. Jasny, Competition Among Grains (Stanford, California: Food Research Institute, Stanford University, 1940).

larger volume and a finer texture and consistency than rye bread making it more soothing to the digestive system.

Because of this special nature of wheat, its use is largely limited to bread-making while other grains (barley, oats, corn) are primarily used for feed purposes and for other food forms.[2] Hence, certain characteristics which distinguish grains determine their most appropriate uses. As a result, consumer preferences for individual grains are, in part, predicated on the relative adaptability of grains for specific purposes. "Scales of preference exist for specific uses of specific grains, rather than for grains generally."[3] Other considerations affecting consumer demand include the income and taste of consumers, prices of individual grains and

---

[2]Oats constitute the principal grain used for horsefeed while corn and barley are fed to hogs. Inferior quality wheat is confined to use as poultry feed and is very rarely used as a source of food for livestock because of the relative difficulty of digestion (through formation of dough balls when moist) in comparison with the other grains. Barley is almost the exclusive grain used in the preparation of beer. Corn is the appropriate grain for flatbread.

[3]Jasny, op. cit., p. 69.

substitutes, and, "palatability, digestibility and appearance"[4] of grains themselves.

In a broad general perspective, the consumption of wheat is concentrated in developed or industrialized countries while the staple diet in underdeveloped or low income areas is composed primarily of rice and coarse grains.[5] The determining factor here is not a matter of preference for these coarse grains but rather their relative cheapness (compared to wheat) which is, in part, a function of the relatively greater yield potential of coarse grains. It is this yield potential which, in turn, determines the share of total agricultural land area devoted to each of these grains.

In these latter developing regions, however, forces are presently at work to increase the total and per capita share of wheat in overall cereal consumption. The increasing population and slowly rising per capita incomes together with a certain

---

[4] Ibid., p. 25.

[5] Jasny ranks the five major grains in term of yielding capacity under similar and fair climatic conditions as follows: 1. corn, 2. oats, 3. barley, 4. rye, 5. wheat (Ibid., p. 198).

whetting of appetites for wheat introduced by concessional wheat imports on special terms have caused a readjustment in dietary habits in favour of wheat. In addition, the improvements in techniques of cultivation, processing, and distribution tend to increase the effective demand or consumption of wheat at the expense of rice and coarse grains.[6]

The price structure of grains is largely based on consumer preferences. A relatively greater demand for grains for food uses (principally wheat and rye) as opposed to feed uses establishes a scale whereby the bread grains command a higher price than the feed grains. Within this overall scale, the unmatched superiority of wheat as a bread grain coupled with the resultant revealed preference for wheat by consumers has placed it as the highest-priced grain. For feed, however, the distinguishing features of grains are less distinct and important and, hence, relative prices are much more sensitive to demand and supply conditions than

---

[6]International Wheat Council, "Report in Consumption," Review of the World Wheat Situation, 1961-62 (London, 1962), p. 10.

is the case with wheat and rye where the hierarchy of preference is more stable. As a result of this situation, substitution and mixing among feed grains due to price changes reflecting production fluctuations is more prevalent than that between bread grains, particularly in the short-run. Indeed, it is this interchangeability of grains for livestock feed which has, to a large extent served to keep prices fairly closely related to one another in the long-run.[7] However, as regards human consumption, in the long-run, changes in dietary habits (tastes), income and other factors may well call forth certain adjustments in one's overall food preference scale. In fact, the competition may no longer exist between grains but rather between grains and other foods. The argument is often advanced that an increase in income will generate increased demand for meat at the expense of grains, illustrating the income inelasticity of grains.[8]

---

[7]International Wheat Council, Trends and Problems in the World Grain Economy, 1950-1970, Secretariat Paper No. 6 (London, April, 1966), p. 16.

[8]Projections for 1970 indicate that demand for wheat in Western Europe (United Kingdom, European

The exclusiveness of the wheat market is indicated by lack of response to price changes (price inelasticity) not only in the short-run but generally in the long-run. It has been observed that wheat has maintained its prior position among food grains and "has not had to give way to another grain for a long period of time,"[9] despite the trend towards declining per capita consumption of cereals in advanced countries as income increases. Unlike the movement from other grains to wheat, shifts away from wheat seem only to occur in emergencies when wheat supplies are lacking or nonexistent.

Preference among different types and grades of wheat is dependent upon their availability. As is the case with grains generally, some wheat grades and classes have specific uses while others are readily

---

Economic Community, European Free Trade Association) will be completely income inelastic for increases in income. Envisaging a total population of 360,000,000 in the region by 1970, coupled with an increase of 25% to 30% in per capita disposable income (1955 base), total demand for wheat from 1955 to 1970 would increase only with population, or by 16%, being unresponsive to income changes.

SOURCE: David L. MacFarlane and John D. Black, The Development of Canadian Agriculture to 1970 (Montreal: Macdonald College of McGill University, 1958), pp. 19-20.

[9]Jasny, op. cit., p. 84.

substitutable among each other. For example, the use of durum wheat (triticum durum), as distinct from common wheat (triticum vulgare), is confined to the preparation of alimentary pastes (spaghetti, macaroni, etcetera).[10] Common wheats are classified into soft and hard (or strong) categories. Maximum volume and finest texture bread of high protein content is baked with the use of hard, red wheats producing a yellowish colour of bread. These strong, red wheats, of which the Canadian Manitoba Northern No.1 is considered the best, generally command the highest prices among wheat grades.[11] Soft wheats produce breads, biscuits and cakes of a whiter colour at the expense of protein content, volume, and texture.[12]

The quality and quantity (yield) of grains grown is by and large dependent upon natural conditions (climate, soil) but proper breeding (which is partly

---

[10]In the E.E.C., only France and Italy possess climatic conditions favourable to the cultivation of durum wheat.

[11]Canada, Russia, and the United States are the principal producers of high-quality, hard wheats. Australian white wheat is of generally medium strength while softer or weaker wheats are grown in north-western and northcentral Europe.

[12]Jasny, op. cit., pp. 94-95.

a function of natural conditions) and other cultural practices are playing an increasingly greater role in the production of grains. The basic natural requirements for high-grade, protein-rich wheat (including durum) are a dry climate and black, heavy, weed-free soil rich in nitrogen. However, an accompanying disadvantage of arid soil is the resultant low yield (output per area of cultivation) of wheat.[13] In fact, in comparison with yields in other wheat-growing countries, a Canadian average yield of 18.5 bushels per acre during the past twenty-five years is relatively low.[14]

Cultural practices comprise the rotation of crops, the application of fertilizer and manure to the soil with appropriate use of machinery, and treatment of the soil to regulate temperature, moisture , and to prevent the growth of weeds which deprive the

---

[13]As the wheat plant matures, water is needed in large quantities. Under relatively dry conditions, any available water in the soil is absorbed in the root of the plant, thus terminating the growth of the kernels (Ibid., p. 5).

[14]Canadian Wheat Board, The Farmlands and Farms of Western Canada, Bulletin No. 3 (Winnipeg, September, 1964), p. 5.

grain plant of the essential nutrients available in the soil. The aim of these procedures is to help maintain or, more significantly, to improve both the quality of the plant and the yield. As the weakest of all grains in terms of its ability to extract the necessary nutrients from the soil, and hence, the most susceptible to damage caused by unwholesome soil, the wheat plant is generally the most responsive to cultural practices.[15] This has the effect of increasing the cost of producing wheat.

Contrary to the case of wheat, coarse grains are less demanding in terms of soil requirements and are more readily adaptable to different climatic and soil conditions than is wheat. The fact that coarse grains can be grown where no wheat can, coupled with the relatively greater yield capacity of coarse grains explains the situation whereby the world area under coarse grains exceeds that under wheat.[16] Though different regions or countries may possess certain conditions favourable to the cultivation

---

[15]Jasny, op. cit., pp. 308-321.

[16]International Wheat Council, Trends and Problems in the World Grain Economy, 1950-1970, p. 7.

of particular grains at the exclusion of others, "only the Prairie Provinces of Canada are fortunate enough to have for sale the best wheat in the world, good rye and oats, and barley suitable for all purposes other than malting. Favourable soil and climatic conditions, advanced technique of breeding and grading grain, and last but not least a great responsiveness of farmers: these combine to explain this somewhat unusual occurrence."[17]

Apart from the importance of nuances in quality and consumer preferences in the determination of prices offered for specific grains, costs of production (including marketing costs[18] from surplus to deficit regions) together with government protectionist policies also influence relative grain prices. Although the addition to price of marketing costs which are generally high in relation to grain prices may stimulate more intensive production and, hence increase yields, the effect is an adverse one

---

[17]Jasny, op. cit., p. 135.

[18]Marketing costs include, among others, transportation, storage, shipping, interest, shrinkage, insurance, inspection and weighing charges.

with respect to consumption in deficit areas. In low-income regions, in fact, the addition of burdensome marketing costs to grain prices may even be manifested in a substitution effect in which not only do people seek other carbohydrate food sources, chiefly in potatoes, but the use of grain feed for animals is restricted.

National grain policies, ordinarily incorporating protection from outside competition, reflect the aims of this sector of the economy which may be to guarantee a satisfactory income to the farmers (comparable to incomes in other sectors of the economy), and to encourage production in order to assure adequate supplies for domestic consumption or for export. However, protectionist policies in the form of minimum or fixed price guarantees, milling and import quotas and licensing and monopoly regulations result in higher domestic prices with general adverse repercussions on consumption and trade. Unlike marketing costs which are the same for all grains, government-imposed restrictions differ among grains and the various qualities of each grain with an important distinction

being made between food grains and feed grains. Though somewhat less true in some countries where the use of wheat as livestock feed is expanding and human consumption of coarse grains is increasing, in general, due to the fact that a much larger share of total wheat production than coarse grain production (the bulk of which is used for domestic feed purposes) is placed on the world market,[19] government protectionist policies are largely directed to the wheat farming element. "The policy differences reflect the degree of wealth and economic development of particular countries, their status as exporters or importers of grains, their efficiency in grain production, as well as the relative importance of the grain sector in their economies."[20]

The effect or response to protectionist measures is dependent upon the demand elasticity of the grain in question as well as the degree of substitution with

---

[19]Historically, only 8% of coarse grain production enters world markets compared to 25% of total world wheat output.

[20]International Wheat Council, Trends and Problems in the World Grain Economy, 1950-1970, p. 19.

other grains. The lower the price elasticity of demand for food grains, the less damaging are the effects of higher domestic prices emanating from the protection policies, on total consumption. In general, however, in the long-run, there is a price to be paid for stimulating domestic production through government action. The danger exists that, along with a reduction in international trade, domestic consumption in the protecting country is likely to decrease.[21] Hence, with both foreign and domestic sources of outlet reduced, domestic production may eventually decrease, perhaps even to the extent of nullifying the original purpose of the protective policies.

The World Wheat Situation

A cursory perspective of the past decade of developments leading up to and including the present world wheat situation seems appropriate at this point in order to lay the foundation for a basic framework within which to place the relative positions

---

[21]Jasny, op. cit., pp. 183-84.

of Canada and the E.E.C. which will be discussed in subsequent chapters. The approach shall be to consider trends in production, consumption, prices, and patterns of trade in a broad worldwide context before narrowing the analysis to concentrate on Canada and the E.E.C.

The result of increasing yields and/or acreage sown in wheat-producing countries has been an obvious trend towards increasing production though not without year to year fluctuations. On the basis of the distinction between developed and developing countries, the main factor influencing the increase in production in the developed countries has been the increase in yields with no or minimal extensions in acreage, reflecting the encroachment of mechanization in agriculture and the resultant improvements in techniques and cultural practices. On the other hand, with less than refined techniques and inappropriate natural conditions, the increase in production in developing regions was due in large measure to an enlargement of acreage under cultivation.[22] World wheat area,

---

[22]International Wheat Council, Trends and Problems in the World Grain Economy, 1950-1970, pp. 1-2.

production and average yields from 1948 to 1964 are shown in TABLE 1.1.

Total area devoted to wheat increased by 36% from 1948 to the 1964 record level of 215,227,000 hectares.[23] Through this period, increases were slow but fairly consistent up to 1958 after which mounting surplus stocks forced cutbacks in area until 1964 when the increase over the previous year amounted to over 8,000,000 hectares. Production increased by 71.5% during the same time period. Due to the effect of aggregation, however, the improvements in yield experienced by the technologically-advanced countries are not readily discernible upon observation of the yield relationships in TABLE 1.1, these being computed by dividing total world wheat production by total annual world wheat area. Hence, the spread between the lowest average annual yield recorded in this time interval, 950 kilograms per hectare, and the highest, 1240 kilograms per hectare does not properly reflect the true advances experienced in the major

---

[23] 1 hectare = 2.471 acres.

TABLE 1.1

WORLD WHEAT AREA, PRODUCTION AND YIELD,
1948 - 1964, INCLUSIVE

Calendar Year	Area[a]	Production[b]	Yield[c]
1948	158138	159231	10.1
1949	161392	153162	9.5
1950	171206	167096	9.8
1951	173290	171509	9.9
1952	185834	205062	11.0
1953	188715	203740	10.8
1954	188841	194852	10.3
1955	195680	206736	10.6
1956	199635	226585	11.3
1957	207009	221130	10.7
1958	207699	257599	12.4
1959	202925	243609	12.0
1960	204127	242582	11.9
1961	202859	227134	11.2
1962	207426	256282	12.4
1963	206915	238968	11.5
1964	215227	273327	12.7

[a]1000 hectares

[b]1000 metric tons

[c]100 kilograms per hectare

SOURCE: United Nations, Food and Agriculture Organization, World Crop Statistics - Area Production and Yield, 1948 - 64. (Rome, 1966).

wheat-producing regions. TABLE 1.2 presents a more realistic picture of average yield increases which occurred in Canada, the United States, Argentina, Australia, and France.

Particularly striking is the performance in France where the improvement was almost 100%. In 1951, the average wheat yield was 1670 kilograms per hectare. By 1964, it reached an unprecedented level of 3150 kilograms per hectare. Though less significant in magnitude than the French gains, the countries comprising the Big Four (Canada, the United States, Argentina, and Australia) recorded long-run increases in yields but not without occasional disturbances caused primarily by adverse weather conditions. In Argentina, a 1950 level of 1110 kilograms per hectare dropped to 770 kilograms per hectare the following year and then rose to 1370 kilograms per hectare in 1952. An almost identical situation occurred between 1956 and 1958 in Australia. Though fluctuations were not as drastic in the United States, Canada suffered two substantial reductions in annual yield - one in 1954, the other in 1961. Recoveries also followed

TABLE 1.2

WHEAT YIELDS[a] IN SELECTED COUNTRIES,
1948 - 1964, INCLUSIVE

Calendar Year	Canada	United States	Australia	Argentina	France
1948	10.8	12.0	10.2	12.0	18.0
1949	9.0	9.7	12.0	11.3	19.1
1950	11.5	11.1	10.6	11.1	17.8
1951	14.7	10.7	10.3	7.7	16.7
1952	18.0	12.4	12.9	13.7	19.6
1953	16.2	11.6	12.4	12.4	21.3
1954	8.7	12.2	10.6	14.1	23.5
1955	15.4	13.3	12.9	12.9	22.8
1956	16.9	13.6	11.5	13.2	20.7
1957	12.2	14.7	7.4	13.2	23.7
1958	12.1	18.5	13.9	12.8	20.8
1959	12.2	14.6	11.0	13.3	26.0
1960	14.2	17.6	13.7	11.0	25.3
1961	7.5	16.1	11.3	12.1	24.0
1962	14.2	16.9	12.5	14.6	30.8
1963	17.7	17.0	13.4	16.5	26.6
1964	13.6	17.7	13.8	18.6	31.5
Average[b]	13.9	14.4	12.1	13.9	22.8

[a] 100 kilograms per hectare.

[b] see footnote 24 p. 20.

SOURCE: same as TABLE 1.1.

in the succeeding years. Average[24] yearly yields through the period 1948 to 1964 for these five countries are listed in TABLE 1.2. The apparent high yield average in France in comparison with the other countries reinforces the fact that soft or weak wheats which France predominantly produces, because they are less sensitive to natural conditions, yield relatively more than hard or strong, quality wheats which comprise the bulk of wheat production in Canada and the United States, the latter to a lesser extent than the former.

Though the fifties and early sixties were characterized by large, unwieldy surplus stocks of grains in general and soft wheat in particular, in the crop years, 1964-65 and 1965-66, carryover levels have not been considered excessive because of the high volume of international trade highlighted by increasing imports by centrally-planned[25] and developing countries,

---

[24]The average is a simple, unweighted average. For Canada, the years 1954 and 1961 were not included as these were not representative years. All years for France and the United States were considered. 1957 was omitted in computing the average for Australia, and 1951 was omitted in Argentina's average.

[25]Poor harvests in Russia and China have resulted in large imports from the main export sources.

the latter being mostly of a concessional nature. With total world carryover stocks of 44,400,000 metric tons in 1964-65 (compared to an average of 56,000,000 metric tons in 1959-63) with the largest proportions in Canada and the United States accruing from bumper crops because of favourable weather conditions, a position of qualified equilibrium between supply and demand is being approached.[26] However, it must be pointed out that this equilibrium is highly unstable and is, in part due to crop failures in certain regions forcing higher import demand and creating the buoyancy in the world grain markets. In fact, the long-run trend is towards reduction of commercial wheat imports by developed countries as national support policies are made effective. "The underlying tendency to imbalance may still be present and liable to exert itself in the

---

[26]United Nations, Food and Agriculture Organization, "Long-term Developments and Contrasts in the Wheat and Coarse Grain Situations," Monthly Bulletin of Agricultural Economics and Statistics, Vol. XV (January, 1966), p.10.

United Nations, Food and Agriculture Organization Group on Grains, "Report on World Grain Situation," Monthly Bulletin of Agricultural Economics and Statistics, Vol. XV (May, 1966), p. 8.

future not only through rising stocks and pressure on prices but also with the reduction of access to import markets and the application of other impediments to trade."[27] Further, "while there is no doubt that grain farmers have in general benefited from the various programmes, the interplay of national policies in their international aspects has provided a continuing stimulus to production and a brake on the growth of world commercial trade, in some cases by insulating domestic markets from foreign competition, and in general through the provision of special incentives for investment, structural changes and productivity increases."[28]

Whereas in the early fifties, Western Europe accounted for more than half of world imports of wheat, gradually this share subsided (in some countries, considerably) as domestic production expanded and the growth of total consumption proceeded at a slow rate.[29]

---

[27] International Wheat Council, Trends and Problems in the World Grain Economy, 1950-1970, p. 5.

[28] Ibid., p. 19.

[29] Ibid., p. 3.

In France, exports of soft wheat expanded significantly. As a consequence, West European net imports as a fraction of total domestic utilization declined from 30% in 1949/50 - 1953/54 to 17% in 1959/60 - 1963/64.[30]

On a global scale, however, when consideration is taken of both commercial and concessional sales to developing countries, world trade in wheat has almost doubled since 1949/50 - 1953/54 when an average of 25,000,000 metric tons was traded. Some of the features of this increase include large increases in demand for hard (spring and winter) wheats, moderate increases for durum wheat varying with availability, fluctuating exports of semi-hard wheats, and increases in trade in soft wheat in Eastern Europe and Asia offsetting the decline of imports into Western Europe.[31]

This approach towards a balance between supply of and demand for wheat, on the demand side has been influenced by the growing significance of wheat as a food grain replacing other basic foodstuffs in developing countries as incomes and standards of

---

[30] Ibid., p. 3.

[31] Ibid., p. 2.

living begin to inch beyond subsistence levels.[32] Here, population growth and increases in income work in the same direction to increase total wheat consumption. On the other hand, in developed countries, as incomes increase, grains in general are replaced in the diet by other forms of protein and hence, the trend, though dampened somewhat by population growth (the effect of which is less than in low-income countries) has been towards declining per capita consumption. Proportionally, wheat has maintained and even increased its share in total grain consumption. TABLE 1.3 reflects the changes in consumption of grains in developed and developing countries. In the former, though overall consumption remained more or less constant, wheat increased its share at the expense of other (coarse) grains, again reflecting the superior nature of wheat. In the developing countries, total consumption increased to a significant extent. The share of coarse grains declined while that of wheat rose slightly. An important comparison is that while wheat consumption

---

[32]United Nations, Food and Agriculture Organization, "Long-term Developments and Contrasts in the World Wheat and Coarse Grain Situation," p. 11.

TABLE 1.3.

CONSUMPTION OF GRAINS AS FOOD IN DEVELOPED AND DEVELOPING COUNTRIES (EXCLUDING CENTRALLY PLANNED COUNTRIES).

Item	Developed Countries		Developing Countries	
	A[a]	B[b]	A	B
	(million metric tons)			
All grains	73.84	73.87	92.29	114.86
Of Which	(percentage)			
Wheat	78.3	81.6	43.9	44.7
Maize	11.0	11.1	21.9	23.0
Sorghum and Millets	0.2	0.2	27.0	26.8
Other Corarse Grains	10.5	7.1	7.2	5.5

[a]Average 1955 - 56 to 1957 - 58

[b]Average 1961 - 62 to 1963- 64

SOURCE: United Nations, Food and Agriculture Organization, Monthly Bulletin of Agricultural Economics and Statistics (Volume 15, January, 1966) (Rome, 1966), p. 10.

comprises over 80% of total grain consumption in the developed countries, the corresponding share is only approximately 45% in developing countries. However, according to present trends, this proportion will rise gradually as incomes rise and the shares of other grains will necessarily decline.

Whereas at present, coarse grains remain important food forms in developing countries, in developed countries, coarse grains constitute important sources of livestock feed. For the world as a whole (excluding centrally-planned countries), total utilization of wheat amounted to an average of 138,200,000 metric tons per crop year while an average of 321,400,000 metric tons of coarse grains per crop year were utilized during the period 1961/62 - 1963/64.[33] Within these totals, 209,800,000 metric tons of coarse grains , or 65.3% were used for feed purposes, 77,200,000 metric tons, or 24.1% were consumed as human food and 10.6% of the total was devoted to other purposes such as industrial uses, and seed and waste. The corresponding percentages for wheat were

---

[33] Ibid.

80.8% for food, 9% for feed (denatured and poor-quality wheat) and 10.2% for other uses. A more detailed analysis of grain consumption patterns in the E.E.C. appears in CHAPTER V.

Except for the immediate post-war period in which open market export prices of wheat rose sharply reflecting the shortage in supply, prices declined up to the late fifties with the gradual improvement in production levels (encouraged partly by the previously prevailing high prices) in the main exporting countries. The downward pressure on prices resulting from excessive surplus stocks and the protectionist attitudes in importing countries brought forth greater government participation (particularly in Canada and the United States) to assume responsibility for the handling of these surplus stocks to prevent the free prices from falling below the limit of the International Wheat Agreements.[34] Through government marketing agencies,

---

[34] The International Wheat Agreement, 1949 (revised 1953, 1956, 1959, 1962, 1965, 1967) is a pact among the main exporting (10) and importing (39) countries whose primary objectives include:

a) to assure wheat supplies at equitable and stable prices,

b) to promote and maintain the expansion and free flow of trade of wheat,
c) to overcome hardships caused to producers and consumers by excessive shortage or surpluses of supply,
d) to encourage use and consumption of wheat.

As a partial means towards these ends, a price range is established within which transactions must take place. An exporting country abiding by the principles of the International Wheat Agreement (I.W.A.) cannot sell wheat on the international market at a price higher than the maximum price declaration of the I.W.A. In this way, the importer is protected. The minimum price quotation, on the other hand, assures the exporter of a reasonable price for his wheat. For example, under the I.W.A. of 1962, the basic minimum and maximum prices established for the duration of the Agreement were respectively, $1.62 1/2 and $2.02 1/2 (Canadian currency per bushel at the parity for the Canadian dollar, determined for the purposes of the International Monetary Fund as at March 1, 1949, for No. 1 Manitoba Northern wheat in bulk in store Fort William/Port Arthur). For the crop year 1964-65, the average, open market export price quotation for the same grade of wheat was $1.85.

The most recent revision of the I.W.A. was concluded in May, 1967 during negotiations under the Kennedy Round of the G.A.T.T. The principal provisions of the new Agreement are as follows:

a) the floor and ceiling prices are to be raised to $1.95 1/2 and $2.35 1/2 , Canadian, basis No.1 Manitoba Northern at the Lakehead,
b) the new price range is to be expressed in a different formula based on American wheat shipped at Gulf of Mexico ports,
c) a new provision to commit between 4,000,000 and 4,500,000 metric tons of wheat each year for shipment to underdeveloped, needy countries to be financed by member nations,

helped alleviate the situation somewhat. A concerted effort was also made to reduce the area under cultivation in the United States. During the past five years, the movement of prices has been upward. From the import price averages cited in TABLE 1.4, the direction of price movements can be seen to be decreasing up to 1960-61 and then increasing up to the present.

The difference in the level of wheat prices and coarse grain prices is explained primarily by the respective uses of the two categories of grains. While the foremost use of wheat is confined to direct human consumption, coarse grains are bought primarily for livestock feeding as was demonstrated earlier. The yearly changes in price quotations of coarse grains in TABLE 1.4 correspond to a large extent in direction with wheat price changes but differ in absolute values. A feature of this relationship is that as wheat supplies become abundant and the prices of soft wheat decline,

---

d) the Agreement would come into effect in August, 1967.

SOURCES: International Wheat Council, International Wheat Agreement 1962 and Rules of Procedure (London, 1962).

Montreal Star.

TABLE 1.4

AVERAGE ANNUAL IMPORT PRICES OF GRAINS, 1955-56 to 1964-65[a]

Crop Year	Hard Wheats		Soft Wheats		Coarse Grains				
	Canada Man. Nor. No. 2	U.S. Hard Wint. No.2	U.S. Red Wint. No. 2	U.S. French milling	Barley U.S. No. 3	Maize U.S. Yellow No. 2	Oats Argentina	Sorghum U.S. Milo No. 2	Rye No. 2
1955-56	83.0	79.3	73.0[b]	65.1[b]	62.3[b]	70.2	66.2[b]	56.3	--
1956-57	84.8	80.6	77.9	--	--	70.8	64.1	61.6	--
1957-58	76.2	72.0	69.3	59.2	49.7	57.0	45.6	48.0	52.6[b]
1958-59	76.2	72.1	65.9	--	55.5	56.1	55.0	47.8	52.6[b]
1959-60	76.1	71.5	64.3	61.9[b]	57.6	56.8	65.3[b]	50.3	54.0
1960-61	74.1	71.9	65.3[b]	59.4	--	53.8	52.7	48.2	46.4
1961-62	77.9	76.1	66.1	64.2	61.4	55.3	55.5	50.6	63.8
1962-63	76.9	76.8	63.4	59.7	58.2	56.3	--	50.4	60.4
1963-64	80.2	78.8	69.1	64.3	58.0	60.6	56.7[b]	54.9	66.8
1964-65	80.5	77.2	68.1	64.2	60.6	62.2	57.0	54.5	59.2

[a]Quotations are c.i.f. U.K. ports in the case of wheat and c.i.f. North Sea ports for coarse grains, July-June year, in U.S. dollars per metric ton.

[b]Average of less than twelve months.

SOURCE: same as TABLE 1.3.

the price range between this latter type of wheat and coarse grains narrows and wheat grades of inferior quality become competitive in the feed grain market.[35] In terms of utilization of all grains, the largest increases, both absolutely and relatively have occurred in feed uses since 1955-56.

With regard to prospects for future consumption, in developed countries, it is expected that the total human consumption of wheat will rise slightly with population changes and total feed uses of coarse grains will increase substantially as incomes increase and shifts take place in diets from grains to other sources of protein, primarily meat. In underdeveloped countries, on the other hand, the reverse is likely to occur. Rising income acts as a force in favour of increased wheat consumption. In effect, wheat will replace coarse grains as a food staple.[36]

---

[35] United Nations, Food and Agriculture Organization, "Long-term Developments and Contrasts in the Wheat and Coarse Grain Situation," p. 14.

[36] International Wheat Council, Trends and Problems in the World Grain Economy, 1950-1970, p. 32.

With projected increases in acreage inspired by higher prices (particularly in France), and assuming a continuation of the recent trend towards rising yields, total world production of wheat is likely to increase substantially in the future (if favourable weather conditions prevail).

Finally, trade in grains in general will continue to rise though at a reduced rate. This prognostication, however, hinges upon the future policies of Russia and China with regard to their grain needs as well as climatic conditions in these countries which determine the size of their crop. The largest increase in the world trade in grains, if present trends continue is foreseen in the coarse grains trade, principally for livestock feed. With the improving income levels in Western Europe and Japan in particular, greater consumption of meat will require a greater amount of feed grains. Though policies in the E.E.C. will stimulate production of grains, import needs of coarse grains will continue to exist with the increase in livestock production in the immediate future at least. With the approach of

a state of near self-sufficiency in soft wheat for human consumption in the region, the future import needs of this type of grain will be nil, barring crop disasters. For other parts of the world, the prospects of increases in the overall commercial wheat trade will depend, in part, upon the price relationship between lower-quality wheats and feed grains. With lower wheat prices than at present and approaching feed grain prices, substitutability between wheat and feed grains may be profitable and may induce a greater volume of wheat exports for feed purposes. Further, so long as concessional supplies of wheat to developing countries persist, the outlook for future commercial sales to these regions is bleak.[37]

---

[37]United Nations, Food and Agriculture Organization, "Long-term Developments and Contrasts in the Wheat and Coarse Grain Situation," pp. 14-15.

CHAPTER II

THE CANADIAN WHEAT ECONOMY AND TRADE: STRUCTURE, DEVELOPMENTS AND TRENDS

Canada In The World Wheat Market

In the context of post-war, total world trade in wheat and wheat flour (in wheat equivalents), Canada ranks second only to the United States as an exporter. TABLE 2.1 aids in depicting the development of the wheat trade during the past twenty years and indicates the relative positions of members of the Big Four[1] during that period. Throughout this time interval, the Canadian share in the world wheat trade has been approximately one-quarter of the yearly totals (which is a decline from the pre-war era) whereas the United States has accounted for close to 40% of trade. In the past five years, Australia has improved its position on the world market partly at the expense of Argentina. Also, not indicated separately but classified under

---

[1]The Big Four refers to the four major world exporters of wheat; the United States, Canada, Argentina, and Australia.

TABLE 2.1

WORLD EXPORTS OF WHEAT AND WHEAT FLOUR BY PRINCIPAL EXPORTERS:
DISTRIBUTION BY QUANTITY[a] AND PERCENTAGE OF WORLD TRADE, CROP YEARS, 1945-46 to 1964-65[b]

Source	1945-46	1946-47	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55
Canada	373	229	205	225	232	226	345	384	278	253
	(43.0%)	(29.5%)	(22.1%)	(22.6%)	(28.1%)	(24.0%)	(32.4%)	(39.2%)	(32.0%)	(26.1%)
United States	390	397	485	504	299	366	475	317	217	274
	(45.0%)	(51.2%)	(52.2%)	(50.7%)	(36.2%)	(38.9%)	(44.7%)	(32.4%)	(25.0%)	(28.1%)
Argentina	68	60	102	61	87	103	30	29	110	132
	(7.8%)	(7.7%)	(11.0%)	(6.1%)	(10.5%)	(10.9%)	(2.8%)	(3.0%)	(12.6%)	(13.6%)
Australia	36	47	96	122	114	127	99	99	71	93
	(4.2%)	(6.1%)	(10.3%)	(12.3%)	(13.8%)	(13.5%)	(9.3%)	(10.1%)	(8.2%)	(9.6%)
Others	--	43	41	83	94	120	115	150	193	219
	--	(5.5%)	(4.4%)	(8.3%)	(11.4%)	(12.7%)	(10.8%)	(15.3%)	(22.2%)	(22.6%)
World Total	867	776	929	995	826	942	1064	979	869	971
	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)

Continued

TABLE 2.1--Continued

Source	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65[c]
Canada	301	267	319	295	277	354	365	330	552	434
	(28.6%)	(19.8%)	(26.8%)	(22.4%)	(20.9%)	(23.1%)	(20.8%)	(20.8%)	(26.5%)	(23.3%)
United States	346	549	402	443	510	662	718	642	861	730
	(32.8%)	(40.7%)	(33.7%)	(33.7%)	(38.5%)	(43.3%)	(41.1%)	(40.6%)	(41.4%)	(39.2%)
Argentina	115	98	78	103	77	40	86	66	102	156
	(10.9%)	(7.3%)	(6.5%)	(7.8%)	(5.8%)	(4.6%)	(4.9%)	(4.2%)	(4.9%)	(8.4%)
Australia	102	126	61	75	116	183	230	182	288	236
	(9.7%)	(9.3%)	(5.1%)	(5.7%)	(8.7%)	(12.0%)	(13.2%)	(11.5%)	(13.8%)	(12.7%)
Others	190	310	332	399	346	260	350	362	279	307
	(18.0%)	(22.9%)	(27.9%)	(30.4%)	(26.1%)	(17.0%)	(20.0%)	(22.9%)	(13.4%)	(16.4%)
World Total	1054	1350	1192	1315	1326	1529	1749	1582	2082	1863
	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)	(100.0%)

[a]millions of bushels.

[b]July - June crop years.

[c]Subject to revision.

SOURCE: Annual Reports of the Canadian Wheat Board.

the category, "Others", France and the Soviet Union are becoming important wheat exporters.

In 1964, wheat and wheat flour exports constituted 60% of the total value of all Canadian agricultural exports.[2] As a share of all grains, wheat and wheat flour exports in 1964 accounted for approximately 95% of this commodity group compared to 80% in 1950-51.[3] In terms of the relative importance of wheat as an earner of foreign exchange vis à vis total Canadian exports of all goods, the share of wheat and wheat flour exports as a percentage of total exports (the two totals measured in value units) has hovered around 10% (with minor yearly deviations) during the past decade, which is a decrease from the proportion for the previous decade as well as the earlier pre-war period. For example, the average proportion for the period 1934-38 was 19.5% and that

---

[2]F. Shefrin, Trends in Canada's Agricultural Trade Pattern, Economics Branch, Canada Department of Agriculture (Ottawa, December, 1965), p. 2.

[3]G.A. MacEachern and D.L. MacFarlane, "The Relative Position of Canadian Agriculture in World Trade," Proceedings of Conference on International Trade and Canadian Agriculture (Banff, Alberta, January, 1966), p. 98.

for 1951-55 was 13.8%.[4] So as not to be misleading, this decline in shares in Canada is attribable not so much to a significant decline in wheat exports but rather to the increase in total export trade values. This is consistent with the movement during the past thirty years towards predominance of the Canadian industrial sector which has resulted in a drop of agriculture's percentage contribution to G.N.P.[5]

In the United States, on the other hand, though relatively insignificant when compared to total exports, the share of wheat exports in this total has increased over the pre- and immediate post-war period largely due to an increase of shipments to developing countries on a concessional basis.

Though the share of Canadian wheat exports in the world market has declined from earlier periods, absolute export quantities have increased (with yearly fluctuations) in concert with expanded world demand

---

[4]The Commonwealth Economic Committee, Grain Crops, A review of Production, Trade, Consumption and Prices Relating to Wheat, Wheat Flour, Maize, Barley, Oats, Rye and Rice (annual; London).

[5]Shefrin, op. cit., p.1.

and with the subsequent rise in the number of outlets. In 1938, Canada exported wheat and wheat flour to seventy-four different countries. By 1963, this number had risen to ninety-three.[6] Export volume has increased from 177,000,000 bushels in the 1935-39 period to an average of close to 407,400,000 bushels during the crop years, 1960/61 - 1964/65 **(APPENDIX TABLE A)** with an all-time high of 594,547,631 bushels in 1963-64 which included the hugh sale to Russia of 184,348,385 bushels after the latter's disastrous harvest of 1963. Excluding the Russian purchase which distorts the true trend, the average is 370,500,000 bushels.

Closer examination of some of the more distinctive features of **APPENDIX TABLE A** reveals that exports to Western Europe as a whole have shown a more or less declining trend during the past decade. This is reflected in both sub-categories, the European Economic Community and Other Western European Countries. For individual countries, by far the most important importer of Canadian wheat and wheat flour has been

---

[6] Ibid., p. 5.

Great Britain on account of the inability of its agricultural sector to supply its own needs, basically because of unfavourable climatic conditions. Due to the fact that Canada is a member of the Commonwealth whose commercial policy is based on the preferential tariff system, it provides the bulk of Britain's foreign wheat requirements. In the years 1955/56 - 1959/60, this trade channel made up over one-third of Canada's total wheat exports. For the period 1960/61 - 1964/65, Britain accounted for slightly over 20% of total Canadian wheat exports.

The export of wheat to the Common Market countries has been erratic in some cases (Italy, France, Netherlands) depending upon havests in these particular countries while West Germany and Belgium-Luxembourg have been consistent sources of outlet for Canadian wheat with West Germany importing roughly half of the yearly E.E.C. totals.[7] Since this is the trade channel which is

---

[7]For example, with record production levels recorded in the E.E.C. as a whole (with France and Italy leading the way) during the crop year 1962-63, import requirements declined. However, the drop in imports was mainly at the expense of the suppliers of soft

of direct concern in this study, detailed analysis of the composition of Canadian exports of wheat (wheat flour is excluded from the totals now) to this area is warranted.

TABLE 2.2 presents a breakdown of exports of Canadian wheat into grade classifications to each of the members of the E.E.C. from 1948-49 to 1964-65. First of all, on the aggregate level, the fact that there are wide disparities in import figures among the "Six" is easily explained by a combination of population and domestic production. France and Italy being the prime suppliers of wheat in the Community,

---

wheats. Argentina, Australia, and the United States, the latter being a source of both soft and strong wheats to the E.E.C.

The need for high-quality, high protein wheat for blending purposes was substantially maintained. A reduction of 9,400,000 bushels in Canadian exports to the area (from 64,100,000 bushels in 1961-62 to 54,700,000 bushels in 1962-63) was relatively small when compared to decreases in shares experienced by the other members of the Big Four. While there are disparities among import figures for individual member countries, depending upon domestic production and the quality of same, on the aggregate, this need for quality wheat placed Canada as the largest supplier of wheat (50% of total E.E.C. imports) during that year.

SOURCE: Canada Dominion Bureau of Statistics, Agriculture Division, The Wheat Review, Catalogue No. 22-005, monthly (Ottawa: Queen's Printer, November, 1963), p. 3.

TABLE 2.2

GRADE COMPOSITION OF CANADIAN WHEAT EXPORTS TO E.E.C. COUNTRIES,[a]
CROP YEARS 1948-49 TO 1964-65 INCLUSIVE

Crop Year	1 Northern	2 Northern	3 Northern	4 Northern	Number 5	Number 6	Others Red Spring	Garnet
France								
1948-49	-	-	-	-	-	-	-	-
1949-50	-	-	-	-	-	-	-	-
1950-51	-	-	-	-	-	-	-	-
1951-52	-	-	-	-	3,717	-	-	-
1952-53	-	-	-	-	1,287	-	-	-
1953-54	-	-	-	-	709	-	-	-
1954-55	-	-	-	-	-	-	-	-
1955-56	-	628	-	-	-	-	-	-
1956-57	-	-	-	-	-	-	-	-
1957-58	-	-	-	-	-	-	-	-
1958-59	-	-	51	213	-	-	-	-
1959-60	-	153	-	-	-	-	-	-
1960-61	886	997	-	-	-	-	-	-
1961-62	396	-	-	-	-	-	-	35
1962-63	198	190	-	19	-	-	-	-
1963-64	1,293	784	-	109	-	-	-	-
1964-65	1,374	896	-	157	-	-	-	-

Continued

TABLE 2.2--Continued

Crop Year	Winter	Eastern	2 C.W. Amber Durum	3 C.W. Amber Durum	Ex. 4 C.W. Amber Durum	4 C.W. Amber Durum	Other Durum	Total
France								
1948-49	-	-	-	-	-	-	-	-
1949-50	-	-	-	-	-	-	-	-
1950-51	-	364	-	237	-	-	-	601
1951-52	-	360	-	2,124	-	561	-	6,762
1952-53	-	-	-	-	-	-	-	1,287
1953-54	-	-	-	-	-	-	-	709
1954-55	-	-	-	-	-	-	-	-
1955-56	-	-	-	-	583	525	-	1,736
1956-57	-	-	-	128	557	3,340	-	4,025
1957-58	-	-	-	-	-	-	-	-
1958-59	-	-	-	819	-	269	-	1,352
1959-60	-	-	3,190	2,127	-	-	-	5,470
1960-61	-	-	6,679	848	344	112	37	9,903
1961-62	-	-	482	23	25	-	75	1,036
1962-63	-	-	1,615	638	322	3,778	118	6,878
1963-64	-	-	-	285	316	1,095	1,002	4,884
1964-65	-	-	215	1,202	158	1,053	498	5,553

Continued

TABLE 2.2--Continued

Crop Year	1 Northern	2 Northern	3 Northern	4 Northern	Number 5	Number 6	Others Red Spring	Garnet
West Germany								
1948-49	-	-	527	-	-	-	-	-
1949-50	-	-	-	-	-	-	-	-
1950-51	-	-	-	-	353	63	-	-
1951-52	-	-	-	842	11,018	1,928	1,838	-
1952-53	-	46	8,149	6,102	5,795	336	-	-
1953-54	1,020	5,547	7,836	1,884	983	-	-	-
1954-55	-	5,655	13,633	1,712	-	-	-	365
1955-56	-	1,610	11,687	1,546	7,542	-	326	113
1956-57	-	532	14,585	2,189	13,999	-	19	-
1957-58	-	280	15,067	2,079	3,821	58	259	-
1958-59	-	706	17,988	5,456	1,856	-	-	-
1959-60	34	228	7,275	7,276	779	-	62	-
1960-61	168	1,346	14,430	4,935	285	-	184	-
1961-62	5,974	15,656	17,459	1,262	-	-	-	-
1962-63	2,615	12,680	2,565	49	-	-	-	38
1963-64	1,117	25,468	2,317	253	75	-	-	-
1964-65	393	11,717	715	-	-	-	-	-

Continued

TABLE 2.2--Continued

Crop Year	Winter	Eastern	2 C.W. Amber Durum	3 C.W. Amber Durum	Ex. 4 C.W. Amber Durum	4 C.W. Amber Durum	Other Durum	Total
West Germany								
1948-49	-	-	-	-	-	-	-	527
1949-50	-	-	-	-	-	-	-	-
1950-51	-	-	-	-	-	-	-	416
1951-52	-	-	-	-	-	-	147	15,773
1952-53	-	-	-	1,631	-	1,846	209	24,114
1953-54	-	-	-	3,015	-	414	-	20,699
1954-55	-	-	-	1,452	-	787	-	23,604
1955-56	-	-	-	605	5,103	564	332	29,428
1956-57	-	-	-	376	2,086	2,501	-	36,287
1957-58	-	-	-	959	4,875	2,338	-	29,736
1958-59	-	-	-	2,556	3,577	2,845	-	34,984
1959-60	-	-	446	2,440	4,210	2,105	19	24,874
1960-61	-	-	2,971	4,375	3,510	736	39	32,979
1961-62	-	-	1,830	816	824	120	-	43,941
1962-63	-	-	2,646	3,729	2,678	991	-	27,991
1963-64	-	59	1,727	2,940	3,149	172	-	37,277
1964-65	-	-	3,004	520	4,123	37	-	20,509

[a]Thousands of bushels.

SOURCE: Courtesy of Board of Grain Commissioners for Canada.

TABLE 2.2--Continued

Crop Year	1 Northern	2 Northern	3 Northern	4 Northern	Number 5	Number 6	Others Red Spring	Garnet
Italy								
1948-49	-	-	-	-	-	-	289	-
1949-50	-	-	-	-	-	-	-	-
1950-51	-	1,529	68	-	4,902	-	-	-
1951-52	-	720	8,401	-	353	-	-	-
1952-53	4,201	5,494	2,135	1,480	42	-	-	-
1953-54	122	213	48	-	-	-	-	-
1954-55	558	417	-	-	-	-	-	-
1955-56	1,460	1,328	-	-	8	-	-	-
1956-57	1,892	175	-	-	-	-	-	-
1957-58	460	542	-	-	-	-	-	-
1958-59	596	506	-	-	-	-	-	-
1959-60	392	56	-	-	-	-	-	-
1960-61	1,374	101	-	-	-	-	-	-
1961-62	3,372	481	-	-	-	-	-	-
1962-63	4,915	-	-	-	-	-	-	-
1963-64	973	541	55	2,189	-	-	-	-
1964-65	2,245	-	-	1,648	-	-	-	-

Continued

TABLE 2.2--Continued

Crop Year	Winter	Eastern	2 C.W. Amber Durum	3 C.W. Amber Durum	Ex. 4 C.W. Amber Durum	4 C.W. Amber Durum	Other Durum	Total
Italy								
1948-49	-	2,450	-	980	-	-	-	3,719
1949-50	-	7	209	402	-	-	-	618
1950-51	-	-	186	3,215	-	2,487	-	12,387
1951-52	-	-	-	382	-	1,105	-	10,961
1952-53	-	-	-	134	-	9	-	13,495
1953-54	-	-	-	-	-	-	-	383
1954-55	-	-	-	-	-	-	213	1,188
1955-56	-	-	-	-	3,686	-	-	6,482
1956-57	-	-	-	-	349	-	-	2,416
1957-58	-	-	-	-	-	-	-	1,002
1958-59	-	-	-	-	-	-	-	1,102
1959-60	-	-	-	302	1,403	-	-	2,153
1960-61	-	-	10,667	2,421	370	-	-	14,933
1961-62	-	-	-	25	-	-	-	3,878
1962-63	-	-	-	-	-	-	-	4,915
1963-64	-	-	-	116	-	-	-	3,874
1964-65	-	-	21	-	-	-	-	3,914

Continued

TABLE 2.2--Continued

Crop Year	1 Northern	2 Northern	3 Northern	4 Northern	Number 5	Number 6	Others Red Spring	Garnet
Belgium-Luxembourg								
1948-49	202	4,135	168	-	7	-	375	-
1949-50	617	7,054	862	326	51	-	215	427
1950-51	4	3,044	1,128	2,219	4,109	476	755	1,638
1951-52	75	464	3,234	5,651	3,038	883	1,123	449
1952-53	352	4,948	4,025	2,856	6,075	704	1,166	211
1953-54	81	7,909	1,572	1,702	503	-	587	174
1954-55	40	11,414	722	1,749	170	-	883	272
1955-56	-	6,213	3,478	226	2,856	-	2,921	137
1956-57	4	3,386	1,346	1,192	3,868	-	6,127	-
1957-58	-	4,239	1,791	1,550	1,246	-	3,312	-
1958-59	-	2,998	2,216	1,432	373	-	2,574	-
1959-60	333	2,669	1,668	1,403	42	-	2,819	-
1960-61	308	4,773	1,266	313	41	-	3,422	-
1961-62	405	8,400	428	166	-	-	1,141	165
1962-63	1,546	6,193	216	179	-	-	1,459	-
1963-64	1,276	11,352	169	864	101	-	916	40
1964-65	1,253	10,959	452	742	-	-	586	-

Continued

TABLE 2.2--Continued

Crop Year	Winter	Eastern	2 C.W. Amber Durum	3 C.W. Amber Durum	Ex. 4 C.W. Amber Durum	4 C.W. Amber Durum	Other Durum	Total
Belgium-Luxembourg								
1948-49	-	5	75	-	-	-	-	4,967
1949-50	-	116	539	11	-	-	36	10,254
1950-51	217	1,913	173	600	-	47	10	16,333
1951-52	-	111	19	80	-	211	-	15,338
1952-53	7	284	-	109	-	61	62	20,860
1953-54	-	757	-	-	-	-	-	13,285
1954-55	-	204	-	19	-	-	19	15,492
1955-56	96	82	-	-	230	-	-	16,239
1956-57	-	-	-	-	11	47	58	16,039
1957-58	-	-	-	107	96	409	70	12,820
1958-59	11	20	30	346	-	655	-	10,655
1959-60	-	-	461	564	-	751	-	10,710
1960-61	-	178	875	53	67	660	212	12,168
1961-62	25	170	477	-	-	28	53	11,458
1962-63	-	19	90	110	-	122	47	9,981
1963-64	-	205	135	390	11	37	-	15,496
1964-65	-	288	369	626	190	52	11	15,528

Continued

TABLE 2.2--Continued

Crop Year	1 Northern	2 Northern	3 Northern	4 Northern	Number 5	Number 6	Others Red Spring	Garnet
Netherlands								
1948-49	361	-	-	-	-	-	-	-
1949-50	-	-	-	-	-	-	-	-
1950-51	-	-	30	-	1,133	10	-	-
1951-52	-	2,355	4,078	-	5,516	-	-	-
1952-53	1,124	5,725	2,389	54	6,133	-	-	-
1953-54	252	4,412	1,720	-	401	-	-	-
1954-55	16	7,449	2,323	301	-	-	19	-
1955-56	-	464	324	53	7,488	149	21	89
1956-57	-	17	13	226	10,934	-	-	-
1957-58	-	19	88	117	20,918	31	22	25
1958-59	-	51	-	88	7,364	152	-	-
1959-60	41	160	34	1,725	5,213	-	602	-
1960-61	-	110	112	124	5,214	196	516	-
1961-62	48	2,373	74	148	255	34	517	38
1962-63	639	3,488	-	-	-	-	499	105
1963-64	79	2,274	-	272	214	-	83	19
1964-65	83	2,693	19	37	-	-	18	-

Continued

TABLE 2.2--Continued

Crop Year	Winter	Eastern	2 C.W. Amber Durum	3 C.W. Amber Durum	Ex. 4 C.W. Amber Durum	4 C.W. Amber Durum	Other Durum	Total
Netherlands								
1948-49	-	-	-	-	-	-	-	361
1949-50	-	-	-	-	-	-	-	-
1950-51	-	-	-	-	-	-	-	1,173
1951-52	-	-	-	-	-	-	-	11,949
1952-53	11	65	-	-	-	94	-	15,595
1953-54	-	30	-	-	-	-	-	6,815
1954-55	-	-	-	-	-	-	-	10,108
1955-56	102	40	-	-	-	-	-	8,730
1956-57	-	-	-	-	-	-	-	11,190
1957-58	-	455	-	-	-	19	37	21,731
1958-59	-	170	-	-	28	-	-	7,853
1959-60	-	-	-	38	-	18	-	7,831
1960-61	-	-	316	-	-	-	37	6,625
1961-62	-	-	81	-	-	-	29	3,597
1962-63	-	18	-	-	-	-	-	4,749
1963-64	23	76	104	50	-	-	-	3,194
1964-65	-	214	252	56	38	-	-	3,410

Continued

imports are relatively low into these countries though they fluctuate inversely with domestic harvests. Abnormally poor harvests have occasioned relatively large imports to satisfy the needs of a fairly large population. Due to land restrictions which inhibit the rise of a wheat growing sector, the Netherlands relies on imports to meet its requirements. Imports from Canada have varied according to specific quality demands. For similar reasons, West Germany and Belgium-Luxembourg have been large net importers (West German totals exceeding the totals of Belgium-Luxembourg because of the relatively greater population) with Canada supplying substantial amounts of specific grades in particular.

By far the bulk of Canadian wheat exports to West Germany and Belgium-Luxembourg has traditionally been composed of strong, spring wheats required foremost for blending with domestic (and other imported) soft wheats to produce a much better quality loaf of bread than would be the case if only soft wheats were used. Price considerations may determine the relative proportions of the various

types of strong wheats imported but with the possible exception of Manitoba Northern No. 1 type wheat,[8] supply limitations seldom exist. The distribution of exports by grades to Belgium-Luxembourg is not uniform though Manitoba Northern No. 2 is almost consistently the largest component but clearly the concentration lies in the hard wheat categories. Also, minimal, though again, not regular quantities of durum wheat are imported to fill domestic voids.

With regard to the composition of exports to West Germany, it is immediately apparent that a heavy emphasis is placed on Manitoba Northern Nos. 2 and 3 grades though large exports of other strong wheats have periodically occurred. Unlike Belgium-Luxembourg, the combination of a fairly large population and the inability to cultivate its own has warranted large (relative to imports into other E.E.C. member countries) and consistent imports of durum wheats, in some years approaching, and in others, even exceeding 10,000,000 bushels.

---

[8]Classification of the various types of wheats appears in APPENDIX D.

Insofar as the Netherlands are concerned, with needs for all types of bread wheats, grade composition of imports from Canada has varied from year to year depending upon imports from other sources. During the last decade, two distinct phases are apparent. From 1955-56 to 1960-61, imports of the strongest wheats, Manitoba Northern Nos. 1, 2 and 3 were minimal with Number 5 wheat comprising almost all of the total imports from Canada. On the other hand, from 1961-62 to 1964-65, as total imports from Canada declined, Manitoba Northern No. 2 wheat was the principal quality desired. Throughout the period, durum wheat imports from Canada were relatively insignificant, and at times, non-existent.

Finally, while fluctuating with domestic production and imports into these countries from other sources, the primary role of Canadian exports to France and Italy has been to supply strong wheats for blending purposes[9] and durum wheats where domestic supplies

---

[9]From among the E.E.C. countries, Italy is the largest importer of Manitoba Northern No. 1 wheat from Canada.

are insufficient. However, the relatively meagre quantities of strong wheats exported to France is explained by the fact that the quality of the French blé de force approaches comparability with some American hard wheats (CHAPTER IV) and hence, less imports are required to provide satisfactory blends of wheats. With regard to durum wheat, large imports from Canada are usually a signal of poor harvests in France and Italy which are the only two producers in the E.E.C. For example, in the crop year, 1960-61, Canadian exports of durum wheat to France and Italy alone totalled over 17,000,000 bushels or almost 70% of total wheat exports to these two countries during that year.

Exports to the Communist Bloc countries of Eastern Europe have been sporadic and inconsistent and have varied inversely with the harvests in the individual countries. For example, as mentionned above, crop failures in Russia and other East European countries in 1963 resulted in a record 270,670,785 bushels of wheat being imported from Canada in the crop year,

1963-64, the bulk of which was destined for Russia. In the following year, with improved climatic conditions, the increase in the amount of wheat harvested was manifested in a substantially reduced import total. However, for the crop year, 1965-66, total purchases of wheat and wheat flour by Russia alone amounted to over 222,000,000 bushels.[10]

Total exports to South American countries, though small and with the exception of Argentina, have almost doubled in the past decade but not without fluctuations during the period. The export figures to Central American countries, again, though relatively small, have shown a surprising degree of regularity with the exception of 1963-64 and 1964-65 when sales of almost 15,000,000 bushels of wheat to Cuba disrupted the consistency. These countries, apart from not producing enough wheat themselves to meet their needs, import semi-strong and strong wheats from Argentina, the United States, and to a lesser extent, from Canada primarily to blend with the soft, poor bread-baking quality wheat

---

[10]Shefrin, op. cit., p. 23.

which they grow.

Among the Asian countries, Japan and the Philippines and latterly, Communist China have been the principal importers of Canadian wheat while exports to India and Pakistan under aid programs - chiefly the Columbo Plan - have varied greatly. Through the past decade, exports of Canadian wheat to Japan have constituted an increasingly significant portion of total Canadian wheat exports. At present, the Japanese market absorbs over 15% of the total wheat export trade. The case of Mainland China is analagous in some respects to the Russian situation where crop failures have necessitated large purchases of wheat from abroad. In recent years, from 1960-61 to 1964-65, unlike earlier periods when virtually no western wheat was imported into China, the amount of wheat imports from Canada has averaged approximately 55,000,000 bushels. On October 28, 1965, a long-term contract was signed between Canada through the Canadian Wheat Board and the China National Cereals, Oils and Foodstuffs Import and Export Corporation for the delivery of between 112,000,000 and 186,700,000 bushels of Canadian wheat to China over a three-year period, August 1, 1966 to

July 31, 1969.[11]

Relationships In The Domestic Wheat Economy

Reverting now to a discussion of wheat within the Canadian economy, some of the more distinctive features and trends shall be outlined. Though the cultivation of grain crops for export to the European continent may be traced as far back as the French régime in Canada (then, only what is now Quebec and Ontario), it was only after settlement of the western prairies in the middle and late nineteenth century that the production of grains became an important aspect of the Canadian economy. Factors such as favourable climate, the potentially large markets, the relatively small initial capital investment and the ease of storage[12] combined to inspire the development and subsequent growth of grain cultivation in Canada.

Considering all qualities and grades of wheat,

---

[11] Ibid.

[12] D.A. MacGibbon, "The Future of the Canadian Export Trade in Wheat," Contributions to Canadian Economics (University of Toronto Studies - History and Economics, Vol. V; Toronto, 1932), p. 11.

TABLE 2.3 shows that total seeded acreage had increased regularly (with minor fluctuations) from 1908-1909 to the early twenties and since then has shown a tendency to fluctuate around a mean of twenty-three to twenty-four million acres. Less consistent have been the movements in average yearly yield per seeded acre. Yields have ranged from an all-time low of only seven bushels per acre in 1937-38 to 26.8 bushels per acre in 1952-53. Total production has varied with yield changes and acreage sown but the trend in recent years, with increasing area under wheat, has been towards increased production levels. The largest crop year output totals co-incide with the years in which the largest yields were recorded; 701,973,000 bushels in 1952-53 and 723,442,000 bushels (26.2 bushels per acre) in 1963-64.[13]

---

[13] Though unofficial as yet and only estimates, indications are that records will be established during the crop year, 1966-67 for total production of wheat and yields. The output figure is estimated at 840,000,000 bushels which is 16% higher than the previous record established during the 1963 harvest. Favourable conditions in all vital aspects (sunny weather, adequate soil moisture) contributed to this bumper crop and resulted in record yields which were 21% higher than in 1965 and averaged 27.5 bushels per acre. Another all-time record was the acreage seeded to wheat; 30,298,100 acres.

SOURCE: "New Records on the Farm," Bank of Montreal Business Review, October 28, 1966.

TABLE 2.3

ALL WHEAT, CANADA:
ESTIMATED ACREAGE, YIELD, AND PRODUCTION, CROP YEARS,
1908-09 TO 1966-67

Crop year	Seeded acreage[a]	Average yield per seeded acre[b]	Production[c]
1908-09	6,610,300	17.0	112,434
1909-10	7,750,400	21.5	166,744
1910-11	8,864,500	14.9	132,078
1911-12	11,095,900	20.8	231,237
1912-13	10,996,700	20.4	224,159
1913-14	11,015,000	21.0	231,717
1914-15	10,293,900	15.7	161,280
1915-16	15,109,400	26.0	393,543
1916-17	15,369,700	17.1	262,781
1917-18	14,755,800	15.8	233,743
1918-19	17,353,900	10.9	189,075
1919-20	19,126,000	10.1	193,260
1920-21	18,232,400	14.4	263,189
1921-22	23,261,200	12.9	300,858
1922-23	22,422,700	17.8	399,786
1923-24	21,886,100	21.7	474,199
1924-25	22,055,700	11.9	262,097
1925-26	20,789,800	19.0	395,475
1926-27	22,895,600	17.8	407,136
1927-28	22,460,200	21.4	479,665
1928-29	24,119,100	23.5	566,726
1929-30	25,155,000	12.0	302,192
1930-31	24,897,900	16.9	420,672
1931-32	26,355,100	12.2	321,325
1932-33	27,182,100	16.3	443,061
1933-34	25,991,100	10.8	281,892
1934-35	23,985,000	11.5	275,849
1935-36	24,115,700	11.7	281,935
1936-37	25,604,800	8.6	219,218
1937-38	25,570,200	7.0	180,210
1938-39	25,930,500	13.9	360,010

TABLE 2.3--Continued

Crop year	Seeded acreage	Average yield per seeded acre	Production
1939-40	26,756,500	19.5	520,623
1940-41	28,726,200	18.8	540,190
1941-42	21,949,300	14.3	314,710
1942-43	21,560,200	25.8	556,067
1943-44	16,733,900	16.9	282,377
1944-45	22,677,300	18.3	414,859
1945-46	23,198,200	13.6	316,320
1946-47	24,375,700	16.9	411,601
1947-48	24,122,200	14.0	338,506
1948-49	23,705,300	16.1	381,413
1949-50	27,387,000	13.4	366,028
1950-51	27,311,200	17.1	466,490
1951-52	25,254,400	21.9	553,678
1952-53	26,164,100	26.8	701,973
1953-54	26,383,600	24.0	634,040
1954-55	25,539,000	13.0	331,981
1955-56	22,659,500	22.9	519,178
1956-57	22,781,100	25.2	573,040
1957-58	21,560,700	18.2	392,719
1958-59	22,149,100	18.0	398,077
1959-60	24,500,200	18.2	445,077
1960-61	24,538,300	21.1	518,379
1961-62	25,316,000	11.2	283,394
1962-63	26,816,900	21.1	565,554
1963-64	27,566,200	26.2	723,442
1964-65	29,685,800	20.2	600,424
1965-66	28,282,200	24.0	677,917
1966-67	30,298,100	27.5	840,000

[a]Acres.

[b]Bushels.

[c]Thousand bushels.

SOURCE: Courtesy of Canada Dominion Bureau of Statistics.

The relationship among production, domestic disappearance, and exports between 1945-46 and 1964-65 is depicted in TABLE 2.4. Domestic disappearance for all uses throughout the period has not shown any upward trend and has averaged approximately 151,000,000 bushels a year. Total supply during a crop year, on the other hand, which includes carryover stocks from the previous crop year, production, and a minimal amount of imports had increased steadily during the first decade of the post-war period with expansion in production levels exceeding the increments in total exports resulting in an increasingly greater accumulation of surplus stocks. At a visual glance, it may be seen, however, that during the second post-war decade, a closer correspondence (relative to the previous ten years) between export changes and production changes gave rise to more or less consistent levels of carryover stocks. For example, despite the record export level of 1963-64, the carryover stocks at the end of that crop year decreased only slightly from those of the previous crop year because production had also attained a record level of over 723,000,000

TABLE 2.4

SUPPLY AND DISPOSITION OF WHEAT, CANADA[a]

	1945-46[b]	1946-47	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54	1954-55
SUPPLY										
Carry-in at Beginning of Crop Year	258,073	73,600	86,141	77,710	102,411	112,200	189,203	217,178	383,185	618,675
Production	316,320	411,601	338,506	381,413	366,028	466,490	553,678	701,973	634,040	331,981
Imports										
Wheat	f	16	771	288	1	6	3	7	452	172
Wheat Flour[c]	74	--	54	1	3	6	14	10	4	6
Total	75	16	825	289	4	12	18	17	457	178
Total Supply	574,468	485,217	425,472	459,412	468,443	578,701	742,898	919,168	1,017,682	950,834
DISPOSITION										
Exports[d]										
Wheat	278,070	163,388	133,505	184,235	179,457	185,039	304,722	329,026	208,835	211,288
Wheat Flour[c]	65,116	76,033	61,477	48,094	45,680	55,921	51,103	56,501	46,246	40,622
Total	343,186	239,421	194,982	232,329	225,137	240,961	355,825	385,527	255,081	251,909
Apparent Domestic Disappearance[e]	157,682	159,655	152,779	124,672	131,107	148,538	169,895	150,456	143,926	162,176
Carryover at End of Crop Year	73,600	86,141	77,710	102,411	112,200	189,203	217,178	383,185	618,675	536,748

Continued

TABLE 2.4--Continued

	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
SUPPLY										
Carry-in at Beginning of Crop Year	536,748	579,574	733,546	648,454	588,001	599,588	607,841	391,058	487,247	459,440
Production	519,178	573,040	392,719	398,077	445,077	518,379	283,394	565,554	723,442	600,424
Imports										
Wheat	3	132	f	2	4	3	f	10	--	--
Wheat Flour[c]	17	15	1	2	3	4	5	3	--	--
Total	20	148	1	4	7	7	6	13	--	--
Total Supply	1,055,946	1,152,762	1,126,266	1,046,535	1,033,085	1,117,974	891,240	956,625	1,210,689	1,059,864
DISPOSITION										
Exports[d]										
Wheat	272,260	230,856	279,912	257,421	240,321	317,568	326,069	303,980	--	--
Wheat Flour[c]	40,000	33,540	40,381	37,125	36,970	35,682	31,953	27,265	--	--
Total	312,260	264,396	320,293	294,546	277,291	353,249	358,022	331,245	594,548	399,594
Apparent Domestic Disappearance[e]	164,113	154,820	157,519	163,988	156,206	156,884	142,160	138,133	156,201	147,246
Carryover at End of Crop Year	579,574	733,546	648,454	588,001	599,588	607,841	391,058	487,247	459,440	513,024

TABLE 2.4--Continued

[a]Thousand bushels.

[b]Time period in crop years.

[c]Conversion factor: prior to 1955-56, 1 barrel to 196 pounds of flour equivalent to 4.5 bushels of wheat and from 1955-56, 2.3 bushels per hundredweight.

[d]From 1955-56 includes bagged seed wheat.

[e]Total Supply less exports and carryover at end of crop year.

[f]Less than 500 bushels.

SOURCE: Canada Dominion Bureau of Statistics, Agriculture Division, Handbook of Agricultural Statistics: Part I - Field Crops, 1908-63, Catalogue No. 21-507, Occasional (Ottawa: Queen's Printer, 1964), p. 182.

bushels. The average annual carryover amounts from 1955-56 onward were 560,000,000 bushels.

Institutions And Arrangements Regulating The Canadian Wheat Economy And Trade: The Canadian Wheat Board, The Board of Grain Commissioners for Canada, And The International Wheat Agreement

In July, 1935, recognizing the importance of the grain-growing sector of the economy as one of the top foreign exchange earners and the need to encourage re-opening of trade channels closed during the depression in the early thirties, the government created an agency, The Canadian Wheat Board which would be responsible for the orderly marketing of Western grains on interprovincial and export markets. As well, the intention was to provide western farmers with certain guarantees, partially in the form of minimum prices for their grain following the extremely low prices paid for cereals during the early thirties. Thus, the need for price stability (and subsequent income security) , coupled with the desire to re-open and expand world markets for wheat (and oats and barley) were the main forces instrumental in establishing the

Wheat Board.[14] Earlier attempts at the turn of the century and during the twenties to provide for such an organization which would deal with the marketing of wheat and maintain certain safeguards for the farmer, though initially successful, eventually all failed due to lack of consistent attitudes on the part of farmer and government alike. Absence of total co-operation and participation from both sides hamstrung efforts to preserve these organizations. However, some farmers sought to attain their goals through formation of co-operatives.

At the outset, in 1935, the Canadian Wheat Board Act created a voluntary organization to purchase all wheat offered to it by Western Canadian farmers. It was not until the emergency situation in World War II that all wheat destined for commercial disposal was required to be marketed through the Board. Further, in order to avoid destabilizing and potentially dangerous price speculation, on September 27, 1943, trading in wheat futures was suspended on the Winnipeg

---

[14]Overseas representation is based in London, Rotterdam, and Tokyo.

Grain Exchange and that decision still is in force today.[15] The control which the Board exercises over the marketing of Western grain is both effective and extensive and ranges from the issuance of permit books to producers (upon application) for deliveries to elevators[16] to the loading of grains on carriers for export. "With regard to quantitative marketing controls, the Board may regulate or prohibit the delivery, sale, other disposition or milling of grain."[17]

As regards pricing policy, the government of

---

[15]United States Department of Agriculture, Foreign Agricultural Service, Canadian Wheat Marketing, FAS-M-140 (Washington, July, 1962), p. 1.

[16]Permit books are used to assure equitable distribution (among producers) of storage facilities, particularly during periods when supply exceeds elevator capacities. Delivery quotas which are set yearly to regulate the flow of grains into elevators are subject to withdrawal in years when storage space is sufficient to handle all deliveries. It is only under conditions of shortage of space caused by bumper crops that quotas are effectively applied. In such cases, producers must seek other means of storing the amount of grain which cannot be delivered to elevators under quotas imposed.

[17]Montell Ogdon, Canadian Agriculture - Its Competitive Position, U.S. Department of Agriculture, Foreign Agricultural Service, Report No. 110 (Washington, July, 1958), p. 46.

Canada[18] annually establishes minimum or initial prices for each grain and the respective grades and authorizes the Board to pay this amount to farmers upon delivery of their grain to any elevator which acts as an agent for the Wheat Board.[19] Though a certain amount is deducted from the stated initial price of a bushel of grain to cover transportation costs from the elevator to west coast (Vancouver) ports or to the Lakehead (Fort William/Port Arthur), elevator handling fees and Wheat Board operation costs,[20] interim payments of varying sizes (based on prospects of buoyant market conditions which foretell a surplus on the Board's operations expenses)

---

[18]The Wheat Board is presently answerable to the Minister of Agriculture.

[19]In circumstances in which the Board is unable to dispose of the wheat at prices equal to or greater than the initial payment, it is the government which bears the deficit. This support by the government provides the effective guarantee to the producer.

[20]For example, in 1960-61, deductions for freight and handling charges for Manitoba Northern No. 2 wheat alone amounted to over $.18 while the initial payment was $1.36. This reduced the actual initial payment to $1.18.

SOURCE: U.S. Department of Agriculture, Foreign Agricultural Service, Canadian Wheat Marketing, p. 3.

have been forthcoming to the farmers on a fairly regular basis. In effect, these payments constitute advances on the final payment to farmers, the latter sum (varying with quality of grain) being the distribution of surplus funds on the Board's account at the close of the crop year.[21] APPENDIX TABLE B lists initial payments (prior to deduction of fixed charges) for each grade of wheat as well as adjusted, interim and final payments since 1950-51. The sum of these amounts comprises the realized price shown (prior to deduction of Prairie Farm Assistance Act levy of 1%).[22] In 1962-63, the guaranteed minimum price for Manitoba Northern No. 1 was raised to $1.50 (in store Fort William/Port Arthur or Vancouver) from $1.40 which had been the price since 1950-51. Initial payments for other grades of wheat are lower and vary according to quality as is evident from the table.

---

[21] In other words, the Wheat Board transfers to the producers all the money accruing from the sale of grains, deducting only administrative and sales expenses.

[22] The funds collected are credited to the Prairie Farm Emergency Fund, created by the Prairie Farm Assistance Act which went into effect in 1939-40. Payments from the Fund are destined to producers in selected areas on acres harvested with a yield of under eight bushels per acre.

These realized prices paid to producers are reflections of the average prices of Canadian wheat (basis in store, the Lakehead) on the world wheat market as quoted by the Board (TABLE 2.5). The determination of these prices is a combination of many factors. One of the more important is the schedule of prices offered by competitors, chiefly, the United States. The quality of wheats offered, vis à vis foreign types as well as the distribution of the various grades of wheat relative to total domestic supply are both influencing factors, particularly in relation to demand conditions. Weight must also be accorded to freight rate and foreign exchange rate changes. Finally, the mechanism offered by the Winnipeg Grain Exchange in bringing together buyer and seller and hence, establishing the confrontation between demand and supply forces is a key in determining daily prices.[23]

The marketing of the deliveries of wheat to Western elevators is the responsibility of the Wheat

---

[23]W. Riddel, The Canadian Wheat Board: History and Functions, A pamphlet prepared for the Wheat Board.

TABLE 2.5

YEARLY AVERAGE CANADIAN WHEAT PRICES,[a] INTERNATIONAL WHEAT AGREEMENT; BASIS IN STORE LAKEHEAD

Grades	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	1964-65
One Northern	173	174	168/1	162/3	166/2	165/7	167/4	189/7	196/1	203/3	198/3
Two Northern	168/7	170/4	164/7	158/3	163	162/5	163/3	187/7	195/2	200/3	195/3
Three Northern	166/7	164/3	158	151	153/4	155/5	161/3	186/7	193/5	197/4	190/5
Four Northern	162/5	158	151/4	140/3	143/1	150/2	158	181/7	187/2	190/5	184/5
Number 5	154/6	133/6	140/1	127/4	140/2	147	152/3	177/7	181/4	184/4	180/2
Number 6	151/2	129/1	136	123/4	138/1	145	150/7	176/7	179/3	179/4	176/3
Feed	147/7	125/1	133	120/6	135/1	143	147/4	172/7	175/7	176/4	173/3
1 C.W. Garnet	158/4	148/7	153/5	155/6	158	155/3	163/1	187/7	192/1	186/4	183/4
2 C.W. Garnet	157/1	145/3	149/5	151/6	154	151/3	159/1	183/7	189/6	184/3	182/1
3 C.W. Garnet	155/6	142/4	146/5	148/6	151	148/3	156/1	181/7	188/5	183/3	181/1
1 C.W. Amber Durum	271/5	262/6	243/5	196/3	189/5	178/1	189/5	343/5	257/2	217/6	197/1
2 C.W. Amber Durum	269/6	259/3	242/4	195/3	186/6	171/6	186/4	342/3	256/2	216/6	194/4
3 C.W. Amber Durum	268/2	254/4	240/4	185	173	166/2	183/4	340/3	251/1	207/2	188/7

[a]Expressed in cents and eighths per bushel.

SOURCE: Courtesy of Board of Grain Commissioners for Canada.

Board which continually seeks to maintain a strong, competitive position in all markets through elaborate market promotional activities.[24] Sales of wheat to domestic and foreign buyers are negotiated by the Board itself or by private brokers acting as agents of the Board.

As a member of the International Wheat Agreement, Canada, through the Wheat Board maintains prices within bounds set forth in the Agreement and rigidly complies with regulations dealing with Minimum trade (export) quotas. Prior to revision of the International Wheat Agreement of 1965 which expires on July 31, 1967,[25] with the trend towards rising world prices reflecting increasing production costs, pressure was being exerted

---

[24]As mentioned above, trading in wheat futures is no longer lawful as a means of conducting trade in wheat. As an alternative, and as a means of encouraging sales of wheat to foreign countries, a deferred pricing policy is in effect whereby the buyer has the right to declare the final price up to eight market days after date of call on shipment from St. Lawrence or Atlantic ports and from fifteen to twenty-two days from date of loading from Pacific Coast ports depending upon destination of shipment.

SOURCE: U.S. Department of Agriculture, Foreign Agricultural Service, Canadian Wheat Marketing, p. 6.

[25]See footnote 34, CHAPTER I.

on the upper price limit of the Agreement. Several exporting countries, including Canada had emphasized the desirability of raising both price limits in order to recognize the reality of world price movements. However, the increases recently agreed to in Geneva were less than what was hoped for, insofar as Canada's representation was concerned.[26] In order that universal approval could be reached on the terms of the overall Agreement, a further concession was necessary in the form of a withdrawal of a demand by Canada that there be guaranteed access to European wheat markets through minimum imports.

As a result of the new terms, it is expected that, with rising world market prices, the Canadian producer stands to benefit. If past patterns are reliable bases for conjecture on future trends, under the three-

---

[26]An increase in the upper and lower price limits of the 1965 I.W.A. was deemed necessary in order to "keep up with the rising costs of producing wheat, and provide an additional small reward for the special skills required for wheat farming. The House of Commons Standing Committee on Agriculture had advocated a fifty cent per bushel increase."

SOURCE: "Wheat-Pool Welcome Isn't All Enthusiasm," Montreal Star, May 17, 1967.

year Agreement, the average world wheat price will move and eventually settle somewhere in the middle of the spread between floor and ceiling prices. With minor deviations, this would mean increases of about eleven or twelve cents per bushel to an average of around $2.24 (Canadian funds) for Manitoba Northern No. 1 at the Lakehead. Though factors which may alter this pattern include world supply and demand conditions, it is suspected that new price limits would condition world traders to a higher price level.[27]

The most convincing aspect in the extensive trade promotion programs conducted by the Wheat Board is the inherent superior quality of the product being sold and the success of quality control as practiced in Canada. The Board of Grain Commissioners for Canada, which, like the Wheat Board , is attached to the Department of Agriculture is the agency whose primary function is to assure proper grading and handling of grain. Specifically, its jurisdiction covers

---

[27]"Grain Deal Means Higher Price Trend," Montreal Star, May 15, 1967, p. 18.

"the grading and weighing of any grain, the deduction made from any grain for dockage or shrinkage, any shortage appearing upon delivery of any grain in or out of any elevator, the unfair or discriminatory operation of any elevator, the deterioration of any grain during storage or treatment, and the refusal or neglect of any person to comply with the provisions of the Canada Grain Act 1930."[28] From the time the first samples are collected at harvesttime until the grain is finally delivered to its destination, the Board of Grain Commissioners is responsible for ensuring consistency of quality.

Inspection for grading purposes takes place as the grain moves through inspection points (Winnipeg, Edmonton, and Calgary) en route to terminal or mill elevators. Samples taken during these inspections are used to determine the official grade after which time no mixing of grades is permitted. Further assurances given to buyers with regard to quality specifications are provided through requirements that all wheat must

---

[28]U.S. Department of Agriculture, Foreign Agricultural Service, Canadian Wheat Marketing, p. 8.

be cleaned before being exported and inspectors are continually taking samples as the grain is being loaded with authority to stop the loading if for some reason, the quantities involved do not conform to the specifications stipulated on the loading notice. Early in each crop year, the Committee on Western Grain Standards of the Board of Grain Commissioners is formed to establish standard samples of the statutory grades of grain as well as other commercial grades in order to facilitate the handling of grain which cannot be assigned to the statutory grades. The standard samples of grains under both categories specify minimum requirements with respect to grading factors. For the crop year, 1965-66, these standard samples are categorized in **APPENDIX D**.

With such rigorous procedures, the foreign buyer is assured that he will get the grade and quality of Canadian wheat specified in his purchase contract. It is in this way that the Canadian sales programs are effectively stimulated even though wheat trading is not engaged in directly by the Board of Grain Commissioners.[29]

---

[29]Ogdon, op. cit., p. 56.

The hard, spring wheats, Manitoba Northern Nos. 1 to 4 have traditionally comprised between 60% and 75% of all wheats inspected and graded in Western Canada with Numbers 2 and 3 forming the bulk of this quantity. In 1960-61, Manitoba Northern No. 2 accounted for 41.1% of total wheat inspected in the Prairies.[30]

The Quality of Canadian Wheat: Its Significance on the World Wheat Market and Future Outlook[31]

Repeated claim is made in this paper that the hard, red, spring wheats grown in Western Canada are acknowledged throughout the world to be the finest bread wheats. Some of the characteristics of Canadian hard, red, spring wheats have been indicated in the general discussion of wheat qualities in CHAPTER I. The following attempts to outline the reasons for this position and to speculate on its future relevance in the light of developments in the world wheat trade

---

[30] U.S. Department of Agriculture, Foreign Agricultural Service, Canadian Wheat Marketing, p. 9.

[31] The following discussion is drawn from a comprehensive paper on the subject written by G.N. Irvine, "Wheat and Its Quality," a study prepared for the Board of Grain Commissioners for Canada. Excerpts are included in APPENDIX D.

and advances achieved in the milling and baking processes.

The high regard in which Canadian wheat is held in world markets and the consistent availability of sources of outlet is due to the following contributing factors, among others:

1. the high intrinsic standard of milling and baking quality,
2. the high degree of quality control exercised by the Board of Grain Commissioners such that the quality variation from grade to grade is well defined and reliably maintained,
3. the wide range of available qualities and prices,
4. the large quantities available at any time throughout the year which eliminates the possibility of wild destabilizing price fluctuations,
5. the maintenance of effective market information services and customer relations programs.

Presently, Canadian wheat exports are comprised primarily of hard, spring required for blending purposes and also of other wheats shipped to areas in order to meet deficit grain situations.[32] In the latter case, the intrinsic quality of the Manitobas is less significant than some of the other advantages of

---

[32]The wheat flour exports to previously colonial areas of the world have gradually been displaced by wheat exports as these regions become independent and establish their own milling industries.

Canadian wheat outlined above which are available to foreign buyers. The demand for wheat among the nations of the world is diverse and is clearly a function of the quantity and quality of domestic production and the type of bread habitually consumed. This is stated to reveal that restrictions do exist insofar as immediate extensions of Canadian hard wheat exports to previously untapped or insignificant markets in Asia and Africa are possible. The availability of cheaper wheats of average quality to fill domestic voids eliminates some Canadian types from consideration. It is in this domain that price competition becomes vital in the meantime since it is only through the lapse of time that consumption patterns, propelled by improvements in the standard of living in these underdeveloped countries can change and only then can increases in the demand for hard wheats for blending purposes be realized.

However, even in highly developed, sophisticated nations in which consumer preference is for bread baked with quality wheats, a danger looms that these presently reliable and vital sources of outlet for Canada

(and the United States) may be substantially curtailed in the light of the surging influence of technology and mechanization in the milling and baking industries and the resultant readjustments in the world market for wheat. The new automated baking methods gradually being introduced throughout the industrialized world are capable of producing high-quality bread comparable to that baked with strong, red wheats but without using these types.[33] Utilization of lower quality wheats is equally effective. A greater interchangeability among wheats is now possible without sacrifice to desired quality. Therefore price considerations become of prime importance.

These developments present a dilemna for the Canadian wheat farmer. With the world wheat market reorienting itself to lower quality wheats and as Canadian hard, red, spring wheats become less vital,

---

[33]In the new methods, the strength of the flour required to produce a given quality of bread is significantly lower than that required by traditional methods. As well, the amount of water that the dough absorbs is substantially increased. Both these factors diminish the need for Canadian hard, red, spring wheats to produce desired results and increase the interchangeability between Canadian spring wheat and other wheats of relatively inferior qualities.

the pressure on the farmer, caused by declining world prices will be to produce a new, higher-yielding wheat slightly lacking in the intrinsic qualities inherent in the Manitobas but at least satisfying requirements of domestic and foreign millers.[34] "With world demand moving to a lower quality wheat, Canada has no choice but to recognize it."[35] A domestic incentive is provided by the fact that the prairie livestock industry requires new, higher-yielding, high-energy wheat as a source of cheaper feed. It is anticipated that prairie plant breeders are within three to five years of developing a wheat that would meet both these needs and which would result in yield increases of between 30% and 60% of present levels.[36]

---

[34]The drop in quality (basically, in the level of gluten) which may result from breeding a new type of higher-yielding wheat is not considered tragic since we are presently maintaining a quality standard considerably in excess of the requirements of the majority of our current markets. Further, Canada is expected to hold its share in world competition with the aid of a superior marketing system, according to Irvine, op. cit., p. 20.

[35]Harold Dodds, "The Case For A Higher-Yielding Wheat," Country Guide, April, 1967, p. 18.

[36]Ibid.

Therefore, given past trends, and keeping in mind the special stature of Canadian wheat, projections of exports for the immediate future (up to 1970) are not dim by any means, according to a study prepared for the Economic Council of Canada[37] as well as to other sources.[38] With strong possibilities for upward movements depending upon purchases by Communist countries,[39] Downs projects a total export figure of 400,000,000 bushels by 1970 thus constituting nine-sixteenths of total agricultural exports. Exports to traditional markets are expected to be preserved with the United Kingdom continuing to be the largest customer followed by Japan, the European Economic Community and Mainland China. A more detailed discussion of future exports to the E.E.C. will be reserved for the final chapter, CHAPTER V.

---

[37]J.R. Downs, Export Projections To 1970, Staff Study No. 8, Economic Council of Canada (Ottawa: Queen's Printer, December, 1964), pp. 12-15.

[38]A breakdown of short-term Canadian wheat exports to its principal markets is provided in D.R. Campbell, "Alternatives and Opportunities For Canada in International Trade in Agricultural Products," Proceedings of Conference on International Trade and Canadian Agriculture, p. 404.

[39]The future of such sales will depend on production levels in the U.S.S.R. as well as the extent of competition provided by the other world wheat suppliers.

CHAPTER III

THE COMMON AGRICULTURAL POLICY OF THE E.E.C. WITH SPECIAL REFERENCE TO REGULATION 19 ON GRAINS

The Treaty Establishing the European Economic Community (The Treaty of Rome) enunciates the basic guiding principles and objectives of a common agricultural policy within the overall plan of European integration although precise measures for its implementation and fulfillment were not spelled out in the original Treaty.[1] With these terms of reference, the framers of the Treaty, recognizing the sensitivity of the agricultural sector saw fit to allow sufficient time for formulation of a comprehensive scheme covering the entire breadth of agricultural activity in the Community in the first phase of the transitional period, then to be followed by gradual implementation of the final proposals. The end of the transitional period, December 31, 1969, was envisaged as the time at

---

[1] An outline of Article 39 of The Treaty of Rome dealing with the agricultural sector is presented in APPENDIX B.

which the new common policy would be in full force and wholly operational. The diverse nature of agriculture in the Community and the differing (and sometimes contradictory) policies pursued by national governments to protect the agricultural sector complicated the task of devising a suitable common policy agreeable to all members. Further, the challenge of automation and mechanization on the farm contrasting with the traditional, small-unit, village-peasant type farms resisting change presented special problems. In effect, then, the prime concern of those responsible for drawing up proposals for a common agricultural policy, though mindful of the inherent difficulties and possible dislocations was, through some basic measures of readjustment and reorientation, to build an economically viable sector commensurate with twentieth-century realities.

Article 43 of the Treaty stipulates that the E.E.C. Commission must convene a convention of member states within two years of the date of entry into force of the Treaty in order to discuss, review, and

compare individual agricultural policies with the intention of submitting proposals for the working out and putting into effect of specific regulations and details of a common agricultural policy and organizational structure to replace the then existing national policies and organizations. These proposals were understood to be effective only after agreed upon and ratified by the Council of Ministers. In compliance with this Article, delegations from each of the member states met at Stresa in Italy from July 3-12, 1958 at which time the question of gradual alignment of prices of primary products, particularly cereals, was raised.[2] As a result of these consultations, the Commission presented proposals to the Economic and Social Committee of the Community[3] on November 7, 1959 for the planning and execution of the common agricultural policy. In particular, these proposed regulations encompassed the following commodities; cereals, sugar, dairy

---

[2]European Economic Community, Official Spokesman of the Commission, Background to the Harmonization of Cereal Prices in the E.E.C. (Brussels, December, 1964), p. 1.

[3]See APPENDIX B.

produce, beef and veal, pigmeat, poultry, eggs, fruit and vegetables, and wine.

With regard to cereals, which is the principal concern here, following the general guidelines stated for all agriculture in Article 39 of the Treaty,[4] it was resolved that the most practical and feasible approach was to divide the process of harmonization and integration into two stages. Based on the concept of a transitional or readjustment period, the prospective alignment of policies and equalization of all cereal prices throughout the Community by the end of this period is to be preceded by an interval in which price and policy changes would be paced and tending towards equalization. The underlying purpose was to minimize possible hardships imposed on farmers in particular as a result of the planned changes since grain prices in Germany, Luxembourg, and Italy will be reduced while those in France, and the Netherlands will increase to the new level. The abolition of all national controls (customs duties, quotas) and policies

---

[4] Ibid.

on trade is replaced by a common policy vis à vis intra-Community trade and trade with third countries. A system of levies, variable according to price differences, is the main regulator of trade between the members of the E.E.C. and outside sources as well as between members though by the end of the transitional period, levies imposed on trade between members will have been abolished since only one price will then exist for each grain.

The main ideas and concepts embodied in these proposals were overwhelmingly approved by the members of the Economic and Social Committee on May 6, 1960 who concurred that the final draft of the Commission, before submission to the Council for ratification, should formulate "the chief objectives of the common agricultural policy during the transition period with a view to preparing the amalgamation of the six markets by a gradual harmonization of the conditions of production, a gradual alignment of prices, the removal of distortions of competition, the expansion of intra-Community trade and co-ordination of commercial

policies."[5]

Subsequently, in October, 1960, debate on these issues took place in the European Parliament[6] where, in particular, the German representatives indicated their concern that the policy measures proposed (the alignment of prices) may discriminate against German farmers who receive the highest prices paid in the Community for their grains. The fact that it was now taken for granted that a common market in farm products necessarily implied a common price level,[7] along with the complications of German resistance to lower bread-grain prices delayed the progress towards agreement on common prices and transitional adjustments. Although the principles of the levy and single-price system as originally proposed were ratified, the actual level of prices (the setting of which was vital for the functionning of the levy system) remained an unsolved problem.

---

[5]European Economic Community, Official Spokesman of the Commission, op. cit., p. 2.

[6]See APPENDIX B.

[7]European Economic Community, Official Spokesman of the Commission, op. cit., p. 3.

The question developed into crisis proportions by the end of 1961 when the French threatened to withhold their consent for advancement into the second of the three stages of the common market, scheduled for January, 1962 unless an agreement was reached to launch the common agricultural policy as soon as possible. The degree of urgency was reflected in the Council session of December, 1961 - January, 1962 which lasted twenty-three days and which resulted in the decision on January 14, 1962 to adopt rules and regulations recommended by the Commission for cereals (wheat and coarse grains) as well as for pigmeat, eggs, poultry, fruits and vegetables, and wine.[8] The coming into force of these regulations was set at July 30, 1962. Henceforth, the discussion will be limited to grains policy and, in particular, to Regulation 19 on "The Gradual Establishment of a Common Organization of the Market in Grains."

---

[8]Subsequently, regulations have been adopted for rice, beef and veal, fats and oils, dairy products and sugar. Together with the regulations of January 14, 1962, over 90% of the Community's agricultural production is now subject to the common agricultural policy.

The variable levy and single-price system (at the end of the transition period), along with a series of support prices is the primary and dominating feature of the policy whose aim it is to guarantee and stabilize farm income and at the same time providing a substantial degree of protection from foreign competition by application of the variable levy equal to the price difference between exporting and importing country prices. This development towards a common and uniform policy structure fusing both domestic and commercial policies was to replace the existing, independent, national policies and regulations of each country whose use of protective and support devices ranged from import duties and licensing and monopoly state trading (O.N.I.C. in France) and export subsidies to domestic milling quotas. It is to be emphasized here that Regulation 19, in creating a uniform system throughout the Community did not establish immediate equal prices for each grain but rather defined upper and lower price limits, different in each country, which would be in force during the transition period up to July 1, 1967 by

which time all disparities in price will have been gradually eliminated and a common basic target price (with allowances for slight deviations) as well as a single threshold price and a single method of determining intervention prices and a single frontier point for determining c.i.f. prices from third countries will prevail in the entire Community.

In conjunction with a variable import levy, the common grain policy of the E.E.C. distinguishes among three basic price relationships.[9] The core of the

---

[9]The following are the main sources consulted for the grains policy of the common agricultural policy:

Sol Sinclair, Common Agricultural Policy of the EEC and Its Implications for Canada's Exports, Sponsored by the Canadian Trade Committee of the Private Planning Association of Canada (Montreal, 1964).

Thomas M. Klein, The European Economic Community's Common Agricultural Policy and Its Impact on U.S. Exports, Board of Governors of the Federal Reserve System Staff Economic Studies No. 19 (Washington, July, 1966).

International Wheat Council, Review of the World Wheat Situation, Annual (London).

L.P. Schertz, Basic Provisions of European Economic Community Grain Regulations, U.S. Department of Agriculture, Foreign Agricultural Service (Washington, June, 1963).

price structure in grains is the target price for each

Hans G. Hirsch, The Fluctuation of EEC Variable Levies, U.S. Department of Agriculture, Economic Research Service, ERS-Foreign-41 (Washington, Sept., 1965).

_____, The Uniform Grain Price in the European Economic Community, U.S. Department of Agriculture, Economic Research Service, ERS-Foreign-110 (Washington, March, 1965).

Thomas A. Warden, U.S. Agriculture's First Year Under EEC Variable Import Levies, U.S. Department of Agriculture, Economic Research Service, ERS-Foreign-134 (Washington, July, 1965).

Geoffrey Hiscocks and Lakdase Hulugalle, "Wheat in the EEC," International Journal of Agrarian Affairs, Vol. III, No. 6: Agriculture and the European Common Market II (August, 1963).

European Economic Community, "EEC Commission Submits Grain Price Proposals to Council of Ministers," Press Release, November 6, 1963.

European Economic Community, Commission Spokesman Group, Common Grain Price (Brussels, November, 1963).

European Economic Community, Official Spokesman of the Commission, op. cit.

U.S. Department of Agriculture, France's Key Role in the Grain Sector of the European Common Market, FAR-122 (Washington, April, 1963).

S.C. Schmidt, Commodity Structure and Regional Distribution of EEC Imports: The Formative Years 1951-1959. Part I - Food, Beverages and Tobacco, and Oils and Fats, University of Illinois College of Agriculture Research Report AERR-70 (Urbana, Illinois, February, 1965).

grain[10] from which all other prices are derived. Taking wheat as an example, target prices (prix indicatif) for a national quality standard, which are determined annually for each member country during the transition period represent wholesale level prices in the greatest deficit area into which the greatest amount of wheat moves.[11] "Target prices.....are set at levels considered necessary for providing a socially satisfactory income for E.E.C. producers."[12] At the conclusion of the transition period in the common market stage, there will be only one deficit area for the Community as a whole, Duisburg, Germany. Due consideration to transport costs is reflected in the

---

[10]These regulations apply to all grains.

[11]These areas in each member country are:

Belgium - Brussels/Antwerp
France - Marseilles
Germany - Duisburg
Netherlands - Utrecht/Rotterdam/Zaandam
Italy - soft wheat - southern Italy
durum wheat - northern Italy

[12]S.C. Schmidt, "Agriculture and the European Common Market," Illinois Agricultural Economics, Vol. IV, No. 1, University of Illinois Agricultural Experiment Station,(January, 1964), p. 30.

derived target prices which are those established for regions other than the main deficit area. The difference between the basic target price and the derived prices is made up of freight costs from the specified market to the deficit area. The farther the distance a surplus production center is from the deficit region, the higher are freight costs and hence, the lower are the derived target prices. Therefore, target prices in each country will range between fixed limits; an upper limit for the main deficit region and a lower limit reflecting prices in surplus production centers. For wheat, the target prices in the largest deficit areas in each of the "Six" fixed at the time of introduction of the new system in August, 1962 for the crop year, August 1, 1962 to July 31, 1963 were as follows:[13]

	U.S. dollars per bushel	U.S. dollars per metric ton
France.....	2.66	97.75
West Germany.....	3.26	119.80

[13]International Wheat Council, "Report on Consumption," p. 50.

Italy.....	3.03	111.35
Belgium.....	2.81	103.27
Luxembourg.....	3.20	117.60
Netherlands.....	2.52	92.61

Hence, the German target price of $3.26 U.S. per bushel constituted the upper limit price for the whole Community while the price of $2.45 U.S. per bushel ($90.04 U.S. per metric ton), being a derived target price in the largest surplus area in France represented the lowest target price in the Community. During the transition period, six sets of price ranges (one set for each country) for each grain will prevail. These will be reduced to a single common basic price level with allowances for lower, derived prices for each grain by the end of the period.[14]

Related to these target prices is a system[15] of intervention prices (prix d'intervention) which

---

[14]Though target prices are announced at the beginning of a crop year, provision is made for adjustments (invariably, upward) to take into account, among others, storage and interest costs.

[15]The term, system here is used to refer to the situation in which derived target prices exist warranting derived intervention prices. Adjustments in target prices during a particular crop year are reflected in the corresponding intervention prices in a similar manner.

are the prices at which the Community (the individual national governments in the transition stage) is obliged to buy wheat from the producers. In fact, it is a guaranteed minimum support or selling price for producers at the wholesale level, ranging between 90% and 95% of the target price. Intervention prices fixed for the crop year 1962-63 as of August, 1962 were as follows:[16]

(prices are quoted in U.S. dollars per bushel with the U.S. dollars per metric ton figures appearing in parentheses)

	Basic Intervention Price in Largest Deficit Area	% of Basic Target Price	Derived Intervention Price in Largest Surplus Producing Area
France.....	2.40 (88.20)	90	2.33 (85.63)
West Germany...	3.03 (111.35)	93	2.92 (107.31)
Italy.....	2.81 (103.27)	93	2.72 (99.96)
Belgium.....	2.61 (95.92)	93	-
Luxembourg.....	3.04 (111.72)	95	-
Netherlands....	2.31 (84.89)	91	-

As a means of preserving the system and re-establishing target prices when the free market prices differ from these latter prices, wheat which is bought

---

[16]International Wheat Council, Review of the World Wheat Situation, 1961-62, p. 51.

by the government at intervention prices cannot be resold on the domestic market at less than the relevant target price unless it has been declared unfit for human consumption. Therefore, the freely negotiable, actual wholesale market price for standard quality wheat in the E.E.C. will fluctuate between the target price and the intervention price in existence in the particular region in which the transactions take place. The maintenance and effectiveness of these imposed limits is assured by the role of the intervention agency (the individual governments in the transition stage) as a purchaser and the fact that wholesale prices are unlikely to exceed the prescribed target prices since imports of equal quality would enter the market beyond that level.

The principal protectionist device employed to guard against foreign competition and to encourage production and trade within the E.E.C. is the <u>variable levy</u> (prélèvement) imposed on wheat imported from third countries (as well as from member E.E.C. countries during the transition period). The levy, which replaces

all previous forms of trade interference, is determined on the basis of the difference between the price of imported foreign wheat[17] and the home price of wheat. The reference price used in the importing country for calculating the levy is the threshold price (prix de seuil) which is directly related to the basic target price in each of the member countries of the E.E.C. The level of the threshold price is set so as to bring the selling price of imported wheat up to the level of the basic target price and thus nullify any price advantage possessed by imported wheat. More precisely, the threshold price is equal to the relevant target price in each country, less, the importer's margin and internal transportation and handling costs from the predetermined port of entry[18] to the greatest deficit

---

[17] For third countries, this price is the most favourable c.i.f. price. For E.E.C. member countries, it is the free frontier price.

[18] For wheat, these locations, for individual countries are:

Belgium - Antwerp
France - Marseilles
Germany - Emmerich
Luxembourg - Steapenich
Netherlands - Rotterdam
Italy - soft wheat - Naples
durum wheat - Genoa

area in which the basic target price obtains; plus a lump sum (montant forfaitaire) or intra-Community preference which serves to give producers an advantage over third country producers;[19] plus or minus an adjustment for quality differences so as to relate national quality standards to the Community quality standard.[20] During the transitional interval, because threshold prices are linked directly to target prices, one threshold price, varying with monthly adjustments in target prices, is established in each member state

---

[19] In other words, this stated lump sum is not added to the target price in calculating the levy for imports from member countries.

[20] To illustrate the principle involved, the following hypothetical prices are assumed;

$2.00 per bushel of wheat in Country X

$2.50 per bushel of wheat in Country Y

If the quality of wheat were identical in both countries, the above values would be true reflections of the prices in the respective countries and no adjustment in price for quality differences is necessary. However, if the quality of a bushel in country X were superior (inferior) to that in country Y, the price of a bushel of wheat of country X quality would be greater than (less than) $2.50 in country Y.

Exact quality coefficients are determined for these quality differences. The quality adjustment is 0 in the case of France because the French quality standard equals the E.E.C. standard.

valid for all ports of entry. These six separate threshold prices will be reduced to one uniform price applicable throughout the Community by July 1, 1967. The initial threshold prices set for the crop year, 1962-63 as of August, 1962 were as follows:[21]

(in U.S. dollars per bushel)

	Soft (bread) Wheat	Durum Wheat
France	2.62	3.11
West Germany	3.32	3.48
Italy	3.00	3.91
Belgium	2.69	2.69
Luxembourg	3.18	3.24
Netherlands	2.52	2.65

Given the threshold price, daily import levies charges to importers are readily calculated once the most favourable (lowest), adjusted, c.i.f., import price is specified by the E.E.C. Commission on the basis of c.i.f. prices supplied to them by importers. The offer prices on the world market are modified or adjusted to take into account quality differentials so as to place the various wheat grades traded on the international market on an even quality/price basis

---

[21] International Wheat Council, Review of the World Wheat Situation, 1961-62, p. 52.

with the E.E.C. quality standard.[22]

The c.i.f. wheat import price quotations at the designated entry points are "standardized" through application of a set of quality coefficients (coefficients d'equivalance) defined in terms of moisture content, weight, quality of protein, and percentage of impurities as well differentials observed on the world market between 1958 and 1961.[23] Due to the fact that the quality standard for wheat in the E.E.C. is inferior to that of most of the wheat traded on the world market, the adjustment in the prices of wheat of foreign origin to the E.E.C. standard is a downward one. That is, the stipulated (by regulation) quality coefficients for each type of wheat are subtracted from the c.i.f. price at a designated port of entry to arrive at the

---

[22]U.S. Department of Agriculture, Foreign Agricultural Service, France's Key Role in the Grain Sector of the European Common Market, p. 18.

[23]International Wheat Council, "A Study of the First Year of the Working of the EEC Grain Regulations in Relation to the World Trade in Wheat," Review of the World Wheat Situation, 1962-63, p. 65.

standardized or adjusted c.i.f. price of wheat,[24] the lowest of which is used to calculate the variable levy by subtracting from it the applicable threshold price.[25] Following is a list of the quality differentials (which are premiums insofar as the E.E.C. standard is the basis) used in the standardization of c.i.f. prices for some of the more widely traded wheats on

---

[24]On the contrary, the quality standard for feed grains in the E.E.C. is superior to that of other foreign qualities. As such, quality coefficients are added to c.i.f. prices of imported feed grain qualities in order to attain the E.E.C. standard. This has the effect of diminishing the gap (levy) between the adjusted c.i.f. price and the threshold price of the member country involved.

SOURCE: U.S. Department of Agriculture, France's Key Role in the Grain Sector of the European Common Market, p. 18.

[25]An important consideration in the overall plan for a price policy was to stimulate production within the Community and to encourage intra-Community trade in wheat. During the transitional stage, before complete freedom of movement across boundaries, a modified form of the levy system is in force. The basis for calculating this levy is the lowest free-frontier price of the exporting country adjusted for quality differences and for costs incurred in transporting and handling the wheat to the frontier. The difference between this figure and the threshold price (less the montant forfaitaire, set at $1 U.S. per metric ton of wheat and $2.50 U.S. per metric ton of wheat flour) of the importing country yields the levy imposed on imports from member countries.

the international market:[26]

Source and Type	U.S. dollars per metric ton
Canadian Manitoba Northern No. 1	12.50
Canadian Manitoba Northern No. 2	12.00
U.S. Hard Winters, 14% protein	12.00
U.S.S.R. 431	9.00
Australia f.a.q. (Eastern States	5.75
U.S. Soft Red Winters	3.75
Rosafe (Argentina)	9.00

According to the above classification, Canadian Manitoba Northern No. 1 type wheat is established as the highest quality wheat on the world market.

Having defined the main features of the price policy with respect to the determination of the levy, an illustrative example summarizing the discussion thus far is presented in TABLE 3.1.

Once a levy is determined in a member country in accordance with the above procedure, it is this

---

[26] International Wheat Council, Review of the World Wheat Situation, 1961-62, p. 52

TABLE 3.1

AN EXAMPLE OF THE CALCULATION OF THRESHOLD PRICES AND IMPORT LEVIES AUGUST, 1962[a]

Item	Belgium	France	West Germany	Italy	Netherlands
Basic Target Price (On National Quality Standard)	2.810	2.660	3.260	3.030	2.520
Transport from Frontier to Deficit Area (-)	0.030	0.072	0.003	0.050	0.010
Importer's Margin (-)	0.010		0.020		0.020
Quality Adjustment (Of National Quality Standard to E.E.C. Standard), (+)	0.025	--	0.055	--	--
Sales Tax (-)	0.130	--	--	--	--
Montant Forfaitaire (+)	0.025	0.027	0.028	0.020	0.030

Continued

TABLE 3.1--Continued

Item	Belgium	France	West Germany	Italy	Netherlands
Threshold Price	2.690	2.615	3.320	3.000	2.520
c.i.f. Price Adjusted To E.E.C. Standard Using Quality Coefficients (as of August 4, 1962)	1.612	1.630	1.644	1.633	1.612
Levy	1.078	0.985	1.676	1.367	0.908

[a]Values are expressed in U.S. dollars per bushel.

SOURCE: Commission of E.E.C. and reprinted in International Wheat Council, Review of the World Wheat Situation, 1961-62 (London, 1962), p. 53.

amount which is imposed on the actual c.i.f. price on all wheat entering any port in this country, irrespective of grade or quality.[27] Due to its very nature, that is, the way in which it is computed, the levy varies with c.i.f. import prices and the applicable threshold prices. But, the result of changes in level and direction of world wheat prices is reflected in the c.i.f. prices to a more or less uniform extent in each of the countries of the E.E.C. For Example, at the time of inauguration of the new regulations in August, 1962, the lowest c.i.f. prices of wheat entering each of the countries were:[28]

(in U.S. dollars per metric ton)

France.....58.45
West Germany.....59.10
Italy.....58.55

---

[27]For example, on December 15, 1962, the lowest standardized c.i.f. price of wheat from third countries at Rotterdam was $1.55 U.S. per bushel. The corresponding threshold price was $2.64 U.S. per bushel. Hence, the levy of $1.09 U.S. per bushel was applicable to all wheat imports into the Netherlands, at any point of entry during the following day.

SOURCE: L.P. Schertz, Basic Provisions of European Economic Community Grain Regulations, p. 11.

[28]International Wheat Council, Review of the World Wheat Situation, 1962-63, p. 66.

Belgium and Luxembourg....57.90
Netherlands.....57.90

Hence, the variation in the levies among the members can be traced to the level of threshold prices which increase monthly in conjunction with target prices. A monthly time series, with yearly averages of variable levies for durum and non-durum wheat for each of the six Common Market countries is listed in TABLE 3.2.

The levies shown in this table reflect to a large degree the relative differences in the threshold prices in each of the Member States. For non-durum, bread wheats, internal prices and hence, levies are highest in West Germany and lowest in France. They are relatively high in Italy and Luxembourg while the rates in Belgium and the Netherlands are intermediate and more closely approximate the common level effective July 1, 1967. Durum wheat levies are highest in Italy followed by Germany, France, Luxembourg, the Netherlands, and Belgium in that order.

In a study recently conducted,[29] it was concluded

---

[29]Hirsch, The Fluctuation of EEC Variable Levies.

TABLE 3.2

E.E.C. VARIABLE LEVIES[a] ON NON-DURUM AND DURUM WHEAT FOR NON-MEMBER COUNTRIES; JULY 30, 1962 TO MARCH 31, 1965 BY MONTH[b]

Year	Month	Belgium		West Germany		France		Italy		Luxembourg		Netherlands	
		Non-Durum	Durum	Non-Durum	Durum	Non-Durum	Durum	Non-Durum	Durum	Non-Durum	Durum	Non-Durum	Durum
1962	Aug.	39.40	7.40	61.25	26.10	36.36	14.64	50.14	43.47	- [c]	-	34.61	-
	Sept.	40.00	12.20	62.82	31.15	37.63	19.49	51.79	48.54	-	-	36.19	3.45
	Oct.	42.60	21.80	64.62	40.15	40.06	28.54	53.52	57.55	-	-	38.45	12.60
	Nov.	42.00	27.20	63.88	45.28	40.43	33.46	54.54	62.24	-	-	37.76	18.01
	Dec.	44.00	30.00	66.52	48.25	41.46	35.89	55.52	64.56	-	-	39.83	20.58
Average		41.60	19.72	63.82	38.19	39.19	26.40	53.10	55.27	-	-	37.37	13.66
1963	Jan.	44.60	34.60	66.70	53.35	42.43	40.21	56.38	68.90	-	-	40.91	25.08
	Feb.	45.80	30.60	67.78	49.32	43.10	36.07	57.02	64.46	-	-	41.82	20.97
	March	47.00	31.60	69.62	51.12	43.39	37.39	57.15	65.63	-	-	43.09	22.29
	April	47.40	33.00	70.70	52.85	44.03	38.83	57.78	67.01	59.60	40.80	43.78	23.84
	May	45.60	35.20	69.28	55.48	41.93	40.27	55.06	67.47	58.00	43.00	41.30	25.33
	June	47.40	36.20	71.50	56.70	44.30	41.56	56.22	67.95	59.40	43.80	42.24	25.11
	July	42.80	24.80	62.22	49.25	40.57	36.26	55.62	67.71	52.40	35.20	42.07	24.03
	Aug.	43.20	26.60	62.45	52.70	40.85	37.23	55.90	68.82	52.60	36.60	42.43	25.69
	Sept.	39.20	26.80	59.32	54.18	37.47	38.10	52.29	69.34	49.20	37.80	39.28	26.93
	Oct.	36.20	19.80	56.62	47.15	34.15	31.05	49.10	62.03	46.40	30.80	36.44	19.89
	Nov.	37.60	20.80	58.08	48.80	35.04	31.74	49.54	79.97	47.60	32.20	37.71	21.49
	Dec.	39.40	27.40	59.72	54.82	36.54	38.08	51.10	68.51	49.00	38.00	39.39	27.46
Average		43.02	28.95	64.50	52.14	40.32	37.23	54.43	68.07	52.69	37.58	40.87	24.01

TABLE 3.2--Continued

Year	Month	Belgium		West Germany		France		Italy		Luxembourg		Netherlands	
		Non-Durum	Durum	Non-Durum	Durum	Non-Durum	Durum	Non-Durum	Durum	Non-Durum	Durum	Non-Durum	Durum
1964	Jan.	40.00	26.60	60.25	53.55	37.25	37.33	50.93	67.09	49.60	40.00	40.25	26.46
	Feb.	41.80	27.60	62.48	55.10	38.93	38.83	52.11	68.69	51.20	37.80	42.15	27.57
	March	43.00	33.60	63.90	61.28	40.06	44.10	53.34	73.34	52.40	43.60	43.40	33.56
	April	42.20	36.60	63.25	64.45	38.75	46.77	52.42	75.78	51.60	46.80	42.68	36.85
	May	44.60	37.80	65.78	65.55	40.10	47.88	53.49	75.50	54.20	47.80	44.94	37.07
	June	46.80	38.00	68.02	65.82	43.16	48.15	54.91	75.50	56.20	47.80	45.63	36.49
	July	37.20	30.80	56.35	57.12	35.22	41.40	48.21	77.20	46.20	40.80	42.82	36.82
	Aug.	39.20	31.40	58.20	57.30	36.05	42.03	50.62	78.74	48.00	41.40	44.94	37.38
	Sept.	40.60	32.00	60.68	58.92	37.56	43.45	52.21	80.27	49.80	42.00	47.35	38.87
	Oct.	41.60	31.00	61.88	58.32	37.53	42.80	51.92	79.50	51.00	41.20	48.40	38.07
	Nov.	41.00	31.20	61.75	58.80	38.63	43.00	52.66	79.49	50.80	41.60	48.09	38.45
	Dec.	43.60	35.60	64.62	63.58	42.78	47.40	57.50	84.24	53.80	46.60	50.86	43.07
Average		41.75	32.68	62.26	59.98	38.84	43.60	52.53	76.28	51.23	43.12	45.13	35.89
1965	Jan.	46.00	40.00	66.98	67.73	45.03	51.31	59.89	88.22	56.20	51.00	53.15	47.18
	Feb.	47.60	41.20	68.52	68.93	46.30	52.87	60.83	89.28	57.80	52.20	54.48	48.29
	March	48.80	43.60	69.75	71.42	47.40	54.99	61.65	90.74	59.00	54.60	55.66	50.58
Average		47.46	41.60	68.41	69.36	46.24	53.06	60.79	89.41	57.66	52.60	54.43	48.68

TABLE 3.2--Continued

[a]Expressed in U.S. dollars per metric ton.

[b]July 30 - 31, 1962 rates identical with August rates and not separately shown

[c]Levy rates not published where no data are shown.

SOURCE: Hans G. Hirsch, "The Fluctuation of EEC Variable Levies," U.S. Department of Agriculture, Economic Reasearch Service, ERS - Foreign - 110 (Washington, March, 1965).

that temporal variation of the levies (for all grains) was relatively small, particularly for non-durum wheat. Based on the data in TABLE 3.2,[30] Hirsch calculated standard deviations and coefficients of variation of levies applicable to third countries. The results obtained are shown in TABLE 3.3.

In addition, the levies were correlated with threshold and c.i.f. prices. Presumably, perfect correlation should exist between the levies as the dependent variable and threshold and c.i.f. prices as independent variables.[31] In the case of Germany, using the monthly average non-durum wheat levies, a multiple correlation coefficient of .993 was obtained. The partial correlation coefficient of levies on threshold prices, with c.i.f. prices held constant was .989 while the partial correlation coefficient of levies

---

[30]Note that for Luxembourg, there are only 24 observations and for the Netherlands, only 31 observations for durum wheat.

[31]Discrepancies occur due to the fact that levy rates are revised only when the difference between the threshold and c.i.f. prices changes by more than a certain amount. This amount was specified to be $0.45 U.S. per metric ton in Germany in 1962-63.

TABLE 3.3

STANDARD DEVIATIONS AND COEFFICIENTS OF VARIATION OF LEVIES ON IMPORTED (FROM THIRD COUNTRIES) NON-DURUM AND DURUM WHEAT IN EACH OF THE E.E.C. COUNTRIES

	West Germany	Italy	Netherlands	France	Belgium	Luxembourg
			Standard Deviation (U.S. dollars per metric ton)			
Non-durum wheat	3.67	3.25	5.09	3.21	3.05	3.50
Durum wheat	10.97	11.44	11.55	9.76	8.76	6.21
			Coefficient of Variation (per cent)			
Non-durum wheat	5.7	5.9	11.3	7.9	7.2	6.6
Durum wheat	22.5	17.0	42.7	28.0	34.4	14.5

SOURCE: Hans G. Hirsch, The Fluctuation of E.E.C. Variable Levies, U.S. Department of Agriculture, ERS - Foreign - 141 (Washington, September, 1965), p. 35.

on c.i.f. prices, with threshold prices held constant was -.978.[32] The negative sign in the latter case indicates that, as the c.i.f. price increases (decreases), threshold prices remaining constant, the levy decreases (increases). In the former case, given the c.i.f. price, the levy changes in the same direction and in the same absolute amount as the change in the threshold price. The general conclusion drawn from further breakdowns in the analysis was that inter-temporal changes in levy rates have been due largely to changes in threshold prices according to prescribed seasonal increases. World market prices and, hence, c.i.f. prices have played a less important role as determinants of the levy rates.

In consideration for the fact that world wheat prices are below those existing in the Community and the desire to maintain competitiveness on the world market, the new regulations also provide for subsidies to be paid to exporters, amounts not greater

---

[32]Hirsch, The Fluctuation of EEC Variable Levies, p. 39.

than the prevailing import levies. An alternative means is to allow the importation of quantities of wheat, free from import levies, equal to those exported. Supervision over the amount of wheat traded is maintained through the non-discriminatory issuance of import and export certificates valid for a total of three months (four months for wheat flour) within which time the trader is entitled to export or import the quantities stated.[33]

Also incorporated in the common policy is the removal of any compulsory wheat mixing regulations previously in force under individual national policies. This, together with the displacement of monopoly control over exports and imports by some countries in favour of a uniform policy based on the levy system

---

[33]A leverage is embodied in this system such that the process of issuing certificates or licences may by suspended by the Community authority (the member countries in the transitional stage) if disruption of internal markets is threatened by excessive imports or exports.

allows greater leeway for Community millers in their choice of wheats used, subject to the restraint of the levy. This may have an important bearing on the future level of imports of wheat into the Community.

As stated above, though the regulations passed in 1962 created a uniform system of support applicable in all E.E.C. countries, price levels for wheat, as for other grains, differed between countries. Price differences were to be narrowed until a common Community-wide price for each grain was agreed upon by the Council of Ministers by the end of the transition period. An outcome of the relatively large disparity in wheat prices (target prices) between France and West Germany was a series of protracted delays in arriving at a decision on a common price level. The standstill developed as a result of the fear of potential hardship to German farmers resulting from substantial reductions in grain prices and the possible adverse consequences of surplus stocks accruing from increased production due to higher support prices in France. Settlement of this impasse was considered vital

for further progress of the grain sector in particular and agriculture as a whole as well as for the overall internal development of the E.E.C. and for the maintenance of relations with non-member countries. Immediate action in establishing a common price level throughout the Community, aside from resolving the political difficulties would eliminate uncertainties and thus clarify the future agricultural situation so that the necessary adjustments and plans could be formulated and implemented for the development of the sector. Finally, the approach of the Kennedy Round of the G.A.T.T. negotiations in May, 1964 made it imperative that a common price level be agreed upon in order that the E.E.C. may be able to negotiate as a unit.

Proposals for fixing grain price levels under the Common Agricultural Policy were set forth on November 5, 1963 in a submission to the Council of Ministers by the Vice President of the E.E.C. Commission, Sicco Mansholt, acting on behalf of the Commission. Up until that point, the progress towards cereal price harmonization had been meagre since July 31, 1962.

The central feature of this Mansholt Plan was that, for the crop year, 1964-65, one basic target price in the largest deficit area would be fixed for each of the various types of grain throughout the Community. These prices would be subject to yearly revision in consideration for changes in agricultural incomes, prices and wages as well as the prevailing supply and market situation. Following the criterion set out in Regulation 19, these target prices form the bases from which other derived, regional, target prices, varying with transportation costs from the main deficit area, threshold prices and intervention prices are calculated. Also, the levy on grain in intra-Community trade would be abolished along with administrative procedures which impair free trading relations among the Member States.

One of the primary considerations in deciding upon a common target price level for each grain was to seek a level that would not cause potentially destabilizing expansion of arable land under grains, especially in France. Assuming a level of target prices

that would maintain the overall acreage existing then, Mansholt predicted that total import requirements of grain in the E.E.C. would be approximately 10,000,000 metric tons per year for the next ten or twelve years.[34] It is suggested by the Plan that the common level for the crop year 1964-65 to which allusion has repeatedly been made above, be fixed between the highest and lowest target prices for each grain as laid down by each Member State in 1963-64. Further, because of the grain supply situation prevailing at the time, that is, the relative overproduction of certain grades of wheat and rye, and the increasing demand for coarse grains (barley and corn), it was thought that a narrowing of the price gap existing between wheat and coarse grains would more closely approximate the true position of each grain in terms of its demand and supply situation in the Community. In addition, due account was taken of future import requirements. In essence, the common

---

[34]The European Community, "EEC Commission Submits Grain Price Proposals To Council of Ministers," p. 2.

price proposals "represent a balanced compromise between consumers' and farmers' interests in the Community."[35] Following are the proposals for uniform target, threshold, and intervention prices in the E.E.C. for non-durum and durum wheat, rye, barley, and corn:[36]

(in U.S. dollars per metric ton)

	Non-durum Wheat	Durum Wheat	Rye and Corn	Barley
Target Price	106.25	125.00	93.75	92.50
Intervention or Support Price	98.75	117.50	87.50	86.25
Threshold or Import Price	105.00	123.75	92.50	91.25

Considering wheat only, acceptance of these proposals would result in substantial decreases in prices in Germany, Italy, and Luxembourg with subsequent reduced production and farm income. On the other hand, French, Dutch, and Belgian prices would be

---

[35]European Economic Community, Commission Spokesman Group, op. cit., p. 5.

[36]The European Community, "EEC Commission Submits Grain Price Proposals To Council of Ministers," p. 3.

increased, stimulating expansion in production, particularly in France where the percentage increase would be greatest. In these countries, where wheat prices will rise, Mansholt assured that though these changes would affect producer prices and incomes directly, consumer prices of wheat products would increase by only one-quarter to one-third of the amount of the producer price changes since consumer prices include marketing (processing and distribution) costs which are independent of changes in the grain price.[37]

In order to avoid serious losses as a result of price declines in Germany, Italy, and Luxembourg and to maintain orderly and balanced growth in all economic sectors of the Community, provision is made in these proposals for measures to compensate the farmers for their loss in income during the transition period ending in 1970. The Community would distribute the funds to the Member States in question according to their projected needs to be allocated among the following measures;

---

[37]European Economic Community, Commission Spokesman Group, op. cit., p. 5.

1. direct payments to farmers,
2. contributions to improved social benefits,
3. aids granted to improve productivity and to rationalize farms, and
4. aids granted to producers of durum wheat under special terms and conditions.[38]

The burden on the E.E.C. budget in financing these compensatory measures would gradually be relinquished by the end of the transition period and greater responsibilities over financing of steps to improve farm incomes and living standards will be given to the Agricultural Guidance and Guarantee Fund of the Community as well as to the European Social Fund.

Recognizing the urgency of agreement on common price levels for all commodities under the Common Agricultural Policy in the light of the upcoming G.A.T.T. sessions, the reaction of the European Parliament to the proposals of the Mansholt Plan was very favourable and a resolution urging acceptance of the provisions of the Plan by the Council of Ministers was passed on November 27, 1963. This decision was later supported by the Economic and Social Committee

---

[38] Ibid., p. 7.

on February 27, 1964. During the session on December 23, 1963, the Council of Ministers pledged to act on these proposals no later than April 15, 1964 in order that uniform grain prices would come into effect in the 1964-65 marketing year. But objections raised by German representatives both on the new level of prices and the financing of compensatory measures[39] averted agreement in April and caused a postponement of a decision until June when further demands by France and Italy for modifications in the original proposals[40] again resulted in setting back the deadline for reaching agreement to December 15.

On December 1, the German Minister of Economic Affairs, M. Schmucker, let it be known that his government was ready and willing to "agree to lower

---

[39] European Economic Community, Official Spokesman of the Commission, op. cit., p. 7.

[40] The French claimed that the proposed prices were too high while the Italians complained that the feed grain prices in particular were too high.

cereal prices in Germany to facilitate the establishment of a common price level and so that a decisive step may be taken towards the realization of the common agricultural market."[41] Finally, on December 15, 1964, agreement was reached by the Council of Ministers on grain-price unification and on terms of financing the Common Agricultural Policy.[42] The capitulation of Germany to the new common price levels well below the domestic prices was based on the calculation that losses incurred in this sector would likely be recouped in free trade in manufactures in which Germany is very efficient.[43] Also, apart from helping to dampen

---

[41]European Economic Community, Official Spokesman of the Commission, op. cit., p.8.

[42]However, on this latter issue, the insistence of the French to maintain a certain degree of independence of action resulted in the refusal to accept the provisions whereby the Community organizations would be financially independent of the national governments of member states. The subsequent boycott of Community affairs (from July, 1965 to January, 1966) by the French jeopardized the E.E.C.'s hope to have completed all aspects of the Common Agricultural Policy before negotiations under G.A.T.T. On May 10, 1966, with minor concessions to French demands, final agricultural financing arrangements were agreed upon by all member states.

[43]Klein, op. cit., p. 21.

inflationary pressures, an important factor was the desire to accelerate the process of European economic integration and these concessions in the agricultural field were considered vital.[44]

Restricting the discussion to wheat only, the adoption of a uniform price schedule on December 15, to take effect in the crop year, 1967-68, beginning July 1, 1967 conforms exactly with the Mansholt price proposals following the rationale of setting these prices between the lowest and highest national target prices. TABLE 3.4 presents the uniform target prices for non-durum and durum wheat.

In addition to these price aspects, all intra-Community barriers to trade in grains are eliminated. As suggested in the Mansholt Plan, financial compensation will be paid to Germany, Italy, and Luxembourg to account for the reduction in farm income as a result of the unification of grain prices.

---

[44]Hirsch, The Uniform Grain Price in the European Economic Community, op. cit., p. 9.

TABLE 3.4

E.E.C. UNIFORM BASIC TARGET PRICES FOR DURUM AND NON-DURUM WHEAT, EFFECTIVE 1967-68, WITH COMPARISONS[a]

	Uniform Basic Target Prices Effective July 1, 1967	Mansholt Proposals, November, 1963	July 1, 1964 Standardized c.i.f. Prices of Wheat Rotterdam
Non-durum Wheat	106.25 (100.0)	106.25 (100.0)	61.75 (58.1)
Durum Wheat	125.00 (100.0)	125.00 (100.0)	75.50 (60.4)

July 1, 1964 - Basic Target Prices

	France	Netherlands	Belgium	Italy	Luxembourg	W. Germany
Non-Durum Wheat	100.22 (94.3)	104.83 (98.7)	104.60 (98.4)	113.60 (106.9)	117.00 (110.1)	118.88 (111.9)
Durum Wheat	117.26 (93.8)	-- --	-- --	143.20 (114.6)	-- --	-- --

[a]In U.S. dollars per metric ton with percentages in parentheses.

SOURCE: Hans G. Hirsh, The Uniform Grain Price In The European Economic Community, U.S. Department of Agriculture, Economic Research Service, ERS - Foreign - 110 (Washington, March, 1965) p. 6.

It is partly within the context of the policy parameters developed in this chapter that the discussion of the wheat situation in the E.E.C. will be conducted in the following chapter.

CHAPTER IV

A GENERAL PERSPECTIVE OF THE AGRICULTURAL SITUATION IN THE E.E.C. AND THE POSITION AND DEVELOPMENT OF THE GRAIN SECTOR SINCE 1950

Agriculture In The E.E.C.

As a prelude to the discussion of the specific features of the grain economy of the Community, including trends in land utilization, yields, production, and trade, the establishment of a framework within which to conduct this analysis seems appropriate and logical. Since wheat is only part of the larger grain sector which is, in turn, a component of the agricultural segment of an economy, proper elucidation of some of the facets of these larger sub-groups in the economy as well as trends in the economy as a whole will hopefully serve to explain, at least to some extent, movements and fluctuations in the relevant variables in the wheat economy. This chapter will deal primarily with the supply side of the picture while consumption patterns and demand relationships will be integrated with the analysis in the final chapter.

The primary source consulted[1] for a description of the structure of agriculture in the E.E.C. revealed, on the one hand, the relative traditional retardedness of agriculture in the overall economic environment and, on the other, the extent of changes which have taken place and are presently taking place to elevate the stature of agricultural activity to a par with the other, industrial sectors of the economy. The combination of policy changes in the form of the Common Agricultural Policy[2] and the introduction of improved techniques of cultivation including greater mechanization, utilization of more effective fertilizers and the use of atomic energy in aiding in the breeding of plants, the preservation of foods and the control of pests together with a more business-like approach to the operation of farms has resulted in substantial progress towards a new structural basis for agriculture.

Production has increased as a result of increased applications of capital though land under cultivation has remained virtually constant and the number of persons employed in agriculture has diminished during

---

[1] Communaute Economique Europeenne, Emploi Agricole dans les Pays de la C.E.E., Tome I: Structure, Etude No. 7, Serie Politique Sociale (Bruxelles, 1964).

[2] See APPENDIX B

the past fifteen years. "The loss of labour was to a large degree compensated by mechanization. This, combined with the adoption of techniques involving new plant and animal varieties and increased use of fertilizers, insecticides, weedicides, herbicides, fungicides and so forth, made possible the sharp increases in total output."[3] A partial indication of the extent to which mechanization has permeated European agriculture is that in 1951, there were slightly over 413,000 farm tractors in all of the E.E.C. By 1963, this figure had swelled to over 2,363,000 which represents an increase of almost sixfold in the period of twelve years.[4]

But this trend is not restricted to the countries of the E.E.C. Indeed, one of the conclusions reached by the F.A.O. in 1965 in a study of the world agricultural

---

[3]U.S. Department of Agriculture, Economic Research Service, The Grain-Livestock Economy of the European Economic Community: A Historical Review, 1951-63, Foreign Agricultural Economic Report No. 31 (Washington, July 1966), p. 11.

[4]The distribution of tractors among the members of the E.E.C. and the changes through 1963 are as follows:

	1949-52 (average)	1961	1962	1963
France	148,142	743,400	804,400	867,676
West Germany	165,144	938,002	999,218	1,053,166
Italy	63,702	272,849	304,893	338,584
Netherlands	22,965	88,916	95,884	104,090

SOURCE: MacEachern and MacFarlane, op. cit., p. 198.

situation during the second post-war decade was that

> in the developed countries, inputs of both land and labour have declined and all of the increase in production during the decade has come from higher yields per unit of land and labour which in turn have resulted from improved technology. In the developing countries, much of the increase in production has come from larger inputs of land and labour. Higher yields per hectare have also played a part in these countries but it seems probable that not all of the increase in yields has come from technological improvements and that part must result from the increased inputs of labour per hectare.[5]

Indexes compiled by the F.A.O. (TABLE 4.1) indicate the direction and degree of change in agricultural output in each of the countries of the E.E.C. With occasional exception due mainly to unfavourable weather conditions and, in part, to policy changes, the path traced out by agricultural production has been an ascending one. However, despite the relative consistency in the increase of agricultural output since 1953, this growth has far from kept pace with the rate at which industrial production has been increasing. Also, industrial output has shown less

---

[5]United Nations, Food and Agriculture Organization, The State of Food and Agriculture, 1965- Review of the Second Post-war Decade (Rome, 1965), p. 79.

TABLE 4.1

INDEX NUMBERS[a] OF TOTAL AGRICULTURAL PRODUCTION,[b] BY COUNTRIES
(1952/53 - 1956/57 = 100)

Country	1952-1953	1953-1954	1954-1955	1955-1956	1956-1957	1957-1958	1958-1959	1959-1960	1960-1961	1961-1962	1962-1963
Belgium-Luxembourg	93	96	104	107	100	107	111	103	113	111	117
France	93	101	106	99	100	99	102	107	121	116	126
West Germany	95	101	101	100	102	105	110	107	121	109	123
Italy	93	104	96	105	103	101	116	116	107	116	115
Netherlands	100	99	100	104	98	105	115	117	118	118	124

[a]The index numbers are computed by a Laspeyres' type formula, applying average regional wheat-relative prices as weights. The regional wheat-relative prices of commodities are the arithmetic averages of the national wheat-relative prices weighted by the country production of the commodities concerned. The national wheat-relative prices consist of the national producer prices of the commodities concerned expressed as a percentage of the national producer price of an equal weight of wheat. In most cases, the prices represent averages of producer prices for the 1952-56 period.

[b]Total agricultural production includes the following commodity groups: grains, starchy roots, sugar, pulses, edible oil crops, nuts, fruit, vegetables, wine, cocoa, livestock and livestock products, fibres, rubber, tea, coffee, industrial oilseeds and tobacco.

SOURCE: United Nations, Food and Agriculture Organization; Production Yearbook, Vol. 19 (Rome, 1966).

tendency to fluctuate during the period. Indices of industrial production for each of the "Six" and for the Community as a whole are presented in TABLE 4.2. Granted that the above indices for both agricultural and industrial production may be a somewhat crude instrument with which to measure and compare movements, I suggest that these suffice for the present purpose which is solely to indicate broad generalizations of the agricultural sector of the E.E.C.

In general, during the fifties and early sixties, a greater awareness on the part of the private sector and government as well of the need for readjustment and modernization in the sphere of agricultural activity in the Community brought forth major changes in attitude and resulted in successful efforts to augment productivity and to create a viable agricultural sector. In part, also, achievements in agriculture are responses to the generally favourable conditions prevailing in the industrial sector of the economy. The relationship and increasing interdependence between agriculture and the industrial sector of the economy was succinctly expressed in one of the presentations to the Conference on International trade and Canadian Agriculture in Banff in January, 1966. "Agriculture has not only become increasingly dependent on industrial

production for its inputs but greater competition exists for resources with a direct impact on capital, labour and land prices."[6] A more elaborate statement of this association appeared in an F.A.O. study:

> It is generally becoming appreciated that there is a complex two-way relationship between agriculture and the rest of the economy, and that successful industrialization generally requires parallel progress in agriculture. In addition to its responsibility for the supply of food and raw materials, agriculture makes other contributions to economic progress that are almost as basic. In nearly all of the developing countries it is the chief earner of the foreign exchange needed to purchase the capital equipment for industrial and general development. Agricultural products themselves provide a raw material base for industrialization. Agriculture must release labour to the rest of the economy and must also supply most of the capital for the early stages of economic development. Industrialization greatly depends, especially in its early stages on the purchasing power of the agricultural population which forms a large part of the market for industrial products in the developing countries.[7]

As shown in TABLE 4.2 in all countries of the E.E.C. and to varying magnitudes, the level of industrial production, as measured by indices has risen consistently throughout the period.[8] In France and Italy, notably,

---

[6] MacEachern and MacFarlane, op. cit., p. 87.

[7] United Nations, Food and Agriculture Organization, The State of Food and Agriculture, 1965 - Review of the Second Post-war Decade, p. 6.

[8] See APPENDIX B.

TABLE 4.2

INDICES OF INDUSTRIAL OUTPUT BY COUNTRY, E.E.C., 1953-63
(1953-57 = 100)

Year	France	West Germany	Italy	Netherlands	Belg.-Lux.	E.E.C.
1953	81	86	84	86	88	83
1954	89	92	92	95	93	91
1955	98	101	100	102	102	101
1956	111	108	108	107	108	109
1957	120	113	116	109	109	116
1958	126	115	120	109	102	119
1959	128	116	133	120	107	126
1960	140	118	153	135	113	141
1961	147	122	170	138	118	151
1962	157	123	187	142	126	160
1963	164	124	203	152	134	168

SOURCE: Organization of Economic Co-operation and Development, General Statistics, September, 1964.

where the gains over the eleven-year period have been in the magnitude of roughly two and two and one-half times respectively, this movement has been particularly striking. For the Community as a whole, during the period 1953-63, whereas industrial production doubled, agricultural output increased by less than one-third.[9]

With regard to agricultural output, for individual countries, the figures in TABLE 4.1 indicate that year-to-year fluctuations varied among the countries. For example, during the crop year 1960-61, while France, West Germany and Belgium-Luxembourg recorded sizeable increases in production compared to the previous year, the Netherlands experienced moderate gains and Italy suffered a reduction. But on the aggregate level, annual fluctuations are much less distinct than in the individual cases. Nonetheless, a historical upward trend is clearly discernible for individual countries and on the aggregate and, in fact, despite the varying degree of fluctuation, the long-term average rate of increase in the index of agricultural production was approximately the same in each of the Community

---

[9] U.S. Department of Agriculture, Economic Research Service, The Grain-Livestock Economy of the European Economic Community: A Historical Review, 1951-63, p. 3.

countries.[10] "This points to one of the key advantages of economic integration: the output of a large geographic region stands less chance than its individual members of being significantly affected by major changes in uncontrollable influences on production."[11]

In addition to, and in conjunction with gains recorded in output, the farmer in the E.E.C., as an integral part of a prosperous economic situation, is benefiting in terms of income received through the prices paid for his produce. With the continuation of the present trend of increasing real incomes for a growing population in the entire area of the E.E.C. stimulating food and overall demand, the benefits accruing to the farm population are likely to be large.

A closer examination of price movements since 1950 reveals a comparatively close parallel between changes in general wholesale prices and changes in agricultural prices received by farmers. Both general wholesale and agricultural prices moved upward in France in particular under pressure of strong consumer demand while prices in Italy and the Benelux countries remained more or less constant until 1963 when they began to rise sharply. German prices have risen at

---

[10] Ibid.

[11] Ibid.

a slow pace since 1957 (TABLE 4.3). It is further noted that output changes (TABLE 4.1) are reflected in responses in prices. That is, increases in production generally result in price declines, ceteris paribus. However, caution must be taken in drawing such conclusions because of the extensive degree of aggregation both in the production and price indices. Finally, only consideration of prices received by farmers cannot give a proper picture of the changes in the welfare of the farmer. Due weight must be given to changes in prices which the farmer necessarily pays for equipment and supplies. A declining ratio of prices received to prices paid may not automatically be termed an adverse situation if increases in productive efficiency (which measures are not available) have occurred.[12]

Even in cases where government intervention controlled prices, support in the form of grants, subsidies, and crop and livestock insurance was nonetheless forthcoming to the farmer since a basic premise in any economic endeavor (and even moreso in agriculture) is that an undertaking must prove to be profitable before capital, land and labour is engaged.

---

[12] Ibid., p. 9.

TABLE 4.3

INDEX NUMBERS OF AGRICULTURAL[a] AND GENERAL WHOLESALE PRICES
(1958 = 100)

Year	Belgium-Luxembourg		France		West Germany[d]		Italy		Netherlands	
	(a)[b]	(b)[c]	(a)	(b)	(a)[e,f]	(b)	(a)	(b)	(a)	(b)
1950	100	92	63	65	---	---	---	---	93	93
1951	107	112	73	83	---	---	---	---	102	102
1952	109	105	80	87	---	---	---	---	107	107
1953	104	98	77	83	86	---	93	99	102	95
1954	102	97	76	81	90	96	94	98	103	96
1955	98	99	75	81	95	97	96	99	98	97
1956	101	102	79	85	98	99	102	101	103	99
1957	103	105	83	90	100	100	98	102	103	102
1958	100	100	100	100	100	100	100	100	100	100
1959	99	100	100	105	103	99	93	97	107	101
1960	96	101	102	107	98	100	95	98	98	99
1961	98	100	104	110	102	102	96	98	98	98
1962	105	101	111	113	104	103	105	101	102	99
1963	111	104	116	117	107	104	111	106	105	101
1964	114	109	118	119	111	104	111	110	113	108

[a]Index numbers of agricultural prices relate to prices of farm products of animal and vegetable origin, excluding forestry products and fodder.

Continued

TABLE 4.3--Continued

[b]Index Numbers of Agricultural Prices.

[c]Index Numbers of General Wholesale Prices.

[d]Prior to 1960, excluding the Saar.

[e]Independent series.

[f]Base: July 1957 - June, 1959 = 100. Twelve months beginning July 1 of year stated.

SOURCE: United Nations, Food and Agriculture Organization, Production Yearbook, Vol. 19 (Rome, 1965).

The role of government, individually or collectively is an increasingly important one in this regard. Agricultural policies in the developed regions of the world, apart from being directed towards raising farm income levels and thus narrowing the bridge between agriculture and other sectors are also vitally concerned with attempts at improving the fundamental structure of agriculture and eliminating the less efficient or marginal elements. The spirit and content of the Common Agricultural Policy of the E.E.C. is a case in point. However, until the Common Agricultural Policy takes full force, the individual government support measures will continue to be "high enough to cover the production inefficiencies resulting from the inadequate farm structure."[13]

The above discussion now precipitates the attempt to explain the fact that since 1950, the rate of growth of agricultural output has been less than that of industrial production in the E.E.C. The reason for the lack of complete correspondence in growth rates lies in the structure of agriculture in Europe in general. Indeed, it may be considered a monumental achievement that progress has been what it is during the past

---

[13]Sinclair, op. cit., p. 48.

decade during the incipient transformation of the agricultural sector. The road has been much longer and much more exhausting than in industry.

Initiated by the post-war industrial expansion and later stimulated and more properly channelled by incentives and concrete measures provided by a common policy, structural reorientation of agriculture in the E.E.C. is aiding in developing a viable and more efficient economic entity. Not only in regard to adjustment and redistribution of land, labour and capital resources is this process taking form. The changes which reaped increased farm production and prosperity outlined above are also directly attributable to greater rationalization of farm activity and the breakdown of physical and social rigidities. The previously existing structural and psychological impediments are rapidly being overcome. To the accelerated use of scientific techniques and procedures mentioned earlier is added the land tenure reforms in the form of consolidation of small, inefficient, peasant-type farm units and thus the elimination of fragmentation of holdings which was choking advancement; and the improved road, water, and housing facilities.

> The process of improvement of the structure of the Community farms is an important factor in the potential increase in farm output. The greater efficiency from larger and consolidated farms can mean larger total output and this change should reduce production costs. These two features, when related to the domestic farm price structure will be important determinants in the degree of self-sufficiency that the Community is able to achieve in agricultural products.[14]

Though complexities[15] enter into attempts to arrive at a meaningful measure of agricultural employment, the irrevocable trend in the E.E.C. is toward a progressive diminution of agricultural employment vis a vis total employment. The decline in this proportion is a result of the decreasing number of people employed in agriculture and the increase in employment in other sectors.[16] As of October, 1960, the Statistical Office of the European Communities reported that 21.6% of the total labour force in the E.E.C. was employed in agriculture (15,379,000

---

[14] Ibid.

[15] The major difficulties lie in ascertaining the degree of participation of family and feminine labour as well as non-permanent labour. The degree of changes in effectiveness of farmers also poses problems. The seasonality aspect of agriculture as well distorts participation or involvement figures.

[16] Communauté Economique Européenne, Emploi Agricole dans les Pays de la C.E.E., p. 13.

out of 71,164,000).[17] By 1962, this proportion had been lowered to under 20%. In 1954, the agricultural labour force represented 26.5% of the labour force and in 1950, this figure was over 30%. Especially in the three largest and most industrialized members of the Community (West Germany, France and Italy) and because of this fact has the decrease been substantial. In each case, decreases in the permanent agricultural labour force of 1,000,000 between 1954 and 1962 represented reductions of 25% in Germany, 20% in France and 15% in Italy. In these countries, whereas in 1954 agriculture provided employment for 20% of the total

---

[17]The corresponding percentages for the individual countries were as follows:

France.....23.8%
West Germany.....14.2%
Italy.....32.3%
Netherlands.....11.9%
Belgium.....11.3%
Luxembourg.....15.9%

The large disparities between countries is to be noted.

The 15,379,000 agricultural labourers in 1960 were classified as follows:

- 14,200,000 or 92.4%, permanent
- 700,000 or 4.7%, seasonal (employed during periods of heavy work loads, for example, autumn)
- 400,000 or 2.9%, occasional

Similarly, these proportions vary among member countries.

SOURCE: Ibid., p. 12.

labour force in Germany, 28% in France and 40% in Italy, by 1962, these percentages dwindled to 12%, 21%, and 30% respectively. In part, these reductions are attributable to increased opportunities for employment in other sectors of the economy. It is important to note also that coupled with this reduction in the agricultural labour force is the relative increase in efficiency and the increasing emphasis on training programs resulting in greater skill and knowledge of new and improved methods of cultivation. The extent and significance of this redistribution of labour has precipitated the statement that "the magnitude of the regression in agricultural employment and the professional migration which accompanies it constitutes one of the most remarkable aspects of the recent socio-economic development in the E.E.C."[18]

A detailed analysis of the composition of the agricultural labour force in the E.E.C. (summarized in TABLE 4.4) reveals the large predominance and significance of family participation.[19] For example, out of the 15,400,000 persons counted as employed in agriculture in October, 1960, only 3,300,000

---

[18] Ibid., p. 14.

[19] Ibid., pp. 15-16.

TABLE 4.4

EUROPEAN ECONOMIC COMMUNITY:
AGRICULTURAL EMPLOYMENT[a] BY SEX AND SITUATION, OCTOBER, 1960[b]

Country	Independent Employers			Family Labour			Salaried Labour			Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total	Men	Women	Total
Belgium	166	24	190	51	109	160	31	5	36	248	138	386
West Germany	889	276	1165	385	1394	1779	334	186	520	1608	1856	3464
France	1500	214	1714	501	1396	1879	711	167	878	2712	1777	4489
Italy	2072	357	2429	969	1376	2345	1297	457	1754	4338	2190	6528
Luxembourg	7.6	.6	8.2	2.9	7.5	10.4	1.7	-	1.7	12.2	8.1	20.3
Netherlands	221	4	225	68	73	141	117	9	126	406	86	492
	4856	876	5732	1977	4355	6332	2491	824	3315	9324	6055	15379

[a]Figures expressed in thousands.

[b]Based on a survey conducted by the Statistical Office of the European Communities.

SOURCE: Communaute Economique Europeenne, Emploi Agricoles dans les Pays de la C.E.E., Tome I: Structure, Etude No. 7, Serie Politique Sociale (Bruxelles, 1964), p. 16.

or about 20% were classified as hired or salaried personnel. 80% were non-salaried and generally consisted of family help. In the individual member countries, the proportion of salaried workers ranged from 10% in Belgium and Luxembourg to 25% in Italy and the Netherlands.

Further, for the E.E.C. as a unit, the proportion of male to female labour was in the order of sixty to forty (9,324,000 to 6,055,000). Again, here, this fraction varies within member countries ranging from 16.67% in the Netherlands to over 50% female participation in West Germany. However, overall, the role of female labour in agriculture is much more important than in other sectors of the economy where the proportion is hardly one-third.

One of the fundamental problems facing European agriculture has been the size and distribution of farms. In fact, one of the principal reasons for the relatively low farm incomes in Western Europe has been the existence of a large number of farms whose production per man is very small. In such a structure, a given increase in product prices has less proportional effect on the incomes of small farms than on larger farms. As farm sizes increase, incomes

have tended to rise.[20]

Whereas total agricultural area in the E.E.C. has remained more or less constant since 1950 (approximately 80,000,000 hectares),[21] the redistribution of this land through consolidation and enlargement of farm units, though hampered by traditional inheritance laws is contributing largely to the development of agriculture in the Community. It is suggested that an economically viable farm unit should consist of at least twenty hectares (approximately fifty acres).[22] However the following statistics for some of the member countries indicate the extent of fragmentation and clearly demonstrate that much remains to be done in this regard as well as in efficiency of manpower and this has been stressed in the provisions of the Common Agricultural Policy. Excessive fragmentation wastes

---

[20]U.S. Department of Agriculture, Economic Research Service, The Grain-Livestock Economy of the European Economic Community: A Historical Review, 1951-63, pp. 12-13.

[21]The distribution of agricultural land among the "Six" is as follows, as of 1960:

France	40,000,000 hectares
Italy	22,000,000 hectares
West Germany, Netherlands, Belgium	18,000,000 hectares

[22]Sinclair, op. cit., p. 46.

land and time and complicates the effective use of modern equipment and the adoption of modern technology.

In Belgium, according to the census of October, 1960, out of a total of 190,600 farm enterprises, only 14,300 or 7.6% consisted of twenty or more hectares. In fact, under 75% were under ten hectares and slightly less than half were classified as being below five hectares. The average number of permanent, salaried workers per farm was two. In only 4% of the farms (7,700) were five or more permanent, salaried workers employed.

The situation in Italy is much similar. The record as of May, 1961 showed that 2,711,900 of the 2,878,400 farm units, or 94.2% were of less than twenty hectares in area, 84.2% were less than ten hectares and 64.7% were less than five hectares. At the same period of time, in Luxembourg, the area of 6,302 farms representing 71.7% of the total number of farms in the country was less than twenty hectares. The corresponding proportion for the Netherlands (December 31, 1959 census) was even more startling - 91.1% of the total of 298,300 farm enterprises.[23] Moreover,

---

[23]Communauté Economique Européenne, Emploi Agricole dans les Pays de la C.E.E., pp. 15-54.

the prime reason why agricultural price levels in West Germany are the highest in the Community is "the historical splitting up of farms into widely scattered plots, the inadequate road systems, and the concentration of farmsteads in conjested villages which the development of efficiency in agriculture and the ability and willingness of West German farmers to adjust to a more competitive market."[24]

Thus is the agricultural situation in the European Economic Community leading up to full implementation of the Common Agricultural Policy. The following section will attempt to locate the grain sector of the E.E.C. member countries within the larger domain of agriculture in general.

The Grain Economy In The E.E.C.

The intention in this section is to elaborate sufficiently on this vital segment of the economies of some of the members of the Community in order to facilitate understanding of the analysis presented in the final chapter. Special emphasis is, of course given to wheat.

---

[24]U.S. Department of Agriculture, Economic Research Service, The Western Europe Agriculture Situation (Washington, 1964), p. 31.

In the context of Western Europe, the E.E.C. countries account for 50% of total area under wheat and coarse grains and production also constitutes 50% of western Europe's and more than 10% of the world's cereal output (excluding the Sino-Soviet area). Consumption of wheat in the Community countries totals approximately 28,000,000 metric tons and disappearance of coarse grains, 35,000,000 tons. Nonetheless, the E.E.C. has historically been deficit in grains, total wheat production constituting 90% of domestic needs and coarse grain production, 80%. As an importer then, the Community absorbs about 15% of world trade in wheat and over 40% in coarse grains.[25]

For the Community as a whole, since 1950, the area of land devoted to the cultivation of grains has changed very little and has comprised approximately one-quarter of total agricultural area, that is, over 21,000,000 hectares. As the most important agricultural country in Western Europe, having the most arable land as well as considerable reserves of unused arable land and the largest agricultural production, France ranks first in the overall production of all grains and

---

[25]United Nations, Food and Agriculture Organization, Agricultural Commodities and the European Common Market, Commodity Policy Studies No. 13 (Rome, 1962), p. 20.

possesses the greatest potential for expansion. Since 1950, about one-quarter of arable land in France (varying slightly around 9,000,000 hectares) has been devoted to grain production. In Germany, from 1951-63, grain area has been constant at around 4,900,000 hectares out of total agricultural area of 14,400,000 hectares. Italy, on the other hand, has reduced the area devoted to grains from 7,000,000 hectares in the early fifties to 6,300,000 hectares in 1963 to where grain now constitutes close to 30% of total agricultural area. In the Benelux countries, area under grains has been more or less constant with minor fluctuations and comprises just over 1,000,000 hectares or under 25% of total agricultural area.[26]

By far, the grain which has commanded the greatest amount of land has been wheat, as witnessed by the fact that for the E.E.C. as a unit, for the period 1951-63, of the total area of grains harvested, wheat area constituted approximately 50% (9,000,000 to 11,000,000 hectares). This is followed by oats with 3,400,000 hectares in 1963 but which has shown a

---

[26]U.S. Department of Agriculture, Economic Research Service, The Grain-Livestock Economy of the European Economic Community: A Compendium of Basic Statistics, Statistical Bulletin No. 351 (Washington, November, 1964), pp. 20-22.

declining trend since 1951 when 4,200,000 hectares were harvested. On the other hand, an increasing pattern is discerned for barley and corn (4,100,000 and 2,100,000 hectares respectively in 1963 compared with 2,000,000 and 1,600,000 hectares in 1951). This is in response to climbing feed needs. Rye area has declined from 2,100,000 hectares in 1951 to 1,600,000 in 1963.

Following the pattern for the E.E.C., France has devoted close to half of its area under grains to wheat (4,500,000 hectares in 1962). The trends for other grains noted above apply in the case of France also as well as in all other E.E.C. member countries. It is to be noted however, that area devoted to corn is very minimal in the Benelux countries and in Germany. In fact, from 1951 to 1961 inclusive, a total of 73,000 hectares for the entire eleven-year period was recorded in Germany. During the same time period in Belgium and Luxembourg, not more than 2,000 hectares of corn were sown in any given year and in the Netherlands, whereas 11,000 hectares were classified as being under corn, this figure had dwindled to 1,000 hectares by 1959.

Returning to wheat, as of 1962, the proportion

of total grain area devoted to wheat was as follows:

France	4,571,000	hectares	49%
West Germany	1,319,000	hectares	26%
Italy	4,556,000	hectares	70%
Netherlands	133,000	hectares	26%
Belgium-Luxembourg	231,000	hectares	41% [27]

Clearly, France and Italy are the key countries with respect to wheat (and all grain) production and it is these two countries which will be most directly affected by Regulation 19 of the Common Agricultural Policy, particularly as regards the production situation. "France joined the E.E.C. under the presumption that she would become the bread basket as well as dominant supplier of other farm products to the Community."[28]

The improvement in technique and increased application of fertilizers and other artificial aids have wrought advances in attempts to increase the yield of grains. With the exception of rice, substantial progress has been achieved in improving the yield of all grains and of wheat in particular which is the grain which is the most responsive to artificial modes of increasing its productiveness (CHAPTER I).

---

[27] Ibid., pp. 23-25.

[28] MacEachern and MacFarlane, op. cit., p. 144.

In 1951, the E.E.C. aggregate average yield per hectare of wheat was 1,740 kilograms. By 1963, this had risen to 2,420 kilograms. With occasional minor relapses, this trend is similar for all grains, though, as stated, the yield of coarse grains initially is higher than for wheat. Though an aggregate trend, the movements of yields in the individual member countries parallel (to slightly varying degrees) the trends for the Community as a whole.[29]

Naturally, as a result of possessing the largest grain area in the Community, France is the largest supplier of grains followed by Italy and West Germany. Precisely, these countries account for 95% of total E.E.C. grain production and about 90% of consumption.[30] Among these three principal producers, only in Germany does production of the coarse grains, rye, barley, and oats exceed wheat output. Climatic and soil conditions are less favourable to wheat in West Germany. Despite a discernible trend towards increases in wheat output in the Community as a whole,

---

[29]U.S. Department of Agriculture, Economic Research Service, The Grain-Livestock Economy of the European Economic Community: A Compendium of Basic Statistics, pp. 26-28.

[30]United Nations, Food and Agriculture Organization, Monthly Bulletin of Agricultural Economics and Statistics (Vol. XIV, March, 1965) (Rome, 1965) p. 22.

nonetheless, year-to-year fluctuations are obvious from closer examination of production in individual countries (TABLE 4.5). Downward movements in grain output are attributable to losses caused by inclement weather conditions and/or prevalence of plant disease since it has been indicated that land area does not change significantly from year to year. Conversely, large upward fluctuations may be a result of unusually favourable climatic conditions and absence of crop losses due to insect damage.

Though Italian wheat output has not lagged too far behind output in France in some years, one of the key aspects of this question of future wheat production and needs in the E.E.C. is the fact that France is the only one of the "Six" which can increase the area and hence production of wheat as well as provide (or at least come close to providing) the requisite qualities. During the past decade, French wheat production has averaged over 11,000,000 metric tons per year comprising between 40% and 50% of the E.E.C.'s total output. This figure of 11,000,000 tons represents a substantial increase over the first post-war decade (TABLE 4.5). With acreage remaining constant, the foremost cause of this improvement is the more thorough application of technology and the

TABLE 4.5

AREA, PRODUCTION AND YIELD OF WHEAT IN THE E.E.C. COUNTRIES, 1948 TO 1964 INCLUSIVE

	1948	1949	1950	1951	1952	1953	1954	1955	1956
Belgium									
Area[a]	147	159	176	165	168	176	190	197	191
Production[b]	351	610	558	529	579	574	589	731	603
Yield[c]	23.9	38.4	31.7	32.1	34.5	32.6	31.0	37.1	31.6
France									
Area	4,231	4,223	4,319	4,250	4,296	4,219	4,491	4,554	2,745
Production	7,634	8,082	7,701	7,116	8,421	8,981	10,566	10,365	5,683
Yield	18.0	19.1	17.8	16.7	19.6	21.3	23.5	22.8	20.7
West Germany									
Area	911	927	1,021	1,037	1,203	1,165	1,117	1,181	1,155
Production	1,959	2,481	2,627	2,965	3,313	3,197	2,914	3,402	3,491
Yield	21.5	26.8	25.7	28.6	27.5	27.4	26.1	28.8	30.2
Italy									
Area	4,666	4,729	4,719	4,728	4,682	4,770	4,769	4,852	4,877
Production	6,166	7,072	7,774	6,962	7,876	9,056	7,283	9,504	8,684
Yield	13.2	15.0	16.5	14.7	16.8	19.0	15.3	19.6	17.8
Luxembourg									
Area	14	15	18	17	19	18	20	18	16
Production	22	28	32	33	36	36	41	38	31
Yield	15.7	18.7	17.8	19.4	18.9	20.0	20.5	21.1	19.4
Netherlands									
Area	95	100	91	75	82	65	110	89	86
Production	306	425	295	269	326	250	397	350	309
Yield	32.2	42.5	32.4	35.9	39.8	38.5	36.1	39.3	35.9
Totals for E.E.C.									
Area	10,064	10,153	10,344	10,272	10,450	10,413	10,697	10,891	9,070
Production	16,438	18,698	18,987	17,874	20,551	22,094	21,790	24,390	18,801
Yield	16.33	18.4	18.35	17.4	19.66	21.2	20.37	22.4	20.7

Continued

TABLE 4.5--Continued

	1957	1958	1959	1960	1961	1962	1963	1964
Belgium								
Area[a]	214	226	207	210	212	212	204	220
Production[b]	766	797	809	790	738	844	770	911
Yield[c]	35.8	35.3	39.1	37.6	34.8	39.8	37.7	41.4
France								
Area	4,668	4,615	4,439	4,358	3,997	4,570	3,850	4,388
Production	11,082	9,601	11,544	11,014	9,574	14,054	10,249	13,838
Yield	23.7	20.8	26.0	25.3	24.0	30.8	26.6	31.5
West Germany								
Area	1,231	1,314	1,342	1,396	1,397	1,319	1,382	1,447
Production	3,869	3,720	4,522	4,965	4,038	4,591	4,856	5,203
Yield	31.4	28.3	33.7	35.6	28.9	34.8	35.1	36.0
Italy								
Area	4,911	4,839	4,665	4,553	4,345	4,556	4,394	4,408
Production	8,478	9,814	8,471	6,794	8,301	9,497	8,127	8,582
Yield	17.3	20.3	18.2	14.9	19.1	20.8	18.5	19.5
Luxembourg								
Area	21	23	20	20	23	21	22	22
Production	43	44	45	48	44	43	50	39
Yield	20.5	19.1	22.5	24.0	19.1	20.5	22.7	17.7
Netherlands								
Area	99	111	120	126	123	133	126	151
Production	393	402	494	590	482	603	530	712
Yield	39.7	36.2	41.2	46.8	39.2	45.3	42.1	47.2
Totals for E.E.C.								
Area	11,144	11,128	10,793	10,663	10,097	10,811	9,978	10,636
Production	24,631	24,378	25,885	24,201	23,177	29,632	24,582	29,285
Yield	22.1	21.9	23.98	22.7	22.95	27.4	24.6	27.5

TABLE 4.5--Continued

[a]1000 hectares.

[b]1000 metric tons.

[c]100 kilograms per hectare.

SOURCE: United Nations, Food and Agriculture Organization, World Crop Statistics, 1948-64 (Rome, 1966).

expansion in fertilizer consumption resulting in increased yields but this is also true for coarse grains. As a consequence of this position as prime producer, French wheat prices are the lowest in the Community. Therefore, the determining factor of the magnitude of future increases in wheat (and all grain production) in France is the response of farmers to the new, higher common grain prices stipulated in Regulation 19. However, when one seeks to discover whether future increases in production will satisfy demand specifications, appropriate consideration must be given to quality aspects before meaningful conclusions may be drawn as to import requirements.

The quality of wheat of the variety used for baking bread, as distinct from durum wheat as produced in the E.E.C. was recently the object of examination in a study conducted under the auspices of the E.E.C. Commission.[31] The central purpose behind the investigation was to classify and compare all the grades of soft wheat grown to ascertain the possibility of encouraging increases in output as well as improving

---

[31] M. Soenen et P.F. Pelshenke, Problèmes Relatifs à la Qualité du Blé Tendre, de la Farine, et du Pain dans les Pays de la C.E.E., deuxième partie, Serie Agriculture, C.E.E., Etude No. 16 (Bruxelles 1965).

particular qualities of wheat in specified regions in the light of new available techniques. The study took special cognizance of the problems associated with wheat cultivation in particular regions and solutions were suggested. Specifically, the application of more powerful fertilizers was proposed to enhance the gluten and protein content in the wheat plant. Also, appropriate action was deemed necessary to increase protection of the plant from the ravages of insects and worms. In terms of structural changes, better drainage systems and storage and cleaning facilities, rigid quality definition, control and inspection, and greater uniformity in marketing procedures constituted the main suggestions for solving some of the underlying difficulties facing the wheat economies of certain regions of the Community.

In the analysis which follows, it is noted that, as the largest grain producer among the "Six", France is a surplus country in wheat with surpluses varying, often considerably with the yearly harvests. A diverse number of qualities of wheat is grown in France. A comparison of various grades of French wheat with the American grades, Hard Winter I and Hard Winter II revealed that, on the average, the French wheats fared admirably as regards gluten and

protein content. Precisely, average gluten content of 29% was recorded for the French blé de force and 32.1% and 30.5% for U.S. Hard Winter I and II respectively. These differences are relatively slight. A similar pattern was evident in protein measures. Samples revealed an average of 12.6% for the French qualities and 13.9% and 13.7% for the two respective grades.[32] The report is careful to point out however that these French qualities are substantially above the average for the E.E.C. On the whole, however, with due consideration given to all characteristics, including texture and volume of bread in which the American grades are superior, an overall index of quality attributes an average value of 140 for U.S. Hard Winter I while the French quality is conferred a value of 103.

A sample of twenty-five summer and winter

---

[32]The relative superiority of certain grades of Canadian wheat is indicated by the following measures of average protein content:

Manitoba Northern No. 1.....16%
Manitoba Northern No. 2.....15.9%
Manitoba Northern No. 3.....15.0%
Manitoba Northern No. 4.....14.5%

This is confirmed in the text in the statement, "les qualites canadiennes se placent en tete, avec une certaine avance, sur le marché mondiale du blé." (Ibid., p. 10).

wheats grown in Bavaria in 1962 formed the basis for an analysis of German wheat qualities. On the average, with all aspects considered, these wheats were revealed to be of a lower quality than the French grades. As a result of these tests conducted on these samples, German wheat was assigned a general index of quality of 91. However, a note of optimism is sounded in the report as to the possibilities of raising the quality of wheat produced. This hope is based on the observation that, despite a low average, the range of quality differences among samples was large with maximum values in some categories attaining or surpassing the level of French averages.

On the Community-wide scale, the difficulties and disadvantages of cultivating strong wheats comparable to those produced in Canada and the United States are briefly outlined. As explained in CHAPTER I, the yield of strong quality wheat is substantially less than that of standard or inferior qualities. In certain regions where quantity is deemed more important than quality, this property has, in the past discouraged attempts to improve the quality. However, with the introduction of the Common Agricultural Policy and with the stress on greater mobility

and interdependence within the Community, appropriate incentives, primarily through the levy system embodied in Regulation 19 on Grains will encourage the use of new available breeding techniques particularly in specific regions already favourable (with respect to soil and climatic conditions) to the cultivation of quality wheat. Assuming favourable response and expeditious action by the Community farmers to carry out the plans, the success of such an endeavor, ceteris paribus, could indeed strike a severe blow to exports of strong wheats from Canada and the United States to the E.E.C. But other factors which may hinder this move must be recognized and briefly sketched.

The problem of the structure of agriculture as a whole has already been discussed. The report also refers to exterior influences such as plant diseases which cause much more damage in the European countries than in North America. Inadequate application on mineral fertilizers relative to usage in Canada and the United States is cited as another hindrance to cultivation of quality wheat. Finally, the practice of crop rotation as well as highly variable weather conditions during the growing season in some of the

countries of the Community is suggested as a cause having an adverse effect on wheat quality. The argument is that consistency of quality is disrupted. Overseas, quality is maintained in the absence of crop rotation in areas principally devoted to grain production.

CHAPTER V

DEMAND FOR DOMESTIC AND FOREIGN WHEAT UNDER THE COMMON AGRICULTURAL POLICY OF THE E.E.C. WITH SPECIAL REFERENCE TO CANADA

In the preceding chapters, we have attempted to outline some of the distinguishing features of the world wheat economy and its trends, the position of Canada in this sphere, and the situation prevailing in the E.E.C. as regards the grain sector with thorough examination of Regulation 19 on Grains of the Common Agricultural Policy. The intention in this final chapter is to tie together the analysis and to draw the main conclusions on the basis of the conditions and environment described in these earlier chapters. Specifically, given the present world grain (wheat) situation with past trends, the conditions of production, supply and consumption of wheat and trade patterns in the E.E.C., the policy parameters embodied in the Common Agricultural Policy (Regulation 19), in what direction and to what extent is the wheat economy of the E.E.C. moving and what will be the effects on Canadian

exports of wheat to the Community in this movement?

The approach shall be, first of all, with reference to the regressions listed in APPENDIX C, to consider consumption patterns and demand conditions for wheat in the E.E.C. to complement the production situation outlined in CHAPTER IV. Then, again in conjunction with APPENDIX C, certain hypotheses with regard to import requirements, specifically from Canada will be developed and tested and trade patterns in general will be projected with appropriate assessment given to the potential impact of the uniform price and structural policy on grains on the future trade channel between the E.E.C. and Canada.

Wheat Consumption Patterns in the E.E.C.

In general, "the growth in the demand for agricultural products is related to the growth in population and income."[1] With regard to population, the assumption is made that, with no change in relative prices, ceteris paribus, a rise in population would instigate an equal proportional rise in demand for food.

---

[1]United Nations, Food and Agriculture Organization, "Agricultural Commodities, Projections For 1970," Commodity Review - 1962, Special Supplement (Rome, 1962), p. i.

However, the changes brought about in consumption of agricultural products as a result of income changes are less obvious nor are they uniform for all commodities and also depend upon the income level of the country under study. In extremely poor, underdeveloped countries whose populations are underfed, the increase in income works to increase demand for food. However, according to Engel's Law, as per capita income increases, the proportion spent on food decreases and expenditure distribution among foods changes.[2] This only applies after a certain stage in the economic development of a nation, that is, after comfortable subsistence levels have been attained. Highly-industrialized, mass-consumption type economies[3] are characterized by declining income elasticity of demand for food as income and per capita consumption rise. Specifically, this applies to cereals, milk,

---

[2]Per capita consumption has been observed to shift from other cereals to wheat under such circumstances.

[3]The following regions or countries are categorized as high-income; North America, Australia, Western Europe, Japan, South Africa, Argentina, and Uruguay. Latin America, Africa, the Near East, Asia and the Far East comprise the low-income regions of the world.

fats and oils, and sugar. The steady increase in the standard of living generally brings forth reduced per capita consumption of cereal products and increased demand for more expensive meat products which become within greater reach of the consuming public. The following discussion will revolve aroundthe patterns and trends of cereal consumption and , in particular, wheat consumption.

The per capita consumption of cereals in general and wheat in particular varies among different countries according to production magnitudes, income levels, and dietary habits primarily, though other factors cannot be totally excluded. The broad division is between low-income countries where coarse grains and/or rice constitute the bulk of cereal consumption and high-income, industrialized countries which have evolved out of the coarse grain consumption stage into wheat consumption and are gradually moving away from cereals as a whole to other forms of food which provide the nutrients available in cereals and more so. In these advanced nations, total consumption of wheat for direct food use increases with population

and decreases with income growth. Per capita consumption declines with rising incomes. With population growth rates substantially less than in underdeveloped countries, the influence of the rate of increase of population is less in advanced countries. The effect of price is considered to be negligible.[4] The increased demand for meat, on the other hand, has stimulated the use of cereals as animal feed with the share of wheat in this total varying according to quantity and quality of the wheat crop. As outlined in CHAPTER I, greater substitutability among grain types is possible for feeding purposes with price relationships between wheat and the various coarse grains being a determining factor.

Following the pattern for food in general, in low-income regions, population growth and higher incomes work in the same direction to increase cereal consumption. As these forces are propelling overall changes in total consumption, others are at work to readjust the

---

[4]Throughout the following demand analysis, an assumption is made that the demand for wheat is price inelastic and hence, no consideration will be made of the effect of price on demand.

consumption distribution among the various grains. The wheat share in the total composition increases as prices become more favourable in relation to other grains and sources of carbohydrates and as traditional dietary habits are broken with the advent of the process of urbanization which regroups production facilities and introduces new and more efficient modes of processing and distribution. Sales of wheat on concessional terms have been a positive aspect in encouraging consumption in underdeveloped countries.[5]

The analysis of grain consumption in the E.E.C. shall be conducted with reference to population and income changes and their role in relation to consumption changes. However, one cannot rightly claim that these factors completely explain patterns of consumption. "Consumption of all cereal foods is subject to secular trends towards greater sophistication or changes in social attitudes which cannot be explained entirely in terms of rising incomes."[6]

---

[5]International Wheat Council, "Report on Consumption," p. 10.

[6]Ibid., p. 90.

The E.E.C. as a whole, considered to be an industrialized, high-income area may be categorized as a region of generally declining per capita consumption of grains. It is important to stress at this point, however, that uniformity does not prevail throughout the Community. Differences exist among member nations and among districts or regions within countries, principally in regard to per capita disposable income which directly affects consumption patterns. Whereas coarse grains may remain the predominant cereal consumed in some areas for income reasons or for reasons of tradition and habit,[7] wheat bread forms a staple in others. A more detailed country by country analysis of total and per capita consumption trends in wheat and all grains appears in TABLES 5.1 and 5.2.

First of all, it is at once apparent from comparison of the total consumption columns, (a) in both tables that for each country, with the exception of West Germany and to a much lesser extent, Italy, wheat consumption comprises the bulk of total human

---

[7]The consumption of rye bread remains a significant part of total cereal consumption in West Germany, as it has been for centuries.

TABLE 5.1

GROSS AND PER CAPITA CONSUMPTION OF WHEAT AND WHEAT FLOUR AS HUMAN FOOD IN THE E.E.C. (1950-51 to 1961-62)

Crop Year	France		West Germany		Italy		Netherlands		Belg.-Lux.		E.E.C.	
	(a)[a]	(b)[b]	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
1950-51	6272	149.5	3873	77.5	7647	165.2	1020	100.8	1136	127.1	20200	128.6
1951-52	6360	150.5	3882	77.2	7725	165.7	1046	101.8	1153	128.5	20300	128.2
1952-53	6600	155.1	4010	79.2	7731	164.9	1076	103.6	1147	127.3	20600	129.2
1953-54	6431	150.8	4007	78.2	7830	164.7	1034	98.6	1150	126.6	20200	125.4
1954-55	6020	140.0	4174	80.7	7779	163.2	1085	102.2	1160	127.1	20700	127.6
1955-56	5939	137.3	4156	79.6	7779	162.0	1104	102.7	1150	125.3	20500	125.4
1956-57	5555	127.3	4106	77.5	7818	161.1	1098	100.9	1082	117.1	19700	119.3
1957-58	5930	134.5	4056	75.5	7826	161.4	1114	101.0	1092	117.3	20000	120.0
1958-59	6068	135.5	3975	73.2	7845	159.9	1087	97.2	1070	114.1	20100	119.2
1959-60	5858	129.9	3946	71.7	7901	161.1	1060	93.4	1070	113.4	19800	116.5
1960-61	5998	131.8	3940	70.7	7950	161.1	1072	93.3	1163	122.8	20100	117.2
1961-62	6000	130.5	3876	68.9	8000	161.7	1166	100.2	1100	115.7	20200	116.9

[a]1000 metric tons.

[b]Kilograms per capita per year. This figure is obtained by dividing column (a) by total yearly population estimates published by the United Nations.

SOURCE: 1950-51 to 1954-55: United Nations, Food and Agriculture Organization, Food Balance Sheets, 2nd Issue (Rome, 1965).

1955-56 to 1961-62: U.S. Department of Agriculture, Common Market Grain Production and Trade Statistics, 1950-51 Through 1961-62 (Washington, April, 1963).

TABLE 5.2

GROSS AND PER CAPITA CONSUMPTION OF ALL CEREAL AS HUMAN FOOD (EXCLUDING RICE) IN THE E.E.C. (1950-51 to 1961-62)

Crop Year	France		West Germany		Italy		Netherlands		Belg.-Lux.		E.E.C.	
	(a)[a]	(b)[b]	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
1950-51	6594	157.2	6216	124.7	8665	187.2	1224	121.0	1249	139.7	23948	152.4
1951-52	6670	157.9	6077	120.8	8815	189.2	1217	118.5	1253	139.5	24032	151.8
1952-53	6900	162.1	6178	121.9	8801	187.8	1223	117.8	1251	138.9	24353	152.8
1953-54	6500	152.4	6179	120.6	8880	186.8	1194	113.8	1263	139.1	24016	149.2
1954-55	6200	144.2	6310	122.0	9014	189.1	1241	116.9	1273	139.5	24038	148.3
1955-56	6068	140.0	6177	118.4	8415	175.2	1253	116.5	1248	135.9	23161	141.8
1956-57	5682	130.1	6122	115.5	8425	174.5	1246	114.5	1152	124.7	22627	137.0
1957-58	6060	137.5	5994	111.6	8419	173.6	1255	113.8	1162	124.8	22890	137.4
1958-59	6207	138.6	5813	107.0	8388	171.1	1230	109.0	1130	120.5	22818	135.3
1959-60	5955	132.0	5743	104.4	8496	173.2	1198	105.6	1129	119.8	22521	132.5
1960-61	6086	133.7	5700	102.5	8572	173.6	1191	103.7	1182	124.8	22731	132.6
1961-62	6072	132.1	5576	99.1	8995	181.8	1291	110.9	1150	122.2	22982	133.1

[a]1000 metric tons.

[b]Kilograms per capita per year. This figure is obtained by dividing column (a) by total yearly population estimates published by the United Nations.

SOURCE: Same as TABLE 5.1.

grain intake. A large proportion of total German cereal consumption is made up of rye bread. Within each table, in each case, for wheat and for cereals as a whole, total consumption has either remained virtually constant or has shown a tendency to decrease with minor fluctuations during the period, 1950-51 to 1961-62. More precisely, equation set IV (a to f) and set V (a to f) in APPENDIX C show time trends for total wheat consumption and total cereal consumption respectively. In some of these equations, the extremely low coefficient of multiple determination, R^2, indicates the failure of these formulations to explain a reasonable amount of variation in the dependent variables.[8] However, that is not the present purpose. Instead, the intention is to indicate the relative meagreness of consumption changes during the fifties. As regards wheat consumption, except for Italy and the Netherlands, and including the aggregate for the E.E.C., the negative sign before the coefficient of the time

---

[8]In fact, for some countries, the period in the time series had to be shortened in order that a linear relationship could be obtained.

variable denotes declining consumption but at a very low rate as can be seen by comparing the absolute size of the time coefficient with the constant term, X_o. In Italy and the Netherlands where the coefficients are positive, the rate of increase is even less than in the case of declining consumption. In time, it is anticipated that these signs will revert to become negative. In the equations denoting the time trend for total cereal consumption, all countries show declining total consumption and at rates greater than the decline indicated in the wheat consumption trend equations. For example, on the aggragate level, that is, for the Community as a whole, whereas the compound rate of decline in total cereal consumption was .79%, that observed for wheat and wheat flour was only .24%.

These facts, together with the natural condition that population has increased in all the countries explains, in part, the declining per capita consumption observed for all countries in both tables. These per capita figures more strikingly illustrate the proportion of wheat which is consumed out of total cereal intake - almost invariably over 80% and sometimes closer to 95%,

especially in France. Again the obvious exception is West Germany. Nonetheless, in that country, the reduction in per capita wheat consumption during the period followed a much slower pace than that for all cereals. That is, reductions in the total were due primarily to decreasing coarse grain (rye) consumption. This is also true in general as seen in the aggregate columns (E.E.C.) and in the above calculations. Coarse grains are usually first to suffer reductions as per capita income increases and wheat becomes the secondary victim as further increases in income accrue.

The role of population and income in these patterns may more properly be focused with the aid of further regressions which appear in APPENDIX C. Firstly, it is important to indicate broad relationships - notably that total consumption figures in France, West Germany and Italy are attributable to relatively large populations in comparison with the Netherlands, Belgium and Luxembourg. Also, since the population totals of the three largest members are fairly similar, further nuances in total consumption figures as well as in the per capita data may be explained by different

initial income levels and their rates of change. The greater the rate of change in per capita income, the greater the rate of decrease in per capita consumption of cereals with wheat consumption, as a sub-category of total cereal intake decreasing at a slower rate within.

Equation sets I (a to f) and I.1 (a to f) in APPENDIX C indicate time trends in population in each of the countries of the E.E.C. and the E.E.C. as a unit. A pure time trend, equation set I (a to f) resulted in better fits in all cases than a semi-logarithmic function.[9] Though yearly percentage changes of population vary among the member countries,[10] for the E.E.C. as an aggregate, the average annual rate of increase for the period 1947 to 1964 was 1.02% according to the pure time trend. It is expected, however, that these rates of increase will decline

---

[9]This simply confirms the fact that estimators utilize the pure time trend to establish yearly population estimates (in these countries at least).

[10]The annual rates of increase for each of the member countries, derived from equation set I (a to f) are as follows:

France	1.03%
West Germany	1.30%
Italy	0.70%
Netherlands	1.50%
Belgium-Luxembourg	0.60%

during the next few years or beyond. The F.A.O. Study, in collaboration with the E.E.C. Secretariat measured the past trend of population growth in the E.E.C. to be 0.9% (compound) during the period 1950 to 1959 and projected the rate of 0.7% (compound) for the period 1958 to 1970.[11] Therefore, carrying forth our earlier assumption that the rate of increase in cereal consumption will parallel the population growth rate, an increase would be foreseen in total cereal consumption but at a slower rate in the future. BUT, the effect of income is yet to be considered. Indeed, as observed in TABLES 5.1 and 5.2, in all cases, total consumption figures have remained virtually

---

[11] In comparison, past and projected population growth rates for other regions or countries are as follows:

	Past Trends (1950-1959)	Projected Trends (1958-1970)
	Percent per year (compound rate)	
North America.....	1.9	1.8
Japan.....	1.3	0.7
Low-income Countries..	2.2	2.4

The most drastic reduction in the rate of growth is expected to be experienced in Japan while in the under-developed regions, the rate is expected to increase.

SOURCE: United Nations, Food and Agriculture Organization, "Agricultural Commodities, Projections For 1970," p. iii.

constant or have decreased during the period. The full effect of population growth on consumption has been subdued by the opposing force of income increases. The per capita consumption columns, (b) clearly dramatize this point. As population has increased, total consumption has remained stagnant. As a result, per capita consumption trends are downward. Income levels have much to say about this.

As the first step in conducting this discussion of the importance of income changes on consumption patterns, as was done with population, time trends of income changes were recorded for both total and per capita private consumption expenditure using again, both pure and logarithmic trend functions. Surprisingly, both formulations produced equal (or almost equal) and satisfactory fits. For present purposes, the pure time trend will be employed. As expected, invariably, the trends show rising incomes of varying magnitudes for each country both on a total and per capita basis during the 1950's.[12]

---

[12]The average annual rates of growth of income (total and per capita) during the period 1950-1960 for each of the "Six" are as follows:

For the E.E.C. taken as a unit, these average annual rates of growth were calculated to be 6.8% and 5.4% for total national consumption expenditure and per capita expenditure respectively. The respective compound growth rates for the period 1950 to 1959 were 5.8% and 4.9% according to the F.A.O. and the E.E.C. Secretariat. The projected compound growth rates of income in the Community for the period 1958 to 1970 were computed to be 5.5% and 4.7% for total and per capita increases respectively. These are regarded as the high set of rates. On other assumptions, the low compound rates of growth are 4.7% and 3.9% respectively.[13]

	Total	Per Capita
France	5.4%	4.1%
West Germany	11.8%	9.1%
Italy	5.4%	4.2%
Netherlands	5.2%	3.4%
Belgium-Luxembourg	2.7%	1.9%

[13]For sake of comparison, past growth rates (1950-1959) in Gross National Product and Gross National Product per capita in North America were 3.1% and 1.2% (compound) respectively. In Japan, on the other hand, these respective rates were 7.5% and 6.1%. Whereas in North America, projections foretell slight increases in these rates in the future, the Japanese rates are expected to decline.

SOURCE: United Nations, Food and Agriculture Organization, "Agricultural Commodities, Projections For 1970," p. iii.

It was stated above that the rate of change in per capita consumption was associated with the rate of change of per capita income. It is observed that in the country which experienced the largest average annual increase in per capita disposable income, West Germany, 11.8%, the greatest rate of decrease in per capita consumption of all cereals took place. The rate of decline in wheat consumption was substantially less which is consistent with general trends cited earlier.

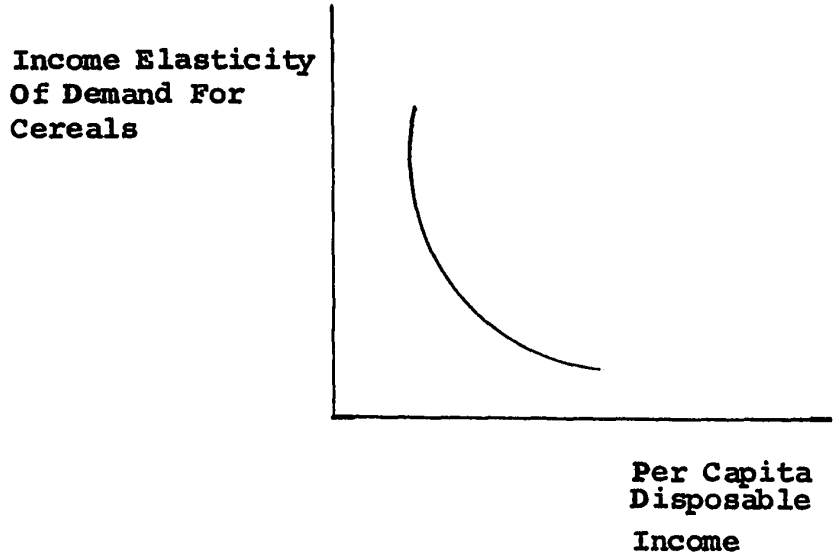
More precise measurements of the effect of income changes on consumption of all cereals and wheat in particular are obtained by calculating income elasticities of demand for each country and the E.E.C. as a unit (TABLE 5.3). Logarithmic functions are used to derive elasticities directly. Income elasticities are conditioned by initial income levels and decline as income and consumption rise. That is, the relationship between the income elasticity of demand for cereals and per capita income is negative resembling a normal demand curve and may be depicted as follows:

TABLE 5.3

INCOME ELASTICITIES OF DEMAND (OVER A TIME PERIOD)
FOR WHEAT AND ALL GRAINS IN THE E.E.C.

Country	Income Elasticity of Demand For Wheat	Income Elasticity of Demand For All Cereals	Income Elasticity of Demand For Wheat On a Per Capita Basis
France	-.237	-.313	-.563
West Germany	-.168	-.114	-.365
Italy	.075	-.106	-.311
Netherlands	.114	-.172	-.515
Belg.-Lux.	-.205	-.482	-.646
E.E.C.	-.051	-.163	--

SOURCE: Drawn from Equations VIII, IX, X (Appendix C).



Income elasticities of the demand for cereals have been observed to range from 0.5 in very low-income countries to 0.0 in medium-income regions and -0.5 in the United States where the negative coefficient defines the package of cereals as an inferior good. For meat, on the other hand, the income elasticity is positive in the United States and was equal to 0.35 in the period 1957 to 1959.[14]

Therefore, according to these observations, it is to be expected that the elasticities appearing in TABLE 5.3 should reflect the relative income situations in each of the member countries.[15] First

---

[14] Ibid., p. A-21.

[15] As indicated, the income elasticity of demand

of all, dealing with totals in column (b), the income elasticity of demand for all cereals is negative in all countries. Therefore, it is negative on the aggregate. For wheat, however, it is negative in all countries Except Italy and the Netherlands. The combined weight

---

varies with levels of income and consumption. Therefore, any measure of elasticity must be defined for a specific period of time. The coefficients appearing in TABLE 5.3 however, since they are derived from time series equations represent indications of elasticities during the eleven-year period, 1950-51 to 1961-62, and in some equations, less than eleven years. Therefore care in interpretation is suggested. The coefficients may not be exact reflections of the relative income positions of each country since incomes have changed and at varying rates in the member countries of the "Six". The F.A.O. Study avoided this dilemna by deriving demand functions which incorporate a progressive reduction in the value of the income elasticity as income increases. The coefficients of income elasticity of the demand for cereals in the E.E.C. , expressed in terms of quantities (1957-59) thus obtained (Ibid., p. A-14) were as follows:

France	-0.2
West Germany	-0.3
Italy	-0.3
Netherlands	-0.4
Belgium-Luxembourg	-0.4
E.E.C	-0.3

It is at once apparent that discrepancies exist between these figures and mine (TABLE 5.3, column (b)). The explanation has been given. Further, the precision which characterized the F.A.O. figures is not vital in this study since quantitative projection is not the prime concern. Rather, the coefficients in TABLE 5.3 are presented in order to facilitate discussion of relationships between overall cereal consumption and wheat consumption with respect to income and to indicate the direction of changes through time.

of the negative coefficients is greater than the two positive coefficients producing a negative income elasticity for wheat for the Community as a whole. Comparison of columns (a) and (b) in TABLE 5.3 reveals that the response to income increases is manifested in greater decline in combined cereal consumption than in wheat consumption. The sole exception is West Germany where habit and tradition in consuming rye distort the pure income effect.

More meaningful conclusions on the effect of income levels on wheat consumption can be derived by examination of column (c) in TABLE 5.3. Here, the elasticities have been calculated on a per capita basis where population effects may be more effectively isolated. All elasticities are, of course, negative but there are differences in the magnitude of the coefficients. Subject to the restrictions cited, these divergencies may be cautiously explained by income levels in the respective countries. The largest coefficient, -.646, coincides with the countries (Belgium and Luxembourg) with the largest initial per capita disposable income. The larger the per capita

income, the greater the substitution away from grains and starchy foods to other forms of food, principally, meat. Also, not surprisingly, the country with the lowest initial per capita disposable income, Italy, has the lowest income elasticity coefficient. Such correspondence is maintained for each of the countries. That is, their relative position in the hierarchy of per capita income figures exactly matches their relative positions vis à vis income elasticity coefficients. With the foreseen continued increase in per capita incomes in each of the countries, these elasticity coefficients will increase (absolutely) at rates varying with rates of increase in income.

Having set forth past trends and developments, a brief examination of the future of human grain consumption in the E.E.C. by attempting a fusion of the opposing forces of population and income shall complete this section. The insinuation is not that these are the sole factors influencing consumption. Tastes, habits, production levels, changes in social structure, and government policies have been and will continue to be determining factors, but these are

isolated and assumed to remain unchanged in statistical analysis due to the inherent difficulty of measurement. It is then vital to stress that any or all of these factors could significantly alter projections based on population and income effects only.

For the world as a whole, no drastic reversal of past trends is envisaged for the near future. The per capita consumption of wheat is expected to follow divergent trends in low-income and high-income countries, increasing in the former and decreasing in the latter. It is further anticipated that the use of grains as feedstuff will show continued increase, at a faster rate in the developed regions as meat consumption replaces human grain consumption and increases.[16] This

---

[16] In the E.E.C., in response to improved economic conditions, consumption of meats has been increasing steadily since the early fifties. Rates of increase have varied among the member countries as a consequence of differences in tastes and in rates of growth in income and population. Unlike cereal consumption, the greater the rate of increase of income, the greater the rate of increase in consumption of meats.

Differences are also apparent in the rates of increase of intake of different types of meats which reflect changes in incomes and relative prices, but invariably, per capita consumption of meats has steadily risen. The implication of such trends is that demand

prognostication is dependent, however, on the assumption that the present average ratio of coarse grain inputs per unit weight of output of animal products will be maintained or increased. The possibility of future substitution between grains and other feeds due to price and/or nutritional criteria and the extent of such substitution may nullify this trend of rising coarse grain utilization.

In terms of total human consumption of grains, in North America and Western Europe, it is foreseen that the growth of population, as in the past, will more or less offset the downward trend in consumption spurred by income increases. Therefore, total consumption demand will remain virtually unchanged.[17]

---

for feedgrains will be substantially maintained and prospects for increases are bright.

SOURCE: U.S. Department of Agriculture, Economic Research Service, The Grain-Livestock Economy of the European Economic Community: A Historical Review, 1951-63 and The Grain-Livestock Economy of the European Economic Community: A Compendium of Basic Statistics.

[17]United Nations, Food and Agriculture Organization, "Agricultural Commodities, Projections For 1970," p. II-1.

Combining the income and population effects, the indices of projected total demand for cereals in the E.E.C. in 1970 (1958 = 100), calculated by the F.A.O. reveal a slight reduction in each of the countries. The projected ranges are:

France	98
West Germany	95
Italy	98 - 99
Netherlands	96 - 98
Belgium-Luxembourg	95 - 96
E.E.C	97 - 98

The effect of population alone in maintaining the near-constant level of total consumption is immediately apparent when note is taken of the projected per capita demand for cereals as a response to income changes only. The following are 1970 indices (1958 = 100) with high and low income assumptions:

	Low	High
France	91	91
West Germany	87	87
Italy	92	91
Netherlands	87	85
Belgium-Luxembourg	90	89
E.E.C	90	89[18]

As the food consumption pattern in Europe

---

[18] Ibid., p. A-18.

becomes progressively more like the present Canadian and United States patterns and as income levels and the pace and standard of living approach North American levels, the trend has been and will continue to be clearly towards declining per capita grain, potato, and other starchy food consumption in favour of meats, eggs, and fruits and vegetables.[19] The relationship between wheat and grains in general will likely be preserved with per capita wheat consumption declining at a slower rate than per capita consumption of grains as a group.

The Effect of the Common Agricultural Policy on the Grain Economies and Trade in E.E.C. Member Countries; And Import Patterns and Requirements

Having indicated grain production conditions and consumption patterns in the E.E.C., an aspect which remains to be dealt with is the future of wheat imports into the Community under changing agricultural conditions and consumption patterns and the provisions of Regulation 19 of the Common Agricultural Policy. In other words, will production developments and policy

---

[19]Sinclair, op. cit., p. 63.

decisions result in eventual self-sufficiency in wheat and all grains and eliminate foreign sources of supply? The final phase of this study will attempt to focus upon certain decisive, contributing factors and to test a number of hypotheses regarding import requirements and patterns in order to arrive at reasonable conclusions on this question.

Trade in grains between the E.E.C. countries and non-member nations is not an exception to the dichotomy which exists between principles and realities in international trade. Economic welfare is assumed to be maximized under a system of free trade and competition. Rare is the existence of such an ideal situation. Invariably, restrictions are imposed on the free flow of goods and services among countries. "Barriers to the international movement of agricultural commodities are in very many cases high or prohibitive in order that domestic programs of price support or production control will not be frustrated by foreign competition."[20]

---

[20]John H. Young, "Agriculture and International Trade," Proceedings of Conference on International Trade and Canadian Agriculture, p. 7.

With some reservations, these reasons have motivated the interference imposed on the grain trade by the members of the E.E.C., both prior to Regulation 19 and in it. Therefore, before proceeding to examine wheat import flows into the E.E.C., it seems imperative at this point to present a cursory review of pre-Common Agricultural Policy national wheat policies and trade barriers in each country and the changeovers which have taken place and will continue to take place until the provisions of Regulation 19 are in full force. A context will thus be established within which to evaluate potential adjustments in the future wheat trade and economy in each of the member countries. The impact of the introduction of the new system is related to the previous policies and the magnitude of changes instigated by the uniform policy. Attention is necessarily focused on the three largest grain producers, France, Italy, and West Germany.

In France, guaranteed producer prices on a fixed quantum of grain to cover domestic utilization and a normal volume of exports were set by the government through the Office National Interprofessionnel des

Céréales (O.N.I.C.) which maintained monopoly powers over the French grain trade and economy and thus regulated the movement, sale, prices and foreign trade of grains. More specifically, its authority extended to handling of all imports of wheat and arranging for their domestic disposal; providing export subsidies according to a tender system to bridge the difference between domestic and world prices; and authorizing the denaturing of lower quality wheat for animal feed by compensating farmers.[21] The advent of the uniform Grain Regulation of the Common Agricultural Policy nullified certain functions previously carried out by the O.N.I.C. Principally, it abolished the latter's control over foreign trade and its prerogative to fix delivery quotas. Also withdrawn was the right of defining price support procedures through unilateral action. These have been replaced by a system of prices and supports outlined in CHAPTER III.

The role to which the O.N.I.C. has been relegated

---

[21]International Wheat Council, "A Study of the First Year of the Working of the EEC Grain Regulations in Relation to the World Trade in Wheat," Review of the World Wheat Situation, 1962-63, pp. 55-56.

under Regulation 19 is controller of stockpiles and intervention agent for the Community and, as such, is required to purchase all grain offered at the intervention price and is as well responsible for the issuance of import and export certificates and for the calculation of import levies and export subsidies. The likely adjustments in the French grain economy as a result of these changes will be outlined briefly.

The potential effects on the French grain economy of the policy of price harmonization and structural readjustment incorporated in Regulation 19 on Grains was recently examined by Helen C. Farnsworth.[22] Attention was focused on France since, as the member with the lowest grain prices, the largest reserve of convertible pasture and unused farmland and past performances as a surplus grain producer, it is the French grain farmer to whom greatest benefit will accrue. The extent of this gain, however, will depend upon the response, in terms of increased production and improved

---

[22]Helen C. Farnsworth, Determinants of French Grain Production, Past and Prospective ("Food Research Institute Studies," Vol. IV, No. 3; Stanford, Calif.: Stanford University Press, 1964), pp. 225-272.

quality to increased prices; the co-operation given in attempts to improve the structure of agriculture in the Community (and the relative success of same); and the continuation of technological advances. In effect, the attitude of the French grain farmer towards these changes and the resultant production and quality changes will have vital repercussions on the wheat economy and trade of the E.E.C. as a whole and on the demand for imports of all types of wheat, including Canadian, high-quality wheat.

Mrs. Farnsworth, though recognizing the difficulty of isolating the separate effects, cites three factors which are liable to affect production levels in a country:

> Starting in any large producing country with a given state of technical knowledge and farm practices, a fairly stable total agricultural area, and a unified grain price structure, one can expect substantial changes in the level or composition of output over a decade or so only if:
>
> (1) technological improvements or better farm practices are more widely adopted, or
>
> (2) net prices to producers for grain, competing crops or livestock products show substantial changes

in 'real' terms[23] or in relationship to one another, or

(3) changes in the effective costs of fertilizer, labour, or farm equipment favour or discourage expansion of the grain area planted, its intensity of cultivation, or its composition.[24]

Total grain area has shown a tendency to increase during the past decade, due in large measure to expansion of area devoted to feed grains. The answer as to whether grain prices were a determining factor in motivating this trend as well as other use-patterns for grains since 1900 is that the available evidence is inconclusive. Factors which are not fully reflected in prices (national economic conditions, technological knowledge and improvements, and the role of government as a price stabilizing agent) confuse the attempt to attribute specific reactions in terms of area changes to price changes. Consideration of costs (and attempts at their reduction through more extensive use of mechanization and better breeding introduced by technological advances) becomes necessary. For example,

---

[23]The real price of a commodity is obtained by dividing the average price recorded in a given period (month or year) by an index of wholesale prices.

[24]Farnsworth, op. cit., p. 247.

to the large, efficient, wheat producers in the north of France, expansion of production became profitable with the increased use of powerful machinery and appropriate application of fertilizer despite the higher surplus-disposal taxes which they were obliged to pay on their large wheat deliveries. These taxes reduced the average price received by the farmer in this region to below the average for the nation as a whole. With the introduction of the new common price for wheat throughout the Community, discrimination of this type against the large producer will vanish and indeed, with the new price set considerably above the prevailing French price, it is these efficient producers in the north of France who are applying the improved methods of cultivation who will receive the largest net increases in price. Further, under the Common Agricultural Policy's emphasis on plans to increase agricultural efficiency through reorganization of farm labour and increased mechanization in an effort to reduce costs of production, it is reasonable to expect a general increase in yields and production of grains. The maintenance of inflated grain prices, however, despite

natural economic pressures which would work to decrease the price, will adversely affect the consumer.[25]

The situation in West Germany[26] is totally opposite to that in France. As a deficit country in grains, and hence, a large net importer, and with the highest government-supported wheat prices in the Community, it was West Germany which originally was vehemently opposed to the price aspects of Regulation 19 which would reduce domestic producer prices substantially

---

[25]With the expected expansion of grain area, land values and rents would rise as well as other costs in the form of greater application of fertilizers and other capital aids until long-run equilibrium prices commensurate with the imposed, higher grain prices were achieved. However, the consumer will feel the pinch in the sense that these higher grain prices (including feedstuffs) would be reflected in higher meat prices. Consequently, the consumption of meats may decline as will the need for feed grains, which might result in changes in land-use patterns away from feed grains. Hence, a vicious circle is envisaged unless the artificially-imposed prices of grains are capable of being changed in the light of prevailing conditions to properly and accurately reflect the needs of producers ans consumers alike. Indeed, provision for such action is stipulated in Grain Regulation 19.

[26]Karen J. Friedman, German Grain Policies and prices ("Food Research Institute Studies," Vol. v, No. 1; Stanford, Calif.: Stanford University Press, 1965), pp. 31-98.

Helen C. Farnsworth and Karen J. Friedman, Grains In German Farming, Past Developments and Prospects For 1970 and 1975 ("Food Research Institute Studies," Vol. VI, No. 1; Stanford, Calif.: Stanford University Press, 1966), pp. 3-64.

so as to achieve a uniform price structure throughout the Community. Under heavy pressure from the other member nations who feared lack of prompt agreement by all parties on this issue would jeopardize the entire Common Agricultural Policy, the German government finally submitted itself to the new regulations, including the price policy. The prominence of the German market for Canadian wheat warrants elaboration of the factors contributing to this situation and the changes introduced by Regulation 19.

Prior to inception of the Grain Policy of the E.E.C. in July, 1962, the grain sector in all its aspects, including domestic and foreign trade was controlled by the government through the Marketing Law for Grains and Feedstuffs (Grain Law) which was enacted in 1950 and subsequently revised periodically. A yearly (crop year) inventory of domestic supplies and needs conducted by the Minister for Food, Agriculture and Forestry preceded decisions as to the distribution of available supplies for food versus non-food purposes, extraction rates, the proportion of domestic and

imported grains in the national grist,[27] and finally,

---

[27]Domestic milling quotas specifying to millers the proportion of domestic wheat to be used in their grist was introduced in Germany in July, 1954. Up to that time, the mixture rates were arbitrary and depended upon the miller's supply of foreign grains. During the first year in which the regulation applied, 1954-55, the proportion of domestic wheat to be used varied between 20% and 30%. In 1960, due in large measure to domestic production increases, this proportion rose to 75% at which rate it was maintained through to 1962 when Regulation 19 abolished all forms of restrictions.

In conjunction with minimum rates of domestic wheat utilization, maximum rates of utilization of high-quality, foreign wheats (Nos. 1 to 3, American Hard Spring and Hard Red Winter and Nos. 1 to 4, Manitoba Northern) were stipulated, the reason being that since these wheats were mainly from hard currency countries (dollar area), imports could only be permitted within limits imposed by West Germany's foreign exchange position.

These quotas were, in a sense, arbitrary and not totally meaningful since the quality of the bread produced is largely a function of the quality of domestic wheat; the poorer the quality, the greater the need for high-quality, imported wheats. Further, the extent to which quotas are made effective is dependent upon the financial position of the country (defining its ability to import), the obligations of the nation under certain trade agreements, and the world supply of the various grades of wheat. Indeed, the partial fallacy of defining quotas was proven shortly after the quota for domestic wheat was raised to 75% when the maximum rate for foreign-quality wheat utilization was abolished. Such a proportion (75 to 25) was considered too low and would mean lower-quality flour and bread.

SOURCE: Friedman, op. cit., pp. 49-50.

the types and quantities of wheats required from foreign sources. As well, based on the results of this survey of the sector, the government-guaranteed producer prices were legally determined for each production center with the deficit areas in each category of grain receiving the largest supports.[28] Imports of wheat into the country, as well as exports were controlled by the Import and Storage Agency for Grains to which importers must offer the imported grain at a specified "take-over" price set in advance by the Agency. A system analagous to the new price policy was in effect whereby, in the case where the domestic price was higher (which has been the case since 1951), [29] the imported grain was subjected

---

[28]The prices refer to producers' prices for grains of average quality, delivery free at nearest mill, dealer, storage facility, or railroad station. After yearly definitions of "average" quality, premiums and discounts are imposed to apply to other specified qualities.

SOURCE: Ibid., pp. 44,46.

[29]In 1950, when the Grain Marketing Law came into effect, German grain prices were below world market prices. The difference became larger as world grain prices rose (with the exception of wheat which was subject to the I.W.A.) as an aftermath of the Korean War. The heavy burden of the government subsidy

to a variable import levy or equalization fee or 'skimming'.[30]

Under the new regulations, with lower grain prices in Germany, the Community import levy will be less. Further, a greater freedom will prevail for the miller who will be able to choose the types of wheats he needs after all government interference measures are abolished. In this respect, the change-over to the common policy of the E.E.C. in Germany, ceteris paribus, will not adversely affect Canadian wheat exports to this country. However, the interplay of other factors caused by the implementation of Regulation 19 (primarily the extent of production increases and quality improvements in the grain sector of France in particular and the benefits of free trade

---

(equal to the difference between the domestic and import prices) paid to the importers along with the feeling that increasing farm costs warranted price increases resulted in rye and feedgrain prices being increased in October, 1950 and again in March, 1951 to world price levels. Domestic wheat prices were increased up to still higher non-I.W.A. levels. As world grain prices gradually declined following the crisis, German price levels were maintained and even slightly increased by the Grain Price Laws of 1957 and 1958.

SOURCE: Ibid., p. 47.

[30] Ibid., p. 45.

among the nations of the E.E.C. as well as introduction of new milling and baking techniques) may result in reduced exports to Germany. Also, the discontinuance of a feature which characterized the former grain policy in Germany, government subsidies to cover inland freight costs on imported grain, will not help importers.

With regard to repercussions on domestic production accruing from the scheduled price reductions, a long-run decline in grain production is foreseen, the magnitude of which will depend upon the prices of major competing products which will influence land usage, and the pace of technological and structural developments whichis, in turn, a function of the rate of growth of the economy as a whole.[31]

On the assumption of a high growth rate of the economy and all aspects concomitant with it, including high employment, rising real wages in industry and agriculture, readjustment in per capita food consumption away from root crops and starchy foods in favour of more expensive foods, extension of mechanization in agriculture, and rational land consolidation, the

---

[31]Farnsworth and Friedman, op. cit., p. 37.

outlook is for total agricultural land in West Germany to decline by 1975. The anticipated reduction in total agricultural land is 1.9% by 1970 (1960-64 base) and 3.1% by 1975. In terms of arable land, these reductions are 3.9% and 6.3% respectively.[32]

While the proportion of total arable land devoted to grains has shown an inclination towards increase, (57.2% in 1950-54, 60.4% in 1955-59, 62.4% in 1960-64, 63.8% in 1964 with projections of 64.5% in 1970 and 65.0% in 1975), with declining total arable land, grain area would amount to 4,900,000 and 4,800,000 hectares in 1970 and 1975 respectively compared to 5,000,000 hectares in 1964.[33] The implication here seems to be that the specific effect of changes in grain prices on grain area is somewhat obscured by the other trend factors which affect land use patterns, principally the direction of movement of the economy as a whole and the impact of technological progress on this movement.

Within the grain sector, the relative

---

[32] Ibid., p. 45.

[33] Ibid.

profitability of wheat in terms of price relationships with other grains will continue to dictate its share of total grain area sown. No substantial reduction in wheat plantings is expected by 1970. Indeed, an increase is forecast. However, as wheat price relationships stabilize between 1970 and 1975, cutbacks are probable. The estimated reduction by 1975 is only .9% (1960-64 base).[34]

Of more direct concern are the future production levels achieved on the area devoted to wheat. This, of course, is heavily dependent upon yields which, in turn, are functions of fertilizer utilization. Price relationships determine fertilizer use. Increases in wheat yields have been steady and are expected to continue through 1970 and 1975. By 1975, wheat yields are projected at between 4,000 and 4,180 kilograms per hectare, being an increase of approximately 35% over averages recorded during 1955-59. The effect of grain price changes on yield is assumed to be negligible. Irregardless of price changes, technological developments in the fields of plant breeding and efficient use of

---

[34] Ibid., p. 49.

fertilizer will spur yield increases. Hence, with this trend towards increased efficiency, though area will eventually decrease, wheat production will continue to increase through 1975, albeit at declining rates as the effect of diminishing area begins to dominate. The trend in wheat production in West Germany is projected as follows:

1950-54..... 3,049,000 metric tons
1955-59..... 3,800,000 metric tons
1960-64..... 4,731,000 metric tons

1970..... 5,400,000 to 5,600,000 metric tons
1975..... 5,500,000 to 5,700,000 metric tons[35]

In Italy, as in both France and West Germany, control over the price support system and all marketing of grains was the exclusive responsibility of the government through the Federazione Italiana dei Consorzi Agrari. Producers were guaranteed specified prices on a portion of the crop which was delivered to government-controlled warehouses. Under the new system of intervention prices, varying in different regions of the country, these guaranteed prices will be initially substantially maintained but under different form and

---

[35] Ibid., p. 56.

jurisdiction. The process of gradual alignment with other nations' prices will eventually reduce the intervention prices in Italy. Variable levies will be the central import-controlling instrument with the abolition of all quotas and ad valorem duties previously in force. The Federazione becomes the intervention authority responsible to the Community organizations.

As regards domestic production policy, effort was expended to encourage durum wheat production to self-sufficiency levels through maintenance of high domestic prices and to restrict domestic output of soft wheat to the quantity required for internal consumption to avoid the problem of surplus disposal. In order to avoid serious, immediate disruption of this policy, under special permission, the Italian government maintained its monopoly control of bread-grain imports for the crop year 1962-63 only.[36] The purpose was to ease the transition from state to free trading.

Unlike France and West Germany, Italian

---

[36]The Commonwealth Economic Committee, op. cit., 1965, p. 190.

agriculture seems the most vulnerable to the policy changes introduced in the grain economy. In certain regions, particularly in the south, the existence of subsistence-type farming and the relatively slow pace of advancement towards efficient, viable farm enterprises may cause a certain amount of hardship as transformation of policy in the form of lower intervention prices takes effect. Though total agricultural area is not expected to change significantly, price relationships principally will dictate the distribution of this area among different crops. In other words, there will be a decline in land used for wheat and rice, equivalent to 20% by 1975; an increase in feed and forage acreage of 7% by 1975; and a substantial rise in fruit and vegetable acreage. With 1955-57 = 100, indices for land utilization for wheat and rice in 1965, 1970 and 1975 were calculated to be 88.4, 84.7, and 80.1 respectively. On the same basis, those for fruits were 130.4, 147.7 and 161.2.[37]

---

[37] U.S. Department of Agriculture, Economic Research Service, Italian Agriculture: Projections of Supply and Demand in 1965, 1970, and 1975, ERS-Foreign-68 (Washington, December, 1962), p. 11.

Commensurate with general advances in technology and know-how and introduction of new varieties, percentage wheat yield increases are expected to match those projected for West Germany, that is, about 35% by 1975. The effect of this trend will be to increase overall production of wheat with the proportion of durum in total wheat output also increasing. Total wheat production is estimated at 9,375,000 metric tons in 1970 and 9,440,000 metric tons in 1975. However, these are not expected to meet total domestic food requirements. Imports will be necessary despite larger production levels.

As minor suppliers of wheat, less attention shall be devoted to consideration of policy changes and their probable effects on the grain economies of the Netherlands and Belgium. In Belgium, as in the Netherlands, guaranteed producer prices for wheat prior to introduction of the new, uniform pricing policy were very close to the new common prices. In this respect, the transition will be minimal. However, the mode of application of these guarantees will be different. Formerly, in Belgium, prices were

in the form of target prices at the farm level applied throughout the country and maintained by compulsory milling quotas. This compulsory mixing regulation, stipulating the use of between 60% and 70% domestic wheat in milling grists was retained until the end of December, 1962. This procedure was generally successful in providing sufficient security for the producer as demonstrated by the fact that it was seldom necessary for the Office Commercial du Ravitaillement to intervene to support the market through its buying, selling, and stockpiling facilities.[38] These milling quotas will, of course, disappear under the revised system with the main instrument of protection being the variable levy. Previously, the impact of import levies on internal prices was mitigated by rebates paid to millers importing wheats for blending purposes. Therefore, with only minor adjustments scheduled, anticipated changes in grain area and production levels will be insignificant. Yields are expected to increase

---

[38]International Wheat Council, "A Study of the First Year of the Working of the EEC Grain Regulations in Relation to the World Trade in Wheat," p. 55.

in response to forces prevalent in the other E.E.C. countries. Import requirements for hard, blending wheats in particular will continue.

Pre-1962 grain policies pursued in the Netherlands parallel those in Belgium to a large extent. The chief means of domestic price support was a guaranteed farm price safeguarded by milling quotas (30% to 40% domestic wheat). Annual target prices established for the whole country were based on calculations of production costs and were determined for each grain by the government in collaboration with the Central Agricultural Board composed of represenatives of the agricultural sector. Further protection was provided by a levy which was imposed on imported wheat. The advent of Regulation 19 terminated the obligation imposed on millers to use a stated proportion of domestic wheat in their grists. Despite this, the restriction inherent in variable levies on imported wheat to bridge the price differential did not make the use of foreign wheat economically feasible for millers and the proportion of domestic wheat used in breadmaking in the first season of the E.E.C. system was higher

than in previous years.[39] In effect, as in Belgium, the changeover to the provisions of Regulation 19 had minor impact on the economy of the Netherlands.

In summary, then, the adoption of the variable import levy system as the main instrument of protection for domestic production and hence, a regulator of supply and demand of sorts replaces an array of independent national policies including tariffs, quantitative import and production barriers, mixing regulations, and state trading. Though access to Community markets has not been extensively liberalized, much of the complexity in the previous impediments has been dissipated.

From the above discussion of adjustments in domestic production instigated by Regulation 19, one might properly conclude that no major, drastic dislocations will be caused by the new, common pricing system. Minor reallocations are unavoidable, especially in Italy and West Germany but with the impact of technological improvement, even under previously

---

[39]The Commonwealth Economic Committee, op. cit., 1965, p. 194.

existing national measures, production of wheat in the E.E.C. would have continued to increase. However, under the Common Agricultural Policy, greater incentive is provided for adoption of efficient techniques of cultivation with the revision of the structural basis of agriculture. Seemingly, it is this aspect which is the most significant in terms of long-run consequences.

In a sense, the climax of this paper has been reached now. After vital analysis of consumption patterns and production trends in the context of the Common Agricultural Policy and prior to it, and according to the basis established in previous chapters, the final task which remains is to interpret past wheat import patterns in the E.E.C. based on certain hypotheses[40] quantified in equations and to investigate future developments in this sphere with special attention to the role and position of Canadian wheat. Though generalizations for the Community as a whole may serve

---

[40]These appear in APPENDIX C.

some purposes, for the sake of exactness,[41] and considering the divergent situations prevalent among the "Six," the approach shall be to analyse each country separately as well as to present aggregate functions.

Figures purporting to indicate the degree of self-sufficiency in wheat in the Community are invariably deceiving when import requirements are calculated on this basis.[42] The composition and quality of the wheat crop is a much more meaningful and significant variable as will be shown shortly. Though the obvious trend in the E.E.C. is towards increased domestic production, even if a level is reached whereby total domestic output exactly matches or exceeds internal requirements, the nature of the wheat crop is such that imports of strong, spring wheats for blending purposes to produce desired bread qualities will continue to exist.[43]

---

[41]The word, exactness, here is used loosely and is relative since no claim is made that the following probable developments are based on precise and complete knowledge.

[42]The degree of self-sufficiency in wheat has been estimated at 93.6% in the E.E.C. in 1959-60, ranging between 115.8% in France and 33.3% in the Netherlands.

SOURCE: Sinclair, op. cit., p. 60.

[43]See CHAPTER IV.

In other words, while France may eventually become a significant net exporter and supply a substantial amount of wheat to other member countries, unless breakthroughs can be achieved in producing a wheat plant that would satisfy the quality demands of other members, imports from Canada and/or the United States of blending wheats will have to be maintained.[44] It is the other major world suppliers of soft wheats which compare with the European qualities, Australia and Argentina which will suffer cutbacks in exports to the E.E.C. under these conditions. Their function as suppliers to the E.E.C. will be restricted to periods in which unfavourable weather conditions either destroy a large portion of the European wheat crop or cause considerable deterioration to quality. Therefore, it seems inevitable that with eventual, internal free

---

[44]However, developments in milling and baking processes towards use of lower-quality wheat, and adoption of these methods may eventually significantly reduce the need for hard, spring wheats.

trade,[45] and assuming favourable weather conditions, the E.E.C. will become self-sufficient in soft wheat with France being the principal supplier to its deficit neighbors, the incentive for increased production being provided by higher prices. Again, this will not eliminate import requirements for specified qualities; namely, hard, spring and durum wheats (the latter where deficiencies may occur).

Reverting to consideration of past import patterns, certain hypotheses were developed to help explain the motivating forces behind wheat imports. The equations under study now are sets XI, XII, XIII in APPENDIX C.

In equation set XI (a, c-f), total imports of

---

[45]Recall, during the transitional stage, the operation of the montant forfaitaire gives Community producers a competitive advantage over third country sources. Up until now, however, this amount ($1.00 per metric ton in 1962-63 and subsequently increased to $1.10 per metric ton in 1963-63) has not been large enough to significantly alter previously existing trade channels. In fact, German imports of wheat from other member countries as a proportion of total wheat imports into that country have actually declined since 1960-61. The importance of specific qualities in imports is therefore revealed.

SOURCE: United Nations, Food and Agriculture Organization, Monthly Bulletin of Agricultural Economics and Statistics, March, 1965, p. 20.

wheat and wheat flour are regressed against domestic production and consumption for the period 1950-51 to 1960-61. The linear formulation produced results for all countries and the E.E.C. as a whole except West Germany.

Equation sets XII and XIII are intended to explain the significance and relative distribution of hard wheat imports. Based on data for the period 1950-51 to 1961-62, equation set XII attempts to analyse the relative importance of North American wheat qualities. Specifically, total imports of wheat and wheat flour (grain equivalent) from Canada and the United States are hypothesized to vary with domestic consumption and total imports of wheat and wheat flour into each of the countries of the Community. No observable linear relationship was derived fro West Germany and the Netherlands.

Finally, the relative significance of the Canadian wheat market in respect to the "Six" was investigated and tested through a regression which included the following explanatory variables: human consumption of wheat and wheat flour, total imports

TABLE 5.4

IMPORTS OF WHEAT AND WHEAT FLOUR
(GRAIN EQUIVALENT), 1950-51 to 1961-62[a]

Crop Year	France		West Germany		Italy		Netherlands		Belg.-Lux.		E.E.C.	
	(a)[b]	(b)[c]	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
1950-51	402.1	.1	2453.5	.1	1224.3	59.6	701.7	8.7	971.3	407.6	5752.9	476.0
1951-52	842.7	125.7	2324.3	266.2	1777.8	510.2	885.3	239.2	723.6	371.2	6562.8	1512.4
1952-53	587.3	83.1	2286.9	750.4	1238.9	372.6	897.9	367.5	700.1	462.1	5711.1	2035.7
1953-54	428.1	15.1	2387.4	555.5	623.8	133.6	927.5	331.4	747.8	368.3	5114.5	1403.7
1954-55	359.7	.3	2885.4	577.4	512.2	7.8	815.7	307.4	683.2	364.5	5256.2	1257.4
1955-56	583.6	33.9	2554.5	677.2	726.1	89.1	908.7	158.4	476.6	280.7	5249.5	1239.3
1956-57	1909.1	100.1	3211.4	1090.0	539.3	72.1	920.7	287.0	503.0	253.9	7083.6	1803.0
1957-58	402.1	49.5	2617.6	983.1	378.7	35.0	1021.0	426.4	443.5	301.3	4862.9	1795.4
1958-59	635.4	32.8	2430.5	926.2	78.7	20.4	1111.8	243.4	492.2	292.6	4748.7	1515.5
1959-60	433.9	128.3	2093.6	752.0	111.7	49.5	1110.7	150.3	407.5	259.1	4157.7	1339.3
1960-61	496.0	241.6	2203.9	906.8	2371.1	405.1	938.0	179.9	477.7	252.0	6486.7	1985.4
1961-62	390.7	72.4	3514.6	1194.8	893.3	92.9	1357.5	88.7	489.5	246.0	6645.7	1694.8

[a]1000 metric tons.

[b]Total imports.

[c]Imports from Canada.

SOURCE: U.S. Department of Agriculture, Common Market Grain Production and Trade Statistics, 1950-51 Through 1961-62 (Washington, April, 1963).

of wheat and wheat flour, and a price ratio (U.S. hard wheat prices divided by Canadian hard wheat prices). Because of data limitations, the time series equations were restricted to nine years, 1953-54 to 1961-62.

The reason for the variation in the coefficient of multiple determination is that not all variables follow linear trends. To obtain exact fits would have necessitated derivation of complex functions. But this is not the purpose at hand. Adequate explanation of trends and fluctuations in variables suffices to clarify absence of perfect linear fits. TABLE 5.4 provides an aid to the discussion.

In France, the only significant explanatory variable[46] of the two tested in equation XI was total domestic production and the relationship was negative, as expected. The larger the domestic output, the less need there is for imports. Apparently, the rationale behind imports of Canadian hard wheats, that is, for blending purposes is swamped by the effect of imports

---

[46]The criterion for significance is the conventional one, that is, the "t" value must be equal to, or greater than 2.

of other types (particularly American hard wheats of a quality inferior to Canadian Manitoba Northerns) to give the negative relation. Otherwise, it would be positive, larger production totals necessitating larger amounts of blending wheats. Imports of wheat into France are dictated, in part, by the need for a certain small amount of quality blending wheats and for fairly large quantities of medium-strength wheats during years of crop failures. 1956-57 was an abnormal year in which imports skyrocketed above previous averages (TABLE 5.4), the bulk of which came from the United States. The close correspondence between total imports and imports from the United States and Canada (R^2 = .90) is evident in equation XII(a). This reinforces the observation that France is self-sufficient in soft wheats which are the principal export types of Argentina and Australia. The relative importance of the United States market for French importers coupled with the sporadic nature of imports of Canadian-quality strong wheats explains the absence of any linear equation for Canadian wheat imports into France.

Though total imports of wheat into West Germany are consistently large, no linear relationships were observed for the total import hypothesis as well as for the hypothesis on imports from Canada and the United States. The existence of many bilateral trading agreements is the primary bug which negates the attempt to derive explanatory equations with the variables chosen. Most wheat-exporting nations are parties to such agreements providing a wide variety of wheat qualities.[47] However, Germany's inability to produce enough strong wheats, even of medium quality places it in a position as a large importer of Canadian wheat. These amounts are shown in TABLE 5.4 and explained in equation XIII(b). In this regression, all variables tested are seen to be significant. The relationship between the dependent variable and the total imports

---

[47]In fact, all imports of soft wheat are under bilateral trade agreements of some type. Countries involved include France, Argentina, the U.S.S.R., Australia and Sweden. None of the imports of hard wheat into Germany are under trade agreements.

SOURCE: Clyde R. Keaton, Competition in the Grain Market of Western Europe, U.S. Department of Agriculture, Foreign Agricultural Service, FAS-M-138 (Washington, May, 1962), p. 6.

and price ratio variables is, as expected, positive. The negative sign before the total human consumption variable is explained by the fact that the trend of imports of Canadian wheat was one of expansion while total consumption of wheat has shown a tendency to remain constant or even decrease slightly.

In Italy, domestic production levels have been the principal regulators of import requirements as is indicated in equation XI(c). The relationship is, necessarily negative, imports varying inversely with domestic output. TABLE 5.4 illustrates the degree of variability in total wheat imports. The large drop in domestic output in 1960 (TABLE 4.5) resulted in an abnormally high import figure of 2,371,000 metric tons in 1960-61 in stark contrast to the meagre 111,700 metric tons imported in 1959-60. Here also, a situation analagous to that in France prevails in that import totals are composed primarily of specific types and qualities of wheat since Italy is able to produce a substantial amount of soft wheat and durum wheat to approach domestic requirements. Hence, the reason for

the high correspondence between total imports and imports from Canada and the United States, and imports from Canada alone. The effect of durum wheat imports (which comprise a substantial share of total wheat imports) to meet occasional domestic deficits is to make the total consumption variable in equation XII(c) significant.

By necessity, imports into the Netherlands have been relatively large and are increasing. Both overall consumption and production variables are contributing factors (equation XI(d)). Much more variable, however, are the sources of these imports. Indeed, the wide variety of grades and qualities imported into the Netherlands and the annual variability in the composition resulted in the inability to derive a linear trend for imports of wheat from Canada and the United States, and the extremely poor equation fit for imports from Canada (equation XIII(d)). The extent of this variability of sources is spotlighted in this equation in which not even the total import figure is significant. This is further reinforced in the figures in TABLE 5.4 which show

two rough, internal trends within the period 1950-51 to 1961-62. The increases recorded up to 1957-58 are followed by successive reductions.

Traditionally, with insufficient natural resources to supply their own wheat needs, Belgium and Luxembourg rely heavily on external sources of supply. With readjustments in the agricultural sector, and with production levels steadily rising (TABLE 4.5), the reliance on imports has shown a declining trend (TABLE 5.4). More attention is being placed on special types of wheats; specifically, strong blending wheats as witnessed by the proportion of Canadian wheat imported. Approximately half of the Belgium-Luxembourg imports are from Canada. The equations verify these patterns. In equation XI(e), the domestic production variable is a significant determinant of total imports. The significance of hard wheat imports, and Canadian qualities in particular in overall wheat imports is seen in equation XII(e) and in equation XIII(e) where the coefficients of multiple determination are respectively .83 and .70.

Finally, the aggregate equations, that is, for the

E.E.C. as a whole were somewhat revealing. First of all, from TABLE 5.4, it may be seen that there is a certain amount of variability in total imports as well as in imports from Canada. The explanation is given in equation XI(f) where domestic production is a significant variable explaining total imports. However, the low coefficient of multiple determination of .47 indicates that production barely explains half of the variation in imports and all other factors together account for the other half. Though they do not appear in the equations, these include bilateral trading arrangements, trade impediments such as tariffs and quotas and transportation costs, just to name a few. However, the importance of high- and medium-quality wheat from Canada and the United States primarily for blending purposes is revealed in equation XII(f) where the amount of variation in total imports parallels fairly closely variations in imports from Canada and the United States together. Elimination of American wheat from this formulation substantially diminishes this close correspondence (equation XIII(f)).

Summary of the Effects of the Common Agricultural Policy on Canadian Wheat Exports to the E.E.C.

It is to be noted that these preceding formulations referred to a period immediately prior to introduction of Regulation 19 in 1962. Therefore, though helpful to a large extent, these equations are not intended as a reliable basis on which to forecast future import patterns. Undoubtedly, much of what is revealed in these equations will remain valid in the near future, but it must also be appreciated that with new price and structural policies, readjustments are inevitable. Overall, the major effect on imports will be to reduce or eliminate certain sources. As France in particular expands its acreage and production and improves its position as exporter of surplus soft wheat output, and with the complete liberalization of intra-Community trade which acts as a deterrent to imports from third countries, the soft wheat requirements of the Community will be largely met. While external sources of those wheat types produced in Europe will be choked off, the demand for quality, strong bread and durum wheats from Canada in particular will remain

intact. However, if the French grain breeders succeed in producing a hard wheat which would satisfy the miller, even this channel will eventually wither, subject to developments in Canadian breeding techniques as outlined in CHAPTER IV. Of course, all sources will remain open to a certain extent to supply the Community countries in cases of crop disasters or otherwise reduced harvests. Further, these trends do not hold true for coarse grains. The steadily rising per capita income will increase demand for meat and consequently, the demand for feed grains which will vary with feeding ratios. In this regard, import requirements will likely continue to expand. More specifically, assuming a 5% income growth rate, E.E.C. net coarse grain import requirements are forecast at 10,000,000 metric tons by 1970.[48] Thus, the United States, as the largest coarse grain exporter could salvage something out of the adverse effect of grain price unification in the Community through maintenance of some part of coarse grain exports.

---

[48]Communauté Economique Européenne, Le Marché Commun des Produits Agricoles - Perspectives 1970, Serie Agriculture, Etude No. 10 (Bruxelles, 1963).

In theory, in a perfectly competitive, international environment, the demand for a product produced in a foreign country is a result of either lower prices than exist on the domestic market for the same good or inability to produce or obtain the product at home. Trade conducted on the basis of price differentials follows the law of comparative advantage. The distinct nature of Canadian hard, spring wheat places it in the second category above. In fact, the question whether the law of comparative advantage which channels trade on the basis of differences in the relative efficiency in combining productive factors is applicable to agricultural commodities has been raised. The widespread prevalence of tariff and non-tariff barriers imposed on agricultural products distorts the mechanism which determines comparative cost positions. Further, "each sector or group is treated as an independent unit, with jobs to maintain, ways of life to preserve and the interrelationships among commodities and resources so important to the comparative cost doctrine are completely ignored."[49]

---

[49]MacEachern and MacFarlane, op. cit., p. 80.

Nonetheless, barring any trade impediments, and based on producer prices which reflect costs, Canadian wheat has been shown to possess an absolute price advantage over U.S. wheat as well as over all other wheats of a comparable quality of wheat-producing countries.[50] But trade barriers nullify these advantages. Especially in the E.E.C., with the high variable levy, price advantages will be for nought and the incentive for the exporter to keep prices low to discourage increases in production in the importing countries will have been removed. Indeed, the lower the foreign price, the greater the penalty for entering the E.E.C.

Therefore, the saving grace for Canadian farmers is the superior quality of Canadian bread and durum wheats which will help preserve outlets in the E.E.C.[51]

---

[50]For the comparison of Canadian and U.S. prices, Manitoba Northern No. 4 and U.S. No. 1 Hard Red Winter formed the basis. (Ibid., p. 112).

[51]The analysis throughout has been focused on the present structure of the E.E.C., without reference to possible future expansion, notably the inclusion of Great Britain. Such a possibility would seriously disrupt Canada-U.K. wheat trade channels with the loss of preferential treatment and the subjection to the variable levy system. Under such a situation, the large import requirements of the United Kingdom would be met to a

One is forced to import that which is unavailable domestically and which is absolutely necessary. Forecasts by the E.E.C. Commission indicate that E.E.C. quality wheat requirements will amount to about 1,500,000 to 2,000,000 metric tons during the next few years. Within these totals, it is anticipated that Canada will maintain or slightly increase its pre-Common Agricultural Policy export totals for both quality blending wheats and durum wheat to meet domestic deficits.

---

greater extent by Community producers with extra-strength, hard wheats continuing to come from Canada. From principal wheat supplier, Canada would be relegated to a position as the source of special blending wheats.

APPENDIX A

BRIEF HISTORICAL PERSPECTIVE OF INTEGRATION IN EUROPE LEADING TO THE TREATY OF ROME

The motives for building a 'European Community', in the opinion of Walter Hallstein were "pressure of technology, increasing interdependence, a growing sense that in a world of giants, nations on the old scale must band together".[1] The movement toward co-operation and ultimately integration[2] in western

---

[1]Walter Hallstein, United Europe: Challenge and Opportunity (Cambridge, Mass.: Harvard University Press, 1962), p. 4.

[2]Bela Balasse, The Theory of Economic Integration (Homewood, Illinois: Richard D. Irwin Inc., 1961), p. 2.

Balassa distinguishes between integration and co-operation. Co-operation consists of "actions aimed at lessening discrimination." An example would be an international agreement on trade policies (G.A.T.T.). Integration deals with the "suppression of some forms of discrimination." The thorough removal of trade barriers serves as an example.

Balassa classifies the various forms of integration as follows:

a) A free trade area is a form of association in which contracting countries agree to eliminate discriminatory tariffs, quotas, and other restrictions to the free flow of goods among them, each country maintaining its own independent commercial policy with respect to the rest of the world.

b) A customs union differs from a free trade area principally in respect to the external tariff. Members of the union apply a common external tariff and commercial policy.

Europe was born out of the desire and indeed, urgency to act to restore some sense of orderliness and stability to the war-ravaged economies. The primary aim of post-war recovery plans was to build an economic structure and atmosphere such as to prevent a recurrence of conditions which gave rise to war in the first place.

To this end, Winston Churchill had called for a United States of Europe in 1946 and also had alluded to a European family. By eliminating nationalistic tendencies and striving to achieve harmony of interests among the nations of Europe, the hope was to diminish if not to totally banish the threat and dread of war. The ultimate aim as envisaged by some (Jean Monnet of France and Paul-Henri Spaak of Belgium) was total economic and political union to be gradually achieved in successive stages.

The immediate concern, however was to lay some

---

c) In a common market, all restrictions including those on factor movements are removed.

d) An economic union "combines the suppression of restrictions on commodities and factor movements with some degree of harmonization of national economic policies in order to remove discrimination that was due to disparities in these policies."

e) Total economic integration "presupposes the unification of monetary, fiscal, and social and countercyclical policies and requires the setting up of a supranational authority whose decisions are binding on the member states".

basic stable economic foundation on which to build this dream. Aid through the American Marshall Plan (1947) became an important impetus in placing Europe back on the road to recovery and hence, providing for the reactivation of a large and significant part of the world trading community. Prior to this aid program, the excessive deficit on current account in Europe's balance of payments with the United States was choking all trade channels. The Americans were thus also naturally concerned with their own welfare and sought to promote the advantages of a large, integrated, domestic market with no internal obstacles as a sound basis from which trading relations may develop.

The Organization for European Economic Co-operation (O.E.E.C.)[3] which was "first and foremost a conference of sovereign states in permanent session",[4] was established in April, 1948 to administer and distribute the monies made available through the Marshall Plan. The initial achievements of the O.E.E.C.

---

[3]In 1960, Canada and the United States joined this organization which was renamed The Organization for Economic Development and Co-operation (O.E.C.D.).

[4]Richard Mayne, The Community of Europe (London: Victor Gollancz Ltd., 1963), p. 78.

were restricted to short-run measures to assist in post-war recovery including attempts to reopen trade channels by reducing or eliminating existing obstacles and prohibitive trade regulations. Further, and most important, a climate of co-operation and mutual assistance emerged which was later to be more fully developed and institutionalized in the forms of a common market (The European Economic Community) among six European countries and a free trade area (The European Free Trade Area) among seven others. But at the time, there remained the more basic problems of long-run investment, growth, and full employment which were unavoidably intertwined with the cautious political atmosphere prevailing.

The year 1948 had also seen the birth of the Benelux customs union (made up of Belgium, the Netherlands and Luxembourg) which had been formulated and signed in 1944. The proposition was worthy but the scope of such a venture was too modest for it to be properly effective and practical.

The feeling grew among most sectors of the population that the readjustment and rebuilding process must be conducted within a "European" context as distinct from individual national plans and policies. Within a broader European context, it was acknowledged

that "to give the German people a sense of responsibility and belonging seemed the safest way to prevent a resurgence of German nationalism."[5] With this in mind, the Council of Europe, under the guidance of Paul-Henri Spaak was set up to promote political and economic unity on the continent. Here again, the intentions were noble but the political structure of the Council was the cause of its ineptitude in dealing positively with the elements dividing Europe. Parliament (the Consultative Assembly) was hamstrung and devoid of any effective power by the fact that it s functions were restricted to submitting resolutions to the executive organ (the Committee of Ministers). Each of the members of this executive body was in turn accountable to his national government which possessed a veto in a system which stipulated unanimous consent for passage of all legislation brought forward. Hence, real power remained in the control of the individual national governments and the Council of Europe represented "a romantic though largely powerless expression of striving toward integration."[6] The hope and promise

---

[5]Harry B. Ellis, The Common Market (Cleveland and New York: The World Publishing Co., 1965), p. 34.

[6]Ellis, op.cit., p. 37.

that gave rise to the Council of Europe gradually turned into frustration and dissatisfaction with the lack of progress and any concrete achievement in terms of the prevailing economic and political quandary. Europe seemed no closer to economic and political union in 1950 than in 1945.

It is generally considered that the single most important move in the direction of European unity took place on May 9, 1950 when Mr. Robert Schuman, the French Foreign Minister submitted proposals for the pooling of French and German coal and steel resources and industries under a single, common institutional command, the High Authority. An important provision of this "Schuman Plan" which was largely inspired by Jean Monnet was the encouragement of participation by other European countries.

The primary purpose of such an undertaking was to foster an atmosphere of peace and understanding along the Franco-German frontier by developing common interests through union. The maintenance of peace required European unity. Common ownership of resources in the Ruhr, the Saar, Luxembourg, the Netherlands, Lorraine, and most of Belgium where Europe's largest concentration of coal and steel lay would render a

war between Germany and each or all of the members of such a federation impossible since the inherent dangers in the production and use of military equipment would be neutralized. One country would no longer be able to control and monopolize the production and use of resources which all member countries owned and shared. Further, economic realities, based on economies of scale, dictated that a common pooling of resources and the establishment of a single large open market would bring forth the advantages of mass production and specialization, lower costs and maximum utilization of labour and equipment. According to Adam Smith, this process in turn results in continuing improvement of technique thus enhancing the possibilities of world demand for the products of this particular region.

Schuman aptly summarized the underlying political and economic forces tending toward such a structure.

> The pooling of coal and steel production will immediately provide for the establishment of common bases for economic development as a first step in the federation of Europe, and will change the destinies of those regions which have long been devoted to the manufacture of munitions of war, of which they have been the most constant victims.....Thus will be realized, simply and rapidly, the fusion of interests which is indispensable to the establishment of an economic community ; thus will be introduced the germ of a broader and deeper community between countries long opposed to

one another by bloody conflicts.[7]

The Treaty establishing the European Coal and Steel Community (E.C.S.C.) implementing the Schuman Plan was signed in Paris on April 18, 1951 to come into effect on February 10, 1953. The signatories were, France, West Germany, Italy and the Benelux countries. The agreement provided for integration in only one sector of the economy which included coal, coke, steel, iron ore, and scrap with the exclusion of associated finished goods like refined steel products. It is further characterized by a supranational administrative structure. The executive functions are vested in an independent nine-man High Authority whose decisions are binding on member governments but which is nonetheless responsible to a 142-member Common Assembly or Parliament. Other institutions include a Court of Justice where appeals on decisions of the High Authority are heard, and a Council of Ministers representing each of the six member countries.

The vital practical or economic aspects embodied within the framework can be summarized in terms of the advantages of a common market, earlier mentioned. The gradual abolition of artificial

---

[7]Hallstein, op.cit., p. 11.

boundaries or limitations such as tariffs, import and export subsidies, quotas, quantitative restrictions, discriminatory trade policies and other hindrances to the free movement of factors and products imposed by government resulted in reduced costs and increased production, income and employment, and, with it, a rise in the standard of living and welfare of the people engaged in this sector and the population as a whole. The Treaty also contained a co-ordinated plan of harmonization policies to insure a smooth readjustment period and a gradual adaptation to a new and improved atmosphere of unfettered Community-wide competition.

The success of the E.C.S.C. may be indicated by the following performance figures: in the period, 1953-1963, steel production rose by 75% and trade among the "Six" in E.C.S.C. products rose by 168%.[8] The by-effects of efficiency improvements and increased employment, income and production of coke, iron ore and steel included the resettlement and retraining of displaced labour which responsibility was handled by the High Authority. For example, appropriate reallocation measures were taken by the High Authority in regard to the declining importance of the coal industry as a

---

[8]Ellis, op.cit., p. 48.

source of energy needs by providing for new sources of employement as well as the necessary training and housing accomodation for the affected workers.

Hence, the formation of the E.C.S.C.bred a situation of relative prosperity if only in one sector of the economy, though the whole economy felt the reverberations. Hope emerged that integration on a wider scale throughout all segments of the member-nation economies would prove to be feasible and appropriate as a result of the short experience of the E.C.S.C. Subsequently, various plans and schemes for sectoral and Community-wide union were formulated. Separate proposals envisaging integration in the agricultural and transportation sectors and in the health services field met with failure. Also, in April, 1954, French fears of German rearmament in a "European" army killed hopes of a European Political Community (E.P.C.) and a European Defence Community (E.D.C.). In May, 1955, as part of NATO, a looser co-operative arrangement on defence, The Western European Union, which included Britain, was born out of the futile attempts to form the E.D.C.

These developments set the stage for a meeting of the foreign ministers of the six members of the E.C.S.C. at Messina, Sicily in June, 1955 where the

major item on the agenda was a serious discussion of the possibilities of total economic integration in Europe after an attempt at political union, the E.P.C., had failed. Further constructive study was conducted by Jean Monnet's Action Committee for the United States of Europe which was made up of spokesmen and leaders of influential economic and political factions in the countries involved. These vital investigations and negotiations established a functional basis on which to realize the dream of a total European Community. The eventual outcome was the signing of the Treaty of Rome or the Treaty Establishing the European Economic Community on March 25, 1957 by the six members of the E.C.S.C. The Treaty was to come into effect on January 1, 1958. After successive frustrations and disappointments, Europe was "relaunched".[9]

---

[9] Ibid., p. 61.

APPENDIX B

THE FORM AND INSTITUTIONS OF THE EUROPEAN ECONOMIC COMMUNITY

The creation of a 'natural' European Economic Community encompassing all sectors, including the political, has wrought extensive economic and social benefits to a long-suffering population of close to 180,000,000 and has established the new Europe as a potent force in the world trading community alongside the two other giants, the United States and Russia. The efforts and sacrifices of an active working population matching that of the United Stated (approximately 74,000,000) has resulted in some astonishing economic accomplishments despite some seemingly inflexible obstacles. " 'Little Europe' (the E.E.C.) has accomplished something of a major miracle. Age-old enmities, immemorial traditions, and jealously guarded scraps of sovereignty have been set aside in face of common needs and common perils. Out of the sad welter of war there has arisen a far-reaching spirit of co-operation, a hand-in-hand kind of growth."[1]

---

[1]Thomas C. Donohue, "American Appraisals of the European Common Market" in W.K. Junckerstorff (editor), International Manual on the European Economic Community (St. Louis: St. Louis University Press, 1963), p. 1.

Nor is this development considered stop-gap or transitory. Based partly on the notion that the 'trade-creating effects' of a customs union outweigh the 'trade-diversion effects', according to Jacob Viner and partly on the political implications inherent in economic union, the view is widely held that the concept of a united Europe is permanent or continuous. "The idea of Europe is here to stay. It is beyond doubt that the old national units of Europe are technologically and economically obsolete so that a much greater amount of international co-operation is inevitable."[2]

The intention here is to examine the institutional framework within which the E.E.C. has developed by referring to some of the basic provisions and dominant features of the Treaty of Rome followed by a summary review of the achievements and progress to date.

General Nature Of The Treaty Of Rome

The purpose underlying the formation of the E.E.C. is contained in the preamble to the Treaty of Rome. Basically, awareness of the advantages of closer union among the European nations moved the framers to

---

[2]J.K. Galbraith, "Thoughts on the Future," Montreal Star, Monday, December 19, 1966.

draft a formula which would radically realign the economies of the signatory nations and which would, in turn, cause readjustment in the social and political climate. More precisely, the removal of barriers and obstacles which were the cause of division and the establishment of common policies (commercial, agriculture, transport) for the achievement of common goals was considered a primary and vital step for insuring economic and social progress, for improving living standards and working conditions, for guaranteeing steady expansion and stability, balanced growth and fair competition, and for strengthening the safeguards for peace and liberty. The overall plan of events is aptly summarized in Article 2 of the Treaty:-

> It shall be the aim of the Community, by establishing a Common Market and progressively approximating the economic policies of member states, to promote throughout the Community a harmonious development of economic activities, a continuous and balanced expansion, an increased stability, an accelerated raising of the standard of living and closer relations between its Member States.

The instruments made available for the attainment of this goal include:

1. the elimination of trading barriers as between member states including customs duties and quantitative restrictions,

2. the establishment of a common customs tariff and a common commercial policy towards third countries,

3. elimination of restrictions on the free movement of persons, services, and capital,

4. provision for a common agricultural policy,

5. provision for a common transport policy,

6. measures to guarantee the workings of free and fair competition,

7. procedures to ensure co-ordination of economic policy and to remedy disequilibria in the balance of payments,

8. creation of a European Social Fund to provide orderly progress in the improvement of working conditions and in the standard of living without costly dislocation, and

9. the establishment of a European Investment Bank to facilitate economic expansion by providing the necessary impetus and resources.[3]

The functioning of the system is entrusted to a supranational governing body made up of an Assembly, a Council, a Commission, and a Court of Justice each of whose functions and responsibilities is defined in the Treaty.

To allow for an orderly changeover from diverse systems to one integrated scheme, the original intention was to provide for a transitional period of twelve years (three periods of four years each) for the putting into effect of all provisions of the Treaty with allowances for extensions. Certain developments have

---

[3]Treaty of Rome, Article 3.

caused modifications in some sectors and progress has either been accelerated or retarded. Movement into succeeding stages is made conditional upon realization of objectives stipulated for the preceding stage. The actual decision to proceed is made by the Council of Ministers. While unamimous consent is necessary to move from the first into the second stage, a qualified majority is all that is required to enter into the third stage.

Specific Provisions of the Treaty

The formal economic structure of the E.E.C. is that of a customs union.[4] As such, the transition period allows for time to remove all trade barriers between Member States and to integrate national commercial policies to provide for a common policy incorporating a common external tariff vis à vis markets outside the Community.

Tariff reductions between Member States are based on rates in force as of January 1, 1957. Reductions of these rates follow a schedule whereby specified across-the-board percentage reductions are carried out within the stages of the transitional

---

[4]Treaty of Rome, Part II - Bases of the Community, title 1 (free movement of goods), Articles 9-37, chapter 1.

period. With reference to the common external tariff, the duty for each commodity entering the Community is set at the level of the arithmetic average of the duties imposed by each of the Member States as of January 1, 1957. Article 29 (Part II, title 1, Chapter 1, Section 2) defines the rationale behind the common external tariff (C.E.T.). In summary, there is recognition of the need to promote commercial exchanges between Member States and third countries, to foster an atmosphere of competition within the Community, and to avoid serious disturbances in the economic life of the Member States while ensuring a rational development of production and an expansion of consumption within the Community.

As well as progressively destroying tariff walls, the Treaty calls for abolition of all quantitative restrictions on imports and exports between Member States.[5] Export quotas were abolished in 1962 at the end of the first stage.[6] Further, discrimination with

---

[5]Treaty of Rome, Part II, title 1, chapter 2.

[6]A safety valve is provided for these regulations regarding quantitative restrictions in Article 36 (Part II, title 1, chapter 2).

> The provisions of Articles 30 to 34 inclusive shall not be an obstacle to prohibitions or restrictions in respect of importation, exportation or transit which are justified on grounds of public morality, public order, public safety, the protection of human or

regard to conditions of supply and marketing of goods resulting from the existence of commercial monopolies is to be removed or other safeguarding measures will be taken by the end of the transitional period.

The significance and future of the agricultural sector and trade in agricultural products is dealt with in the Treaty where broad guiding principles are outlined.[7] The objectives of a common agricultural policy are set forth in Article 39. These are:

1. to increase agricultural productivity by developing technical progress and by ensuring the rational development of agricultural production and the optimum utilization of the factors of production, particularly labour;

2. to ensure therby a fair standard of living for the agricultural population, particularly by the increasing of the individual earnings of persons engaged in agriculture;

3. to stabilize markets;

4. to guarantee regular supplies; and

5. to ensure reasonable prices in supplies to consumers.

---

animal life or health, the preservation of plant life, the protection of national treasures of artistic historical or archaeological value or the protection of industrial and commercial property. Such prohibitions or restrictions shall not, however, constitute either a means of arbitrary discrimination or a disguised restriction on trade between Member States.

[7]Treaty of Rome, Part II, title 2 (agriculture), Articles 38-47.

In the realization of these aims, due account is taken not only of the predominant place of agriculture in the economies of the "Six", but also of the wide disparities among the countries in the structural basis of the agricultural sector. Under these circumstances, the need to pace the process of readjustment of technique and outlook tending towards harmonization of policies becomes crucial in order to avoid hardship caused by displacement of labour. Indeed, the Treaty provides for an organization to finance and help implement the necessary transitional measures such as the retraining of personnel, the financing of consolidation and modernizing projects on farms, the research into new products and techniques, and the development of new regions and sources of supply.

The theme of co-operation, consolidation, co-ordination and the absence of intra-Community discrimination pervades the plan to create a more meaningful and practical foundation for the agricultural sector. Although general guidelines and aims for a common agricultural policy in the Community are specified in the Treaty, rules and regulations regarding production, trade, and other economic aspects of individual segments and products within the sector

were left for later study by the Council but to be fully implemented within the time of the transitional period. The decisions defining the framework and mechanism of operation of the grain sector of the E.E.C. are embodied in Regulation 19 which, among other regulations covering a substantial proportion of the agrecultural products of the Community, was ratified on January 14, 1962 after a marathon Council session of twenty-three days and which came into effect on July 30, 1962.[8]

The removal of restrictions and discriminations on the mobility of factors of production (persons, services, and capital) and the right of establishment[9] reveals the form of the E.E.C. to be in fact a customs union within a more homogeneous common market. The Treaty[10] cites an ideal situation whereby a free choice of employment and complete intra-Community mobility would assure a balancing of supply of and demand for labour thus lessening the possibilities of regional unemployment. Further, the freeing of capital movements,

---

[8]International Wheat Council, "A Study of the First Year of the Working of the EEC Grain Regulations in Relation To the World Trade in Wheat," p. 51.

[9]Treaty of Rome, Part II, title 3 (the free movement of persons, services and capital), Articles 48-73.

[10]Treaty of Rome, Article 49.

principally from the existing exchange restrictions would contribute to the economic development of the area as a whole and alleviate balance of payments difficulties.

The special problems of transportation in an economically-integrated area are recognized in the Treaty[11] and measures in the context of a common transport policy are proposed for their practical solution. Specifically, common ground rules extended to rail, road, and inland waterways are intended to prohibit discrimination as stated in Article 79:

> Any discrimination which consists in the application by a carrier, in respect of the same goods conveyed in the same circumstances, of transport rates and conditions which differ on the ground of the country of origin or destination of the goods carried, shall be abolished in the traffic within the Community not later than at the end of the second stage (of the transitional period).

Also, support or protection of a particular enterprise or industry at the expense of others is considered intolerable and inconsistent with the functioning of a common policy.[12]

---

[11]Treaty of Rome, Part II, title 4 (transport), Articles 74-84.

[12]Treaty of Rome, Article 80.

Further reference is made to the desirability of safeguarding the mechanism of competition within the Community.[13] Monopoly powers of varying degrees exercised through control of prices, production, or markets by any enterprise is prohibited. General principles of conduct and behaviour in a competitive atmosphere are enforced and protected by a system of penalties and fines imposed on trespassers. As well, where detected and found harmful, dumping practices may be subject to discontinuation (Article 91).

The Treaty describes economic policy with respect to economic growth, balance of payments, and commercial policy.[14] In the respective internal economies of the "Six", mutual consultation is suggested to best evaluate trends of the individual economies and to seek appropriate measures in the light of existing circumstances (Article 103). The goals of full employment and price stability dictate the requirement that confidence be maintained in national

---

[13]Treaty of Rome, Part III - Policy of the Community, title 1 (common rules), chapter 1 (rules governing competition), Articles 85-94.

[14]Treaty of Rome, Part III, title 2 (economic policy), Articles 103-116.

currencies and equilibrium be sought in each country's overall balance of payments (Article 104). Where deemed necessary, Member States may aid other members who are experiencing balance of payments troubles. As regards commercial policy vis à vis third countries, the motivating consideration on a common front was the desirability to liberalize world trade by negotiating as a unit through G.A.T.T. and hence contribute to general economic welfare.

Not only economic but also social policy receives attention in the Treaty.[15] Harmonization and collaboration among the Member States on conditions of employment, labour legislation, occupational training, social security measures and employer-employee relations is of central importance in the effort to improve the living and working conditions of labour within the wider context of economic integration (Articles 117,118). A corollary to this objective which is stated in Article 119 is that equal work as between men and women workers warrants equal renumeration.

The European Social Fund is established to co-ordinate and administer arrangements whereby the

---

[15]Treaty of Rome, Part III, title 3 (social policy), Articles 117-128.

displaced workers who are victims in the process of integration are retrained and relocated in selected industries. Nor is the availability and distribution of capital neglected with the creation of the European Investment Bank.[16] With an aim towards the balanced and smooth development of the E.E.C., the Bank is endowed with the powers to make available the necessary loans and guarantees to help finance projects ranging from the development of underdeveloped regions within the Community to the modernizing of industrial complexes which would not otherwise be possible.

Such is the nature of the economic form of the E.E.C. Aside from a series of Articles (131-136) dealing with the Association of Overseas Countries and Territories and an inexhaustible list of protocols and conventions which shall not be of direct relevance here, what remains to be discussed in this outline of the Treaty of Rome is the formal listing of the supervisory, regulatory, and decision-making bodies of the Community as well as their respective functions.[17]

---

[16]Treaty of Rome, Part III, title 4 (the European Investment Bank), Articles 129-130.

[17]Treaty of Rome, Part V - Institutions of the Community, Articles 137-209.

The 142-member Assembly[18] is composed of delegates representing the Member States. The representation distribution is as follows:

France	36
West Germany	36
Italy	36
Belgium	14
Netherlands	14
Luxembourg	6

The main function of the Assembly is to act as a forum for discussion of problems and questions dealing with the implementation of the Treaty and progress of the Community and for debate on the annual general report submitted by the Commission. One of the effective powers of the Assembly is the prerogative to introduce and ratify (by a two-thirds majority) a motion of censure concerning the activities of the Commission forcing resignation of the latter body.

The responsibilities of the Council of Ministers,[19] on the other hand are much more definite and widespread. Comprising one representative from each Member State, it wields the all-important power of final decision on legislative proposals of the Commission. Decisions are taken on the basis of unanimous, majority, or

---

[18] Treaty of Rome, Part V, title 1 (provisions governing institutions), chapter 1 (institutions), section 1 (Assembly).

[19] Ibid., section 2 (the Council).

qualified majority voting within the Council, depending upon the degree of importance of the decision as stipulated in the Treaty.

Supervision over and execution of the Treaty of Rome is vested in an independent (from national government influence) Commission[20] which is made up of two members each from France, Italy and Germany and one each from the Benelux countries. Communication between the Council and the Commission is a two-way proposition. In conjunction with the latter's submission of proposals to the Council for ratification, Article 152 grants the Council the right to request the Commission to "undertake any studies which the Council considers desirable for the achievement of the common objectives, and to submit to it any appropriate proposals" resulting.

Article 164 clearly defines the functions of the judicial authority: "the Court of Justice shall ensure observance of law and justice in the interpretation and application of this Treaty."[21] The seven judges on the Court are to hear and rule on cases brought forward by the Council, Commission, Member States or private citizens regarding infringements on Treaty

---

[20] Ibid., section 3 (the Commission).

[21] Ibid., section 4 (the Court of Justice).

obligations by other Member States, persons or institutions. Conviction of persons, institutions or Member States (each of which possesses the right of appeal) in regard to violation of the provisions of the Treaty may result in appropriate penalties or sanctions being imposed by the Court.

As a source of information and research to both the Council and Commission, a consultative body, the Economic and Social Committee[22] is established comprising representatives of various sectors of economic and social life from each of the Member States.[23] Interests ranging from agriculture and transport to labour and the professional groups are included in this Committee whose raison d'ètre is to assure a meaningful means of communication between the institutions of the Community and all segments of the population. The dialogue between the Committee and the Commission and Council is conducted in the form of proposals and recommendations to the latter bodies from the former, reflecting the former's opinions.

---

[22]Treaty of Rome, Part V, title 1, chapter 3 (the Economic and Social Committee).

[23]The Treaty (Article 194) provides for the following representative distribution:

Germany.....24
France.....24
Italy.....24

Developments and Performance of the E.E.C.

A brief sketch of the major developments in the nine-year history of the E.E.C. as well as a glance at some comparative statistics and indicators reflecting the extent and direction of changes since 1957 is presented to round out this summary review of the E.E.C. The most striking feature has been the accelerated rate of growth and pace of economic activity experienced during the early years of existence of the Community. This was followed by a slowdown in 1965 reflecting the general climate throughout Western Europe. The initial effect of the larger market has been to stimulate trade not only within the E.E.C. but also throughout the world.

Recently, the final decision of a long series of decisions gradually tending towards free trade within the Community was taken to establish a full customs union by July 1, 1968, one and one-half years before the date referred to in the Treaty. At that time, all customs duties and quantitative restrictions on trade between member states will have been eliminated

---

Belgium.....12
Netherlands.....12
Luxembourg..... 5

and a common external tariff and common agricultural policy will be in effect. What will remain to be completed before December 31, 1969 in order that a true common market may be established is harmonization of national tax policies and common anti-dumping arrangements, among other steps.[24]

The impact of the creation of the E.E.C. on the economy of the area as a whole and reflected in the individual economies of the member countries up to 1964 may be indicated by the following comparisons.[25] It should first be noted that Gross National Product (G.N.P.) in the Community rose from $ 157,000,000,000 (U.S.) in constant 1958 prices in 1957 to $ 228,000,000,000 in 1964, an increase of 45.5%. With 1953 as base year (=100), the general index of industrial production in the E.E.C. in 1957 was 140 and rose to 203 in 1963

---

[24]Thomas M. Klein, op. cit., p. 1.

[25]The main sources for the basic statistics used in the following computations are:

a) Statistical Office of the European Communities, Basic Statistics of the Community, sixth edition (Brussels, 1965).

b) Organization for Economic Co-operation and Development, Main Economic Indicators, March 1966.

c) Organization for Economic Co-operation and Development, Statistical Bulletins.

for an increase of 45% matching that of G.N.P. For a comparable period, the increases in Canada, the United States, and the United Kingdom were, respectively, 26.6%, 23.7%, and 16.8%. For individual countries, Italy experienced the largest increase of 75% from a value of 138 in 1957 to 241 in 1963.

Due largely to increased opportunities made available by economic expansion and to the abolition of restrictions on labour mobility, the number of unemployed persons in Belgium, Germany, Italy and the Netherlands declined substantially between 1957 and 1963. In fact, whereas a combined total of 2,177,000 persons were unemployed in 1957 in Germany and Italy, by the end of 1963, only 30.6% of this number or 677,000 were jobless and in some sectors, acute shortages in manpower created serious problems. In comparison, over the same period of time, unemployment has increased in Britain and has not decreased significantly in Canada and the United States.

Coupled with vast improvements in employment and production rates is an associated rise in hourly wage earnings[26] in the manufacturing industries.

---

[26]This figure is calculated by dividing the total-wage bill by the number of hours paid for.

In particular, between 1957 and 1963, the rates of increase were 48.4% in France, 33.6% in Belgium and 60% in West Germany. The increases in Canada and the United States were 21.1% and 19.5% respectively.

The extent to which the individual consumer has felt the new-found prosperity is reflected in part by the retail trade sales figures. Whereas the increases in this barometer recorded in Canada and the United States between 1957 and 1963 may be considered normal, those experienced in the E.E.C. countries were abnormally but pleasantly high and ranged from 28% in Germany and the Netherlands to 57.4% in Italy.[27]

Last, but certainly not the least important of economic indicators to be discussed are the foreign and intra-Community trade statistics since 1957. The E.E.C. as a whole ranks among the top trading units in the world and this is evident from a study of the trade figures for the individual member countries. Between 1957 and 1964, the E.E.C. has accounted for an average of approximately 25% of total world trade. In terms of volume indices, the rise in imports during the same time period has exceeded 100% in Germany and Italy

---

[27]The data on current-price retail trade sales were adjusted for price increases by dividing by the consumer price index for each country.

and ranged around 70% in France, the Netherlands, Belgium, and Luxembourg. For exports, on the same basis, that is, 1958 = 0, an index of 99 in 1957 in Italy rose to 242 in 1964, an increase of 143%. For the other countries, the increase from 1957 to 1964 averaged around 77%. Intra-Community trade was stimulated by transitional measures to assure complete freedom of movement. Exports to member countries constituted a larger share of total exports of each country. For example, in 1957, France and Italy were each exporting 25% of their total exports to other member countries. By 1964, this share had reached 38%. Similar changes are noted for the other members. As a result, on balance, gold and dollar reserves increased to such an extent that the immediate post-war situation in which Europe found herself in desperate deficit was now reversed with the United States experiencing serious deficits in its capital account in the balance of payments.

The overall success of the Community has been attributed to the economic advantages of integration and the subsequent benefits accruing from economies of large scale and from greater co-operation to attain common goals. Indeed, the revolutionary aspect of the formation of the E.E.C. was precisely this crucial decision to define

common purposes to be achieved through co-ordination of activities. Also, by eliminating all interior barriers to trade and commerce, and establishing a common tariff level for third countries,[28] the intention was to strive to promote greater trade liberalization throughout the world. The instrument available through which bilateral negotiations for tariff reductions may take place is, of course, G.A.T.T. It is also in this spirit that the American Trade Expansion Act of 1962 came into existence. Predicated on the belief that greater interdependence and mutual co-operation and development between the United States and the E.E.C. was inevitable and, indeed, desirable, the Act authorized the President of the United States to negotiate tariff cuts of up to 100% on items which the U.S. and the E.E.C. account for 80% of world trade and up to 50% on other commodities and total elimination of import duties on tropical products. The optimism generated by this Act which "marks not only a further step away from the lingering protectionist or isolationist temptations, but also the potential

---

[28] In general, specifying a common external tariff for all commodities throughout the Community (to be reached in stages) has resulted in an increase in the import duties previously imposed by the Benelux countries and Germany and a decrease in France and Italy.

beginning of co-operation on a broad range of economic as well as purely commercial problems"[29] was based on the hope that the application of the United Kingdom for admission into the Common Market on July 31, 1961 would be accepted.

It was only under that condition that the provisions of the Trade Expansion Act, especially the 80% clause would be at all meaningful. Without Britain, only a small number of insignificant items would fall into the category of accounting for 80% of world trade. Some of the important features tied to the question of British entry into the Community which have instigated much debate and discussion will be outlined briefly to complete this sketch of the more outstanding developments in the short history of the E.E.C.

An argument in favour of Britain joining the E.E.C. was put forward by James Meade.[30] Defining the balance sheet and classifying the advantages of being part of a large free-trade Community into static and dynamic elements, he states that "the static calculus of

---

[29] Junckerstorff (ed.), op. cit., p. 156.

[30] James E. Meade, "The Common Market: Is There An Alternative?" Prologue to 2nd edition of U.K., Commonwealth & Common Market, Hobart Paper 17 Supplement (London: Institute of Economic Affairs, 1962).

commercial gain and loss is probably very evenly balanced when one sets against the advantages to our exports of free entry to the Six, the disadvantage to our exports of the loss in preferences in Commonwealth and E.F.T.A. markets and the disadvantages to our imports of paying more to Europe than we do to the Commonwealth for our foodstuffs....but the much less easily measured dynamic effects of confronting our industries with unhampered competition from efficient, growing industries in Germany, France, Italy and Benelux could be of great importance."[31]

However, though eager not to be left behind by the pace established by the E.E.C. and to be within rather than outside the common external tariff (C.E.T.), three main obstacles faced Britain in its attempt to join the Common Market. The United Kingdom is a member of both the Commonwealth and E.F.T.A.[32] and is thus committed to the principles which bind the countries in these organizations together. Some of the basic

---

[31] Ibid., p. 9.

[32] E.F.T.A. (Outer 7) was founded in January, 1960 when Britain, Denmark, Norway, Sweden, Austria, Switzerland and Portugal decided to band together in a free trade area.

guiding principles of both E.F.T.A. and the Commonwealth are contradictory to those defined in the Treaty of Rome. The very nature of the Commonwealth Preference system is opposite to the E.E.C. non-discriminatory trading principles. Thirdly, the diverse nature of agricultural support mechanisms in the E.E.C. and the U.K.[33] constituted another bulwark. The onus for reconciling these conflicts of interest rested with the British since the attitude taken by the Community and, in particular, France was that the U.K. needs the E.E.C. more than the E.E.C. needs Britain. The situation whereby the rules (of the Common Market) become the exceptions and the exceptions become the rules is intolerable insofar as the E.E.C. is concerned.[34]

Through lengthy negotiations, compromises were reached on most of the major problems involved without distorting the fundamental principles of the E.E.C. and indications pointed to a favourable decision by the Council of Ministers allowing British entry. However, in accordance with provisions set out in the Treaty of Rome that the admittance of new members must

---

[33]British farmers are supported by means of deficiency payments from the government. Under the common agricultural policy, agriculture in the E.E.C. is regulated through a system of minimum prices and import controls.

[34]W.A. Wilson, "Commonwealth Preference Issue," Montreal Star, June 1, 1962.

receive unanimous consent coupled with the concept of a 'Europe des patries' clung to by General DeGaulle, the British application was rejected on DeGaulle's veto in January, 1963. In effect, the vision of General DeGaulle is contrary to the fundamental basis of the Community. The fathers of the E.E.C. had envisaged eventual political union not only among the member countries but throughout Western Europe. On the contrary, it is DeGaulle's dream to create a loose federation of sovereign states each maintaining a veto and independent control of its own destiny. The inclusion of Britain in this federation, with its dependence on the United States defence policy and Commonwealth ties would be inconsistent with the stated aims of such a federation. It was the fear by DeGaulle that Britain's entry would act "as a wedge which the United States would use to manipulate the affairs of the 'Six' and to widen American influence in Europe"[35] that brought about his refusal to accept the British application.

The insistence of DeGaulle not to deviate from his opposition to political supranationality precipitated the crisis in 1965. The Treaty of Rome,

---

[35]Ellis, op. cit., p. 140.

in defining the transitional periods stipulated that the sovereignty of each of the member states would be eroded as various stages were completed. Precisely, whereas unanimity was required to pass from the first to the second stage, only qualified majority was needed to proceed into the third stage. This, the French opposed and a boycott of all Community institutions resulted which lasted until January 31, 1966 when a compromise was reached whereby the veto power would be retained on matters considered of vital interest to individual members. The definition of what constituted vital matters was not specified. In all other cases, majority voting would decide issues. "What the evasive compromise boils down to is that the Common Market is to go on as an economic organism but has been stripped of its political implications and particularly of its character as the foundation structure for Western European Federation."[36]

The dialogue over Britain's entry into the E.E.C. has re-appeared with the former's renewed attempt in the fall of 1966. With rising wages and

---

[36]Bernard Kaplan, "France Re-enters Common Market," Montreal Star, January 31, 1966.

prices and the increasingly severe imbalance in Britain's balance of payments and the resultant decline in gold and dollar reserves, the E.E.C. is seen as a less hostile alternative. Recent internal pressure to join may result in a decision by the Wilson government to accept the basic existing rules of the Community as the price of entry. But General DeGaulle has again voiced public opposition to such a move on mainly political grounds. In particular, DeGaulle is averse to British support of N.A.T.O and the U.S. involvement in Viet Nam.[37] It is becoming increasingly clear, however that Britain will bend over backwards not to accept NO as an answer again.

---

[37]Boyce Richardson, "DeGaulle Still Opposes U.K. Bid To Join ECM," Montreal Star, November 19, 1966.

APPENDIX C

QUANTITATIVE FORMULATIONS

The following formulations are based on the single equation method of estimation. The numbers in parentheses below the coefficients are "t" test values.

Description of Variables; and Sources

X_t - Time; 1,2,3,.....

X_{tt} - Time; 10,11,12,.....

X_1 - Population; mid-year estimates (thousands).
SOURCE: United Nations, Statistical Yearbooks.

X_2 - Disposable income; total private consumption expenditure in constant U.S. dollars (1960 exchange rate). This variable excludes savings and direct taxes. (million U.S. dollars).
SOURCE: U.S. Department of Agriculture, The Grain-Livestock Economy of the European Economic Community: A Compendium of Basic Statistics, p. 5.

X_3 - Disposable income per capita. X_2 used for disposable income figures.

X_4 - Total gross human consumption of wheat and wheat flour. (thousand metric tons).
SOURCES: 1950/51 to 1954/55 - United Nations, Food and Agriculture Organization, Food Balance Sheets.
1955/56 to 1961/62 - U.S. Department of Agriculture, Common Market Grain Production and Trade Statistics 1950-51 Through 1961-62.

X_5 - X_4 on a per capita basis.

X_6 - Total imports of wheat and wheat flour (grain equivalent) from Canada and the United States. (thousand metric tons).
SOURCE: Same as X_4.

X_7 - Total imports of wheat and wheat flour (grain equivalent). (thousand metric tons).
SOURCE: Same as X_4.

X_8 - Total gross domestic consumption of wheat and wheat flour (grain equivalent) for all uses, that is, total available supply. (thousand metric tons).
SOURCE: Same as X_4.

X_9 - Total production of wheat. (thousand metric tons).
SOURCE: Food and Agriculture Organization, World Crop Statistics, 1966.

X_{10} - Total gross human consumption of all grains (excluding rice). (thousand metric tons).
SOURCE: Same as X_4.

X_{11} - Total imports of wheat and wheat flour (grain equivalent) from Canada. (thousand metric tons).
SOURCE: Same as X_4.

X_{12} - Price ratio; U.S.A. No. 2 Red Winter wheat, Atlantic ports (c.i.f. U.K. ports) divided by Canada Manitoba Northern No. 2, St. Lawrence ports (c.i.f. U.K. ports).
SOURCE: International Wheat Council, World Wheat Statistics.

EQUATION SET I

Country		Time Period	Regression Equations
France	(a)	1947 - 64	X_1 = 40,048.59 +414.94 X_t (364.36) (19.58) R^2 = .96, Stand. Error of Est. = 466.32
West Germany	(b)	1947 - 64	X_1 = 47,011.47 +615.10 X_t (1,012.17) (68.70) R^2 = .99, Stand. Error of Est. = 197.05
Italy	(c)	1947 - 64	X_1 = 45,054.80 +318.56 Xt (1,204.46) (44.18) R^2 = .99, Stand. Error of Est. = 158.70
Netherlands	(d)	1947 - 64	X_1 = 9,503.58 +142.58 X_t (1,173.64) (91.35) R^2 = .99, Stand. Error of Est. = 34.35
Belg.-Lux.	(e)	1947 - 64	X_1 = 8,712.92 +53.46 X_t (1,769.39) (56.33) R^2 = .99, Stand. Error of Est. = 20.89
E.E.C.	(f)	1947 - 64	X_1 = 150,331.38 +1,544.66 X_t (919.35) (49.00) R^2 = .99, Stand. Error of Est. = 693.74

EQUATION SET I.1

Country		Time Period	Regression Equations
France	(a)	1947 - 64	X_1 = 23870.146 +16112.641 log X_{tt} (137.052) (11.964) R^2 = .90, Stand. Error of Est. = 738.972
West Germany	(b)	1947 - 64	X_1 = 22408.555 +24381.844 log X_{tt} (170.795) (24.030) R^2 = .97, Stand. Error of Est. = 556.726
Italy	(c)	1947 - 64	X_1 = 32273.475 +12658.971 log X_{tt} (475.801) (24.130) R^2 = .97, Stand. Error of Est. = 287.854
Netherlands	(d)	1947 - 64	X_1 = 3799.579 +5652.549 log X_{tt} (129.214) (24.875) R^2 = .97, Stand. Error of Est. = 124.775
Belg.-Lux.	(e)	1947 - 64	X_1 = 6570.979 +2122.077 log X_{tt} (584.697) (24.413) R^2 = .97, Stand. Error of Est. = 47.695
E.E.C.	(f)	1947 - 64	X_1 = 88922.732 +60928.081 log X_{tt} (222.323) (19.698) R^2 = .96, Stand. Error of Est. =1697.155

EQUATION SET II

Country		Time Period	Regression Equations
France	(a)	1950 - 60	$X_2 = 23658.32 + 1290.21\ X_t$ (154.86) (26.70) $R^2 = .99$, Stand. Error of Est. = 506.67
West Germany	(b)	1950 - 60	$X_2 = 16551.47 + 1956.39\ X_t$ (134.64) (50.32) $R^2 = .99$, Stand. Error of Est. = 407.70
Italy	(c)	1950 - 60	$X_2 = 11962.32 + 653.40\ X_t$ (164.37 (28.39) $R^2 = .99$, Stand. Error of Est. = 241.37
Netherlands	(d)	1950 - 60	$X_2 = 3966.92 + 209.48\ X_t$ (68.79) (11.48) $R^2 = .93$, Stand. Error of Est. = 191.23
Belg.-Lux.	(e)	1950 - 60	$X_2 = 6322.67 + 172.05\ X_t$ (142.43) (12.25) $R^2 = .94$, Stand.Error of Est. = 147.22
E.E.C.	(f)	1950 - 60	$X_2 = 62431.43 + 4285.10X_t$ (195.19) (42.36) $R^2 = .99$, Stand. Error of Est. =1060.78

EQUATION SET II.1

Country		Time Period	Regression Equations
France	(a)	1950 60	X_2 = -18797.23 +43039.27 log X_{tt} (-105.26) (22.79) R^2 = .98, Stand. Error of Est. = 592.29
West Germany	(b)	1950 - 60	X_2 = -47416.43 +649263.51 log X_{tt} (-167.54) (21.69) R^2 = .98, Stand. Error of Est. = 938.65
Italy	(c)	1950 - 60	X_2 = -9375.09 +21661.33 log X_{tt} (-80.59) (17.60) R^2 = .97, Stand. Error of Est. = 385.82
Netherlands	(d)	1950 - 60	X_2 = -2864.67 +6936.76 log X_{tt} (-43.78) (10.02) R^2 = .91, Stand. Error of Est. = 216.98
Belg.-Lux.	(e)	1950 - 60	X_2 = 763.53 +5652.89 log X_{tt} (13.67) (9.57) R^2 = .90, Stand. Error of Est. = 185.16
E.E.C.	(f)	1950 - 60	X_2 = -77843.63 +142350.82 log X_{tt} (-127.29) (22.01) R^2 = .98, Stand. Error of Est. =2028.28

EQUATION SET III

Country		Time Period	Regression Equations
France	(a)	1950 - 60	$X_3 = 580.981 + 23.518\ X_t$ (126.769) (16.228) $R^2 = .96$, Stand. Error of Est. = 15.200
West Germany	(b)	1950 - 60	$X_3 = 345.963 + 31.400\ X_t$ (160.333) (46.018) $R^2 = .99$, Stand. Error of Est. = 7.156
Italy	(c)	1950 - 60	$X_3 = 258.891 + 11.881\ X_t$ (190.888) (27.704) $R^2 = .99$, Stand. Error of Est. = 4.498
Netherlands	(d)	1950 - 60	$X_3 = 402.109 + 13.436\ X_t$ (73.154) (7.730) $R^2 = .85$, Stand. Error of Est. = 18.231
Belg.-Lux.	(e)	1950 - 60	$X_3 = 717.400 + 13.691\ X_t$ (149.026) (8.994) $R^2 = .89$, Stand.Error of Est. = 15.966
E.E.C.	(f)	1950 - 60	$X_3 = 406.109 + 21.618\ X_t$ (204.716) (34.461) $R^2 = .99$, Stand. Error of Est. = 6.579

EQUATION SET III.1

Country		Time Period	Regression Equations
France	(a)	1950 - 60	X_3 = -199.643 +790.487 log X_{tt} (-51.903) (18.431) R^2 = .97, Stand. Error of Est. = 12.758
West Germany	(b)	1950 - 60	X_3 = -684.998 +1045.735 log X_{tt} (-184.507) (26.632) R^2 = .99, Stand. Error of Est. = 12.314
Italy	(c)	1950 - 60	X_3 = -129.311 +394.065 log X_{tt} (-61.401) (17.692) R^2 = .97, Stand. Error of Est. = 6.985
Netherlands	(d)	1950 - 60	X_3 = -36.841 +445.587 log X_{tt} (-6.359) (7.272) R^2 = .84, Stand. Error of Est. = 19.215
Belg.-Lux.	(e)	1950 - 60	X_3 = 276.048 +448.956 log X_{tt} (49.419) (7.600) R^2 = .85, Stand. Error of Est. = 18.527
E.E.C.	(f)	1950 - 60	X_3 = 304.366 +720.549 log X_{tt} (-111.697) (25.001) R^2 = .98, Stand. Error of Est. = 9.039

EQUATION SET IV

Country		Time Period	Regression Equations
France	(a)	1950/51-60/61	$X_4 = 6445.05 \quad -58.55\ X_t$ $\quad\quad (90.02) \quad\quad (-2.58)$ $R^2 = .36$, Stand. Error of Est. = 237.44
West Germany	(b)	1954/55-60/61	$X_4 = 42294.28 \quad -44.75\ X_t$ $\quad\quad (527.27) \quad\quad (-11.15)$ $R^2 = .95$, Stand. Error of Est. = 21.22
Italy	(c)	1950/51-60/61	$X_4 = 7661.43 \quad +23.56\ X_t$ $\quad\quad (757.07) \quad\quad (7.36)$ $R^2 = .84$, Stand. Error of Est. = 33.56
Netherlands	(d)	1950/51-60/61	$X_4 = 1043.89 \quad +4.74\ X_t$ $\quad\quad (130.20) \quad\quad (1.87)$ $R^2 = .20$, Stand, Error of Est. = 26.59
Belg.-Lux.	(e)	1950/51-60/61	$X_4 = 1158.74 \quad -5.65\ X_t$ $\quad\quad (111.05) \quad\quad (-1.71)$ $R^2 = .16$, Stand. Error of Est. = 34.60
E.E.C.	(f)	1950/51-60/61	$X4 = 20494.54 \quad -49.09\ X_t$ $\quad\quad (241.17) \quad\quad (-1.82)$ $R^2 = .19$, Stand. Error of Est. = 281.84

EQUATION SET V

Country		Time Period	Regression Equations
France	(a)	1950/51-60/61	X_{10} = 6749.83 - .80699 X_t (88.89) (-3.36) R^2 = .51, Stand. Error of Est. = 251.83
West Germany	(b)	1950/51-60/61	X_{10} = 6348.58 -50.44 Xt (165.96) (-4.17) R^2 = .62, Stand. Error of Est. = 126.86
Italy	(c)	1950/51-60/61	X_{10} =8871.32 -40.82 X_t (160.14) (-2.33) R^2 = .31, Stand. Error of Est. = 183.72
Netherlands	(d)	1954/55-60/61	X_{10} = 1270.00 -9.85 X_t (204.25) (-3.17) R^2 = .60, Stand. Error of Est. = 16.45
Belg.-Lux.	(e)	1950/51-60/61	X_{10} = 1291.10 -13.79 X_t (118.58) (-4.00) R^2 = .60, Stand. Error of Est. = 36.11
E.E.C.	(f)	1950/51-60/61	X_{10} = 24488.34 -185.39 X_t (234.52) (-5.61) R^2 = .75, Stand. Error of Est. = 346.30

EQUATION SET VIII

Country		Time Period	Regression Equations
France	(a)	1950/51-60/61	$\log X_4 = 4.848 \quad -.2368 \log X_2$ $(974.413) \quad (-2.745)$ $R^2 = .40$, Stand. Error of Est. $= .01650$
West Germany	(b)	1954/55-60/61	$\log X_4 = 4.364 \quad -.168 \log X_2$ $(3789.437) \quad (-8.237)$ $R^2 = .92$, Stand. Error of Est. $= .003032$
Italy	(c)	1950/51-60/61	$\log X_4 = 3.579 \quad +.07465 \log X_2$ $(7706.372) \quad (9.084)$ $R^2 = .89$, Stand. Error of Est. $= .00155$
Netherlands	(d)	1950/51-60/61	$\log X_4 = 2.608 \quad +.1137 \log X_2$ $(821.933) \quad (2.058)$ $R^2 = .32$, Stand. Error of Est. $= .0105$
Belg.-Lux.	(e)	1950/51-60/61	$\log X_4 = 3.844 \quad -.205 \log X_2$ $(935.420) \quad (-1.640)$ $R^2 = .14$, Stand. Error of Est. $= .01362$
E.E.C.	(f)	1950/51-60/61	$\log X_4 = 4.558 \quad -.05122 \log X_2$ $(2532.848) \quad (-1.929)$ $R^2 = .21$, Stand. Error of Est. $= .00596$

SET EQUATION IX

Country		Time Period	Regression Equations
France	(a)	1950/51-60/61	$\log X_{10} = 5.20 \underset{(1029.43)}{} -.313 \log X_2 \underset{(-3.57)}{}$ $R^2 = .54$, Stand. Error of Est. = .01676
West Germany	(b)	1950/51-60/61	$\log X_{10} = 4.285 \underset{(1427.14)}{} -.1135 \log X_2 \underset{(-3.68)}{}$ $R^2 = .56$, Stand. Error of Est. = .00995
Italy	(c)	1950/51-60/61	$\log X_{10} = 4.382 \underset{(1521.96)}{} -.1062 \log X_2 \underset{(-2.10)}{}$ $R^2 = .25$, Stand. Error of Est. = .00954
Netherlands	(d)	1954/55-60/61	$\log X_{10} = 3.737 \underset{(1291.947)}{} -.172 \log X_2 \underset{(-1.946)}{}$ $R^2 = .32$, Stand. Error of Est. = .00765
Belg.-Lux.	(e)	1950/51-60/61	$\log X_{10} = 4.945 \underset{(1256.971)}{} -.482 \log X_2 \underset{(-4.026)}{}$ $R^2 = .60$, Stand. Error of Est. = .0130
E.E.C.	(f)	1950/51-60/61	$\log X_{10} = 5.176 \underset{(2851.087)}{} -.163 \log X_2 \underset{(-6.110)}{}$ $R^2 = .78$, Stand. Error of Est. = .0060

EQUATION SET X

Country		Time Period	Regression Equations
France	(a)	1950/51-60/61	$\log X_5 = 3.624 \quad -.563 \log X_3$ (1168.216) (-8.423) $R^2 = .87$, Stand. Error of Est. = .01028
West Germany	(b)	1950/51-60/61	$\log X_5 = 2.787 \quad -.365 \log X_3$ (1625.843) (-17.692) $R^2 = .97$, Stand. Error of Est. = .00568
Italy	(c)	1950/51-60/61	$\log X_5 = 2.878 \quad -.3109 \log X_3$ (896.409) (-4.825) $R^2 = .70$, Stand. Error of Est. = .0106
Netherlands	(d)	1950/51-60/61	$\log X_5 = 3.266 \quad -.515 \log X_3$ (1545.427) (-10.096) $R^2 = .91$, Stand. Error of Est. = .0070
Belg.-Lux.	(e)	1950/51-60/61	$\log X_5 = 3.838 \quad -.646 \log X_3$ (807.851) (-3.349) $R^2 = .50$, Stand. Error of Est. = .01575

EQUATION SET XI

Country		Time Period	Regression Equations
France	(a)	1950/51-60/61	X_7 = 2243.41 -.1742 X_9 (24.000) (-3.371) R^2 = .49, Stand. Error of Est. = 307.191
West Germany	(b)	1950/51-60/61	No observable linear relationship.
Italy	(c)	1950/51-60/61	X_7 = 5272.013 -.533 X_9 (36.559) (-3.565) R^2 = .52, Stand. Error of Est. = 65.902
Netherlands	(d)	1950/51-60/61	X_7 = -190.962 +1.266 X_8 -.1233 X_9 (-10.038) (6.578) (-3.311) R^2 = .85, Stand. Error of Est. = 65.902
Belg.-Lux.	(e)	1950/51-60/61	X_7 = 103.824 =.869 X_8 -.845 X_9 (3.867) (1.827) (-3.026) R^2 = .70, Stand. Error of Est. = 92.99
E.E.C.	(f)	1950/51-60/61	X_7 = 1704.338 +.83555 X_8 -.627 X_9 (-9.075) (1.865) (-2.690) R^2 = .47, Stand. Error of Est. = 650.556

EQUATION SET XII

Country		Time Period	Regression Equations
France	(a)	1950/51-61/62	$X_6 = -269.304 \quad +.8147\ X_7$ $\quad\quad (-7.902) \quad\quad (10.329)$ $R^2 = .90$, Stand. Error of Est. = 111.995
West Germany	(b)	1950/51-61/62	No observable linear relationship.
Italy	(c)	1950/51-61/62	$X_6 = -7061.842 \quad +.78024\ X_8 \quad +.680\ X_7$ $\quad\quad (-189.017) \quad (2.406) \quad\quad (11.867)$ $R^2 = .93$, Stand. Error of Est. = 129.422
Netherlands	(d)	1950/51-61/62	No observable linear relationship.
Belg.-Lux.	(e)	1950/51-61/62	$X_6 = -92.77 \quad +.9940\ X_7$ $\quad\quad (-4.046) \quad\quad (7.449)$ $R^2 = .83$, Stand. Error of Est. = 75.34
E.E.C.	(f)	1950/51-61/62	$X_6 = 3786.531 \quad -.210 \quad +.870\ X_7$ $\quad\quad (29.739) \quad (-1.920) \quad\quad (5.173)$ $R^2 = .82$, Stand. Error of Est. = 441.063

EQUATION SET XIII

Country		Time Period	Regression Equations
France	(a)	1953/54-61/62	No observable linear relationship.
West Germany	(b)	1953/54-61/62	$X_{11} = 4113.5 \underset{(153.95)}{} -1.84 X_4 \underset{(-5.8)}{} +.22 X_7 \underset{(3.5)}{} +4103.74 X_{12} \underset{(4.6)}{}$ $R^2 = .87$, Stand. Error of Est. = 80.157
Italy	(c)	1953/54-61/62	$X_{11} = -15.862 \underset{(-1.003)}{} +.1681 X_7 \underset{(8.096)}{}$ $R^2 = .89$, Stand. Error of Est. = 40.119
Netherlands	(d)	1953/54-61/62	$X_{11} = 587.194 \underset{(15.259)}{} -.3415 X_7 \underset{(-1.601)}{}$ $R^2 = .16$, Stand. Error of Est. = 97.569
Belg.-Lux.	(e)	1953/54-61/62	$X_{11} = 104.354 \underset{(10.363)}{} +.35569 X_7 \underset{(4.461)}{}$ $R^2 = .70$, Stand. Error of Est. = 25.53
E.E.C.	(f)	1953/54=61/62	$X_{11} = 8767.945 \underset{(123.587)}{} -.400 X_4 \underset{(-1.805)}{} +.155 X_7 \underset{(2.215)}{}$ $R^2 = .48$, Stand. Error of Est. = 194.293

APPENDIX D

PART I

WESTERN CANADIAN WHEAT GRADES[1]

The following are the specifications of the standard export samples of grades of wheat, which have been established for the crop year, 1965-66. It should be emphasized that they represent the minimum requirements for the grades at the export level and that, over the years, the average quality of export shipments of any grade has always been substantially higher than its export standard.

Red Spring Wheat

NO. 1 MANITOBA NORTHERN - Test weight per bushel, 64.1 pounds (kg/hl. 80.0). Total foreign material, including other cereal grains, 0.15%, including 0.05% other seeds. Wheats of other classes and varieties not equal to Marquis, 0.2%, including 0.1% contrasting classes.

NO. 2 MANITOBA NORTHERN - Test weight per bushel, 62.1 pounds (kg/hl. 77.5). Total foreign material, including other cereal grains, 0.3%, including 0.15% other seeds. Wheats of other classes, and varieties not equal to Marquis, 1.5%, including 0.2% contrasting classes.

---

[1]The following is extracted directly from The Canadian Wheat Board, Canadian Grain Handbook, Crop Year 1965-66 (Winnipeg, 1965), pp. 24-29.

NO. 3 MANITOBA NORTHERN - Test weight per bushel, 60.9 pounds (kg/hl. 76.0). Total foreign material, including other cereal grains, 0.45%, including 0.15% other seeds. Wheats of other classes, and varieties not equal to Marquis, 6%, including 4% other classes and 0.5% contrasting classes.

NO. 4 MANITOBA NORTHERN - Test weight per bushel, 59.7 pounds (kg/hl. 74.5). Total foreign material, including other cereal grains 0.65%, including 0.15% other seeds. Wheats of other classes, 5%, including 1% contrasting classes.

NO. 5 WHEAT - Test weight per bushel, 58.7 pounds (kg/hl. 73.3). Total foreign material, including other cereal grains, 0.8%, including 0.15% other seeds. Wheats of other classes, 7.5%, including 2.5% durum.

Garnet Wheat

NO. 1 CANADA WESTERN GARNET - Test weight per bushel, 63½ lbs. Total foreign material, including other cereal grains, 0.2%, including 0.05% other seeds. Wheats of other classes, 4.0%, including 0.2% contrasting classes.

NO. 2 CANADA WESTERN GARNET - Test weight per bushel, 63 lbs. Total foreign material, including other cereal grains, 0.6%, including 0.15% other seeds. Wheats of other classes, 9% including 0.2% contrasting classes.

NO. 3 CANADA WESTERN GARNET - Test weight per bushel, 62¼ lbs. Total foreign material, including other cereal grains, 0.75%, including 0.25% other seeds. Wheats of other classes, 14.5%, including 0.5% contrasting classes.

Amber Durum Wheat

NO. 1 CANADA WESTERN AMBER DURUM - Test weight per bushel, 65.7 pounds (kg/hl. 82.0). Total foreign material, including other cereal grains, 0.15%, including 0.05% other seeds. Wheats of other classes, and varieties of durum not equal to Mindum, 4.6%, including 3.6% of wheats of other classes.

NO. 2 CANADA WESTERN AMBER DURUM - Test weight per bushel, 64.7 pounds (kg/hl. 80.7). Total foreign material, including other cereal grains, 0.4%, including 0.15% other seeds. Wheats of other classes, and varieties of durum not equal to Mindum, 9.5%, including 5.5% wheats of other classes.

NO. 3 CANADA WESTERN AMBER DURUM - Test weight per bushel, 62.4 pounds (kg/hl. 77.9). Total foreign material, including other cereal grains, 0.55%, including 0.15% other seeds. Wheats of other classes, and varieties of durum not equal to Mindum, 13%, including 8.5% of wheats of other classes.

EXTRA NO. 4 CANADA WESTERN AMBER DURUM - Test weight per bushel, 62.4 pounds (kg/hl. 77.9). Total foreign material, including other cereal grains, 0.7%, including 0.15% other seeds. Wheats of other classes, 10%.

NO. 4 CANADA WESTERN AMBER DURUM - Test weight per bushel, 61.1 pounds (kg/hl. 76.3). Total foreign material, including other cereal grains, 0.75%, including 0.15% other seeds. Wheats of other classes, 10%.

Winter Wheat

NO. 1 ALBERTA RED WINTER - Minimum weight per measured bushel, 62 lbs. Variety: any variety of red winter wheat. Minimum percentage by weight of hard vitreous kernels: 60%. Well matured, practically free from damaged kernels. Maximum limits of foreign material other than cereal grains; total including cereal grains: about 1%. Maximum limits of wheat of other classes: 5%. Free of durum.

NO. 2 ALBERTA WINTER - Minimum weight per measured bushel, 60 lbs. Variety: any variety of winter wheat. Minimum percentage by weight of hard vitreous kernels: 45%. Well matured, practically free from damaged kernels. Maximum limits of foreign material other than wheat: reasonably free from matter other than cereal grains; total including cereal grains: about 2%. Maximum limits of wheat of other classes: durum about 1%; total including durum: 10%.

NO. 3 ALBERTA WINTER - Minimum weight per measured bushel, 57 lbs. Variety: any variety of winter wheat. Reasonably well matured but excluded from preceding grades on account of frosted or otherwise damaged kernels. Maximum limits of foreign material other than wheat: reasonably free from matter other than cereal grains; total including cereal grains: about 2½%. Maximum limits of wheat of other classes: durum about 2%; total including durum: 20%.

NO. 4 ALBERTA WINTER - Minimum weight per measured bushel, 56 lbs. Variety: any variety of winter wheat. Excluded from the higher grades account of frosted, shrunken or otherwise damaged kernels. Maximum limits of foreign material other than wheat: reasonably free from matter other than cereal grains; total including cereal grains: about 2½%. Maximum limits of wheat of other classes: durum 3%; total including durum 20%.

Wheat

NO. 6 WHEAT - Minimum weight per measured bushel, 51 lbs. Variety: any variety of spring or winter wheat excluded from higher grades on account of frosted or otherwise damaged kernels. Maximum limits of foreign material other than wheat: reasonably free from matter other than cereal grains; total including cereal grains: about 3%. Maximum limit of durum wheat: 6%.

Amber Durum Wheat

NO. 5 CANADA WESTERN AMBER DURUM - Minimum weight per measured bushel, 54 lbs. Variety: any variety of amber durum. Excluded from higher grades on account of frosted or otherwise damaged kernels. Maximum limits of foreign material other than wheat: reasonably free from matter other than wheat: reasonably free from matter other than cereal grains; total including cereal grains: 3%. Maximum limits of wheats of other classes: red durum 10%; total including red durum, 25%.

PART II

HISTORICAL DEVELOPMENT OF THE DEMAND FOR WESTERN CANADIAN HARD RED SPRING WHEAT[1]

When the early settlers began to grow wheat for their own needs in the Red River valley of Manitoba they grew spring wheat, of no special distinction, because winter wheats would not survive the winter. For the most part, the seed came from the old country and was probably of fairly soft endosperm varieties. This latter feature was natural because over hundreds of years, soft endosperm wheats had been selected as being the most suitable for grinding flour in the stone mills used from the time of the Roman Empire until the middle of the last century.

Following the entry of Manitoba into Confederation, there was a gradual influx of farmers from Ontario to the new province, and they probably brought with them a variety of spring wheat developed by an Ontario farmer from a parcel of Baltic wheat sent to him from Scotland. This was Red Fife wheat. It did well in the Red River valley and the southwest, and by the time

---

[1]This is an unaltered excerpt from G.N. Irvine, "Wheat and its Quality," a paper prepared for the Board of Grain Commissioners for Canada.

the Canadian Pacific Railway reached Winnipeg and began to rapidly move west, Red Fife wheat from Manitoba had already achieved a great reputation for milling quality in the new roller flour milling industry in Minneapolis. The C.P.R. carried on a vigorous program to attract settlers to its lands along the right of way, and as a part of this program they provided free seed to the new homesteaders; this seed was Red Fife. Wherever new settlers went, following the railway lines, Red Fife went along with them.

Here was the first melding of propitious circumstances that started the Canadian West along the road to its worldwide reputation for high quality wheat. The factors that interacted at this point in history were the following.

1) The invention of the purifier, a machine which allowed more effective use of hard endosperm wheats in stone milling systems. Hard spring wheats had long been discounted because they were difficult to mill and produced dark-coloured flour. With the purifier came the so-called "patent" flour of a whiteness and brightness never known before, and this was most efficiently produced from hard spring wheats.

2) This invention catalyzed the development of the roller milling system which was rapidly adopted

by the milling industry in Minneapolis. Suddenly hard red spring wheat was very much in demand and premiums were being paid for it wherever the new roller mills became established. In 1881 Ogilvie's established the first roller mill in Western Canada at Winnipeg.

3) By the time the C.P.R. went through Winnipeg in 1883, the wheat markets of the world were ready and waiting for supplies of hard red spring wheat for the new roller milling industry. The Red Fife produced in Manitoba had already established its reputation in Minneapolis, and so when Manitoba began to produce a surplus for export to the East along the new railroad, it was recognized that the wheat must be graded in some way. In Eastern Canada, wheat was already being graded according to a simple system, and in the General Inspection Act of 1886 the system was applied to Manitoba wheat. One change in principle was made however, which was to make "Manitoba wheat" unique ever after on the world markets. The change was that in place of a single class of "spring wheat" grades, four classes of spring wheat were defined; these classes were distinguished by minimum percentages of hard Red Fife wheat that they must contain. The top class, which soon became world famous, was called

Manitoba Hard wheat; this class had three statutory grades and each was open only to wheat which was at least 85% hard Red Fife. Other classes defined were Canada Hard wheat, Northern Spring wheat and Spring wheat. This latter class could contain spring wheat of any type or variety. While this system proved to be too cumbersome and was subsequently modified and streamlined, the principle of requiring that the top grades of wheat could contain only wheat varieties meeting a <u>defined standard level of quality</u> has been retained to this day and is a unique feature of the Western Canadian wheat grading system. Looking back, it is hard to escape the notion that there were some men with great vision instrumental in building the bright future that was in store for Western Canada. Through the interaction of these three factors the stage was well set.

The C.P.R. set up experimental farms along its right of way, to produce Red Fife seed for the immigrants who soon were pouring in to take up homesteads wherever the railways extended their lines. These new farmers seem to have been well satisfied with Red Fife; it yielded well on the virgin soil and was doubtlessly higher in protein than the same type of wheat grown in Eastern Canada or south of the border. This was the kind of wheat that Europe, and particularly the

United Kingdom, needed to blend with their softer, low protein, higher yielding winter wheats.

Meanwhile the Federal Government established the Dominion Experimental Farm system, with the main effort at the Central Experimental Farm in Ottawa, but with stations soon established in Western Canada at Indian Head and Brandon, and later at many other locations as new areas were opened up. Sir William Saunders was the first director of the Experimental Farms and was probably the first Canadian wheat breeder. It wasn't long before the ideas of the Austrian monk Gregor Mendel, first published in 1866, were being applied to the breeding of new strains of wheat for Western Canada through the new concept of crossbreeding. It was early recognized that if wheat was to be grown farther north than the original route of the C.P.R., earlier maturing varieties must be developed. Fortunately, it was also clearly recognized that any new varieties must also have quality similar to that of Red Fife.

Saunders' son, later Sir Charles Saunders, became Dominion Cerealist in 1903 and carried forward the work so well begun by his father. In 1910 his immortal achievement, Marquis wheat, was ready for increase and propagation throughout the West. This

new variety matured almost a week earlier than Red Fife, yet had the quality of Red Fife (one of its parents) in full measure. About this time Saunders set up a milling and baking laboratory at the Central Experimental Farm in Ottawa and became Canada's first Cereal Chemist. The great importance of maintaining the highest quality levels in new varieties of wheat was firmly established.

In the incredibly short span of 25 years the railroads were spread across Western Canada; terminals for handling the grain at the Lakehead for trans-shipment down the Great Lakes were proliferating, and country elevators were sprouting every few miles along the railroad lines. The first co-operative elevator company was set up and the lines of battle between the growers and the Line Elevator companies operating from the Winnipeg Grain Exchange were already drawn up. During this period several Royal Commissions sat to try and mediate the fundamental difference between the individual capitalists on the farms and the "big business" capitalists of the Grain Exchange. As a result of these investigations, the Federal Government set up the Board of Grain Commissioners for Canada in 1912 to administer the new Canada Grain Act. This act

was aimed at controlling the grain handling system in the mutual interests of the producer, the trade and the overseas markets. This Board became the custodian of quality for the cereals, especially wheat, being grown in Western Canada and fulfills this role to the present day. Through the Board, elevators of all types were licensed and controlled. The inspection of grain, and the administration of the whole grading system was put on a uniform basis with one set of standards for all of Western Canada. A laboratory was set up to assist the Inspection Branch in the practical interpretation of quality factors. This laboratory had the responsibility of advising the Board what varieties of wheat could be considered equal in quality to Red Fife (or soon after, Marquis) which was the standard of quality named in the Canada Grain Act.

Within 30 years from the opening of the West to homesteaders, we had developed the necessary control mechanisms to consolidate the position and reputation of Western Canada as the producer of the finest bread wheats marketed from anywhere in the world. There were still many problems to be solved and many sharp differences of view to reconcile, as there are still today, but the groundwork had been effectively laid and

there has been no fundamental change in philosophy since that time. Basic control of quality was built into the grading system through the naming of a standard of quality in the Canada Grain Act. Plant breeding was firmly in the hands of the Federal Department of Agriculture; and the mechanism for effective breeding programs, through the use of crossbreeding, was well established. The world had swiftly changed over from the production of flour on stone mills to milling with roller mills, thereby assuring the future of hard spring wheats.

APPENDIX TABLE A

EXPORT CLEARANCES OF CANADIAN NON-DURUM AND DURUM WHEAT BY COUNTRIES AND REGIONS OF FINAL DESTINATION AND EXPORTS OF WHEAT FLOUR (WHEAT EQUIVALENT),[a] CROP YEARS, 1955-56 TO 1964-65[b]

Destination	1955-56	1956-57	1957-58	1958-59	1959-60
E.E.C.					
Belgium-Luxembourg	16,652,244	16,586,771	13,162,676	10,886,677	10,892,965
France	1,736,572	4,024,686	-	1,352,435	5,469,849
West Germany	29,569,806	36,290,971	29,736,006	34,983,696	24,874,639
Italy	6,644,543	2,417,961	1,004,380	1,104,058	2,153,274
Netherlands	8,748,585	11,193,629	21,733,457	7,858,997	7,854,200
Sub Totals	63,351,750	70,514,018	65,636,519	56,185,863	51,244,927
Great Britain	109,446,122	90,435,518	104,060,568	100,887,406	93,578,276
Western Europe[c]	191,884,655	182,170,882	188,950,006	175,712,531	164,322,214
Russia (U.S.S.R.)	14,790,447	-	14,833,328	7,308,187	-
Eastern Europe (Communist Bloc)[d]	44,771,757	9,526,248	16,277,008	12,716,518	4,871,813
Africa	8,200,095	2,591,662	2,136,382	10,812,999	12,626,479
Oceania[e]	97,553	238,203	1,768,517	497,436	551,764

Continued

APPENDIX TABLE A--Continued

Destination	1960-61	1961-62	1962-63	1963-64	1964-65
E.E.C.					
Belgium-Luxembourg	12,365,177	11,650,226	10,148,604	15,708,958	15,671,667
France	9,902,903	1,036,314	6,877,184	4,883,596	5,552,755
West Germany	32,979,004	43,945,071	27,997,114	37,276,899	20,508,768
Italy	14,936,716	3,896,999	4,920,150	3,875,315	3,921,960
Netherlands	6,631,133	3,599,079	4,753,795	3,199,532	3,417,924
Sub Totals	76,814,933	64,127,689	54,696,847	64,944,300	49,073,074
Great Britain	91,773,280	85,953,679	89,622,711	90,832,222	80,147,643
Western Europe	187,066,701	167,685,393	157,279,709	171,871,843	140,169,252
Russia (U.S.S.R.)	7,511,317	-	-	184,348,385	10,199,167
Eastern Europe (Communist Bloc)	29,616,670	22,435,583	22,497,526	270,670,785	80,257,739
Africa	4,956,113	8,426,762	12,632,489	5,823,069	4,667,653
Oceania	350,354	483,012	489,970	471,243	98,382

Continued

APPENDIX TABLE A--Continued

Destination	1955-56	1956-57	1957-58	1958-59	1959-60
South America[f]	6,750,774	6,610,031	8,223,255	7,233,800	8,879,922
Central America[g]	9,272,944	7,010,277	8,764,432	8,270,390	8,028,331
North America[h]	8,276,611	7,565,692	8,943,089	5,032,340	3,643,470
China (Communist)	-	-	3,786,907	463,867	-
Japan	29,439,868	35,100,604	38,721,127	42,127,102	46,823,424
India	1,697	172	23,795,301	11,419,549	4,772,569
Pakistan	46	978,689	3,526,433	3,824,584	2,175,591
Philippines	6,353,460	5,353,108	4,861,076	4,201,326	6,221,864
Other Southeast Asia[i]	2,913,390	2,304,181	4,066,132	4,046,684	3,451,347
Middle East[j]	1,218,615	2,346,976	2,253,830	2,554,531	5,312,183
Total (All Countries)[k]	312,259,702	264,395,826	320,292,836	294,545,520	277,290,953

Continued

APPENDIX TABLE A--Continued

Destination	1960-61	1961-62	1962-63	1963-64	1964-65
South America	6,122,133	6,308,369	8,556,424	9,904,906	12,011,539
Central America	8,280,464	9,117,932	8,590,304	23,382,230	23,683,606
North America	3,865,882	2,874,065	2,491,175	1,995,494	1,069,022
China (Communist)	34,699,851	71,977,630	56,443,819	41,286,001	62,370,202
Japan	55,629,543	49,124,116	44,625,158	49,811,603	50,172,194
India	3,955,436	3,554,104	703,612	721,373	7,266,240
Pakistan	2,098,690	1,856,325	361,664	354,984	3,199,467
Philippines	3,621,077	4,945,763	6,752,196	7,308,411	6,482,931
Other Southeast Asia	3,754,532	3,783,087	2,995,880	5,289,408	5,082,060
Middle East	2,616,359	2,133,138	2,940,771	2,744,318	1,751,740
Total (All Countries)	353,249,439	358,021,822	331,367,218	594,547,631	399,594,316

APPENDIX TABLE A--Continued

---

[a]Conversion factor; 2.3 bushels per hundred weight.

[b]Quantities in bushels.

[c]Includes E.E.C. countries, Great Britain, Austria, Denmark, Finland, Gibralter, Greece, Iceland, Ireland, Malta and Gozo, Norway, Portugal, Sweden, Switzerland.

[d]Includes Russia, Albania, Bulgaria, Czechoslavakia, East Germany, Hungary, Poland, Rumania, Yugoslavia.

[e]Includes Australia, British Oceania, Fiji, French Oceania, Netherlands Oceania, New Zealand, United States Oceania (Guam).

[f]Includes Argentina, Bolivia, Brazil, Guyana, Chile, Columbia, Ecuador, Peru, Surinam, Venezuela.

[g]Includes Bahamas, Barbados, Bermuda, British Honduras, Costa Rica, Cuba, Dominican Republic, El Salvador, French Guiana, French West Indies, Guatemala, Haiti, Honduras Republic, Jamaica, Leeward and Windward Islands, Netherlands Antilles, Nicaragua, Panama, Trinidad and Tobago, U.S. Virgin Islands and Puerto Rico.

[h]Includes St. Pierre and Miquelon and the United States.

[i]Includes British East Indies (not elsewhere specified), Burma, Cambodia, Laos, Ceylon, Hong Kong, Indonesia, Malaysia, Portugese Asia, Portugese India, South Korea, Taiwan and Formosa, Thailand, Viet Nam.

APPENDIX TABLE A--Continued

---

[j]Includes Aden, British Middle East, Cyprus, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Qatar, Saudi Arabia, Syria.

[k]Includes bagged seed wheat.

SOURCE: Canada Dominion Bureau of Statistics, Agriculture Division and Board of Grain Commissioners for Canada, Statistics Branch, Grain Trade of Canada, Catalogue No. 22-201, Annual (Ottawa: Queen's Printer).

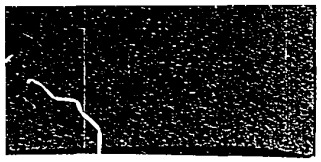
APPENDIX TABLE B

CANADIAN WHEAT BOARD PRICES[a] TO PRODUCERS FOR WESTERN CANADIAN WHEAT BASIS IN STORE, FORT WILLIAM/PORT ARTHUR OR VANCOUVER, CROP YEARS, 1950-51 TO 1964-65

Crop Year	Grade	Initial Payment[b]	Adjusted Payment[b]	Interim Payment[b]	Final Payment[b]	Realized Price[b]
1950-51	1 Northern	1.40	.20	-	.25756	1.85756
	2 Northern	1.37	.20	-	.26070	1.83070
	3 Northern	1.30	.20	-	.29639	1.79639
	4 Northern	1.22	.20	-	.32400	1.74400
	5 Wheat	1.12	.20	-	.32354	1.64354
	Feed Wheat	1.00	.20	-	.24810	1.44810
	1 Amber Durum	1.40	.20	-	.25756	1.85756
	2 Amber Durum	1.37	.20	-	.26646	1.83646
	3 Amber Durum	1.25	.20	-	.32458	1.77458
1951-52	1 Northern	1.40	.20	-	.23569	1.83569
	2 Northern	1.37	.20	-	.24579	1.81579
	3 Northern	1.34	.20	-	.25589	1.79589
	4 Northern	1.26	.20	-	.27609	1.73609
	5 Wheat	1.16	.20	-	.24547	1.60547
	Feed Wheat	1.00	.20	-	.29597	1.49597
	1 Amber Durum	1.40	.20	-	.23569	1.83569
	2 Amber Durum	1.37	.20	-	.24579	1.81579
	3 Amber Durum	1.30	.20	-	.30134	1.80134

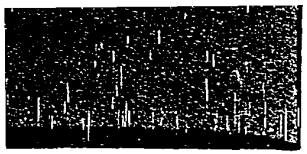
APPENDIX TABLE B--Continued

Crop Year	Grade	Initial Payment	Adjusted Payment	Interim Payment	Final Payment	Realized Price
1952-53	1 Northern	1.40	.20	.12	.09872	1.81872
	2 Northern	1.37	.20	.12	.10185	1.79185
	3 Northern	1.34	.20	.12	.10567	1.76567
	4 Northern	1.26	.20	.12	.13711	1.71711
	5 Wheat	1.16	.20	.12	.09507	1.57507
	Feed Wheat	1.00	.20	.12	.14948	1.46948
	1 Amber Durum	1.40	.25	.12	.46330	2.23330
	2 Amber Durum	1.37	.25	.12	.48073	2.22073
	3 Amber Durum	1.30	.25	.12	.54309	2.21309
1953-54	1 Northern	1.40	-	.10	.06426	1.56426
	2 Northern	1.37	-	.10	.04920	1.51920
	3 Northern	1.34	-	.10	.05488	1.49488
	4 Northern	1.26	-	.10	.08568	1.44568
	5 Wheat	1.12	-	.10	.10924	1.32924
	Feed Wheat	1.00	-	.10	.16726	1.27626
	1 Amber Durum	1.50	-	.10	.52613	2.12613
	2 Amber Durum	1.47	-	.10	.52936	2.09936
	3 Amber Durum	1.40	-	.10	.57098	2.07098



APPENDIX TABLE B--Continued

Crop Year	Grade	Initial Payment	Adjusted Payment	Interim Payment	Final Payment	Realized Price
1952-53	1 Northern	1.40	.20	.12	.09872	1.81872
	2 Northern	1.37	.20	.12	.10185	1.79185
	3 Northern	1.34	.20	.12	.10567	1.76567
	4 Northern	1.26	.20	.12	.13711	1.71711
	5 Wheat	1.16	.20	.12	.09507	1.57507
	Feed Wheat	1.00	.20	.12	.14948	1.46948
	1 Amber Durum	1.40	.25	.12	.46330	2.23330
	2 Amber Durum	1.37	.25	.12	.48073	2.22073
	3 Amber Durum	1.30	.25	.12	.54309	2.21309
1953-54	1 Northern	1.40	-	.10	.06426	1.56426
	2 Northern	1.37	-	.10	.04920	1.51920
	3 Northern	1.34	-	.10	.05488	1.49488
	4 Northern	1.26	-	.10	.08568	1.44568
	5 Wheat	1.12	-	.10	.10924	1.32924
	Feed Wheat	1.00	-	.10	.16726	1.27626
	1 Amber Durum	1.50	-	.10	.52613	2.12613
	2 Amber Durum	1.47	-	.10	.52936	2.09936
	3 Amber Durum	1.40	-	.10	.57098	2.07098



APPENDIX TAPLE B--Continued

Crop Year	Grade	Initial Payment	Adjusted Payment	Interim Payment	Final Payment	Realized Price
1954-55	1 Northern	1.40	-	.10	.15066	1.65066
	2 Northern	1.36	-	.10	.15397	1.61397
	3 Northern	1.34	-	.10	.12387	1.56387
	4 Northern	1.26	-	.10	.11657	1.47657
	5 Wheat	1.12	-	-	.06619	1.18619
	Feed Wheat	1.00	-	-	.10619	1.10619
	1 Amber Durum	1.50	-	.25	.59498	2.34498
	2 Amber Durum	1.47	-	.25	.59498	2.31498
	3 Amber Durum	1.40	-	.25	.62998	2.27998
1955-56	1 Northern	1.40	-	.10	.10893	1.60893
	2 Northern	1.36	-	.10	.11838	1.57838
	3 Northern	1.34	-	.10	.05948	1.49948
	4 Northern	1.26	-	.10	.08592	1.44592
	5 Wheat	1.10	-	.10	.09905	1.29905
	Feed Wheat	.98	-	.10	.14891	1.22891
	1 Amber Durum	1.50	-	.25	.46123	2.21123
	2 Amber Durum	1.47	-	.25	.46973	2.18973
	3 Amber Durum	1.40	-	.25	.52099	2.17099

APPENDIX TABLE B--Continued

Crop Year	Grade	Initial Payment	Adjusted Payment	Interim Payment	Final Payment	Realized Price
1956-57	1 Northern	1.40	-	.10	.08838	1.58838
	2 Northern	1.36	-	.10	.08892	1.54892
	3 Northern	1.32	-	.10	.05978	1.47978
	4 Northern	1.25	-	.10	.02880	1.37880
	5 Wheat	1.08	-	.10	.07521	1.25521
	Feed Wheat	.96	-	.10	.08886	1.14886
	1 Amber Durum	1.50	-	.25	.19804	1.94804
	2 Amber Durum	1.47	-	.25	.22054	1.94054
	3 Amber Durum	1.40	-	.25	.24204	1.89204
1957-58	1 Northern	1.40	-	.10	.12120	1.62120
	2 Northern	1.36	-	.10	.12592	1.58592
	3 Northern	1.32	-	.10	.07794	1.49794
	4 Northern	1.25	-	.10	.04630	1.39630
	5 Wheat	1.08	-	.10	.14216	1.32216
	Feed Wheat	.96	-	.10	.22347	1.28347
	1 Amber Durum	1.50	-	.15	.19554	1.84554
	2 Amber Durum	1.47	-	.15	.20511	1.82511
	3 Amber Durum	1.40	-	.15	.13039	1.68039

APPENDIX TABLE B--Continued

Crop Year	Grade	Initial Payment	Adjusted Payment	Interim Payment	Final Payment	Realized Price
1958-59	1 Northern	1.40	-	.10	.09569	1.59569
	2 Northern	1.36	-	.10	.10069	1.56069
	3 Northern	1.32	-	.10	.06507	1.48507
	4 Northern	1.25	-	.10	.05161	1.40161
	5 Wheat	1.08	-	.10	.19846	1.37846
	Feed Wheat	.96	-	.10	.28726	1.34726
	1 Amber Durum	1.40	-	.10	.18192	1.68192
	2 Amber Durum	1.36	-	.10	.17055	1.63055
	3 Amber Durum	1.32	-	.10	.12847	1.54847
1959-60	1 Northern	1.40	-	.10	.08999	1.58999
	2 Northern	1.36	-	.10	.08863	1.54863
	3 Northern	1.32	-	.10	.09790	1.51790
	4 Northern	1.25	-	.10	.12398	1.47398
	5 Wheat	1.08	-	.10	.21310	1.39310
	Feed Wheat	.96	-	.10	.30837	1.36837
	1 Amber Durum	1.40	-	.10	.18418	1.68418
	2 Amber Durum	1.36	-	.10	.18644	1.64644
	3 Amber Durum	1.32	-	.10	.20690	1.62690

APPENDIX TABLE B--Continued

Crop Year	Grade	Initial Payment	Adjusted Payment	Interim Payment	Final Payment	Realized Price
1960-61	1 Northern	1.40	-	.10	.29526	1.79526
	2 Northern	1.36	-	.10	.30328	1.76328
	3 Northern	1.32	-	.10	.32719	1.74719
	4 Northern	1.25	-	.10	.34620	1.69620
	5 Wheat	1.08	-	.10	.44896	1.62896
	Feed Wheat	.96	-	.10	.53706	1.59706
	1 Amber Durum	1.40	-	.10	.41672	1.91672
	2 Amber Durum	.36	-	.10	.42491	1.88491
	3 Amber Durum	1.32	-	.10	.44712	1.86712
1961-62	1 Northern	1.40	.10	-	.41021	1.91021
	2 Northern	1.36	.10	-	.44107	1.90107
	3 Northern	1.32	.10	-	.46928	1.88928
	4 Northern	1.25	.10	-	.47404	1.82404
	5 Wheat	1.08	.10	-	.56797	1.74797
	Feed Wheat	.96	.10	-	.63797	1.69797
	1 Amber Durum	1.75	.75	.63751	-	3.13751
	2 Amber Durum	1.71	.75	.66751	-	3.12751
	3 Amber Durum	1.67	.75	.68001	-	3.10001

APPENDIX TABLE B--Continued

Crop Year	Grade	Initial Payment	Adjusted Payment	Interim Payment	Final Payment	Realized Price
1962-63	1 Northern	1.50	-	-	.37448	1.87448
	2 Northern	1.46	-	-	.38691	1.84691
	3 Northern	1.42	-	-	.40154	1.82154
	4 Northern	1.35	-	-	.39764	1.74764
	5 Wheat	1.18	-	-	.48301	1.66301
	Feed Wheat	1.08	-	-	.51547	1.59547
	1 Amber Durum	1.50	-	-	.68873	2.18873
	2 Amber Durum	1.46	-	-	.71677	2.17677
	3 Amber Durum	1.42	-	-	.68651	2.10651
1963-64	1 Northern	1.50	-	-	.47366	1.97366
	2 Northern	1.46	-	-	.48315	1.94315
	3 Northern	1.42	-	-	.49837	1.91837
	4 Northern	1.35	-	-	.50582	1.85582
	5 Wheat	1.18	-	-	.60881	1.78881
	Feed Wheat	1.08	-	-	.64871	1.72871
	1 Amber Durum	1.50	-	-	.43225	1.93225
	2 Amber Durum	1.46	-	-	.44788	1.90788
	3 Amber Durum	1.42	-	-	.40662	1.82662

APPENDIX TABLE B--Continued

Crop Year	Grade	Initial Payment	Adjusted Payment	Interim Payment	Final Payment	Realized Price
1964-65	1 Northern	1.50	-	-	.38683	1.88683
	2 Northern	1.46	-	-	.39102	1.85102
	3 Northern	1.42	-	-	.36594	1.78594
	4 Northern	1.35	-	-	.37261	1.72261
	5 Wheat	1.21	-	-	.44467	1.65467
	Feed Wheat	1.13	-	-	.48119	1.61119
	1 Amber Durum	1.50	-	-	.38683	1.88683
	2 Amber Durum	1.46	-	-	.39564	1.85564
	3 Amber Durum	1.42	-	-	.39333	1.81333

[a]Prices expressed in Canadian dollars per bushel.

[b]Prior to deduction of Prairie Farm Assistance Act levy of 1%.

SOURCE: Same as Appendix Table A.

BIBLIOGRAPHY

Anderson, Walton J. Canadian Wheat In Relation To The World's Food Production And Distribution. Sponsored by Alberta Wheat Pool, Manitoba Pool Elevators, Saskatchewan Wheat Pool. Saskatoon: Modern Press, 1964.

Balassa, Bela. The Theory of Economic Integration. Homewood, Illinois: Richard D. Irwin Inc., 1961.

Bank of Montreal. Business Review.

Board of Grain Commissioners for Canada. Canadian Grain Exports. Annual. Ottawa.

_____. Canadian Wheat. Crop Bulletin No. 94. Winnipeg, November, 1965.

Brandow, G.E. Interrelations Among Demands For Farm Products and Implications for Control of Market Supply. Bulletin 680, Interregional Publication for the State Agricultural Experiment Stations. Agricultural Experiment Station, University Park, Pennsylvania: The Pennsylvania State University College of Agriculture, August, 1961.

Canada Department of Agriculture. Agriculture Abroad. Bi-monthly. Ottawa.

_____. The Canadian Wheat Board - Organ for the Sale of Grains. Ottawa, 1962.

Canada Dominion Bureau of Statistics, Agriculture Division. Handbook of Agricultural Statistics: Part I - Field Crops, 1908-63. Catalogue No. 21-507, Occasional. Ottawa: Queen's Printer, 1964.

_____. The Wheat Review. Catalogue No. 22-005, Monthly. Ottawa: Queen's Printer.

Canada Dominion Bureau of Statistics, Agriculture Division and Board of Grain Commissioners for Canada, Statistics Branch. Grain Trade of Canada. Catalogue No. 22-201, Annual. Ottawa: Queen's Printer.

Canadian Wheat Board. Annual Reports. Winnipeg.

_____. Canadian Grain Handbook, Crop Year 1965-66. Winnipeg: Grain Trade Press, 1966.

_____. Western Canadian Grain: The Farmlands and Farms of Western Canada. Bulletin No. 3. Winnipeg, September, 1964.

Commonwealth Economic Committee. Grain Crops, A Review of Production, Trade, Consumption and Prices Relating To Wheat, Wheat Flour, Maize, Barley, Oats, Rye and Rice. Annual. London.

Communauté Economique Européenne. Economie de la Production, Transformation et Consommation du Blé Dur dans la C.E.E. Serie Agriculture, Etude No. 18. Bruxelles, 1965.

_____. Emploi Agricole dans les Pays de la C.E.E., Tome I: Structure. Serie Politique Sociale, Etude No. 7. Bruxelles, 1964.

_____. Le Marché Commun des Produits Agricoles - Perspectives 1970. Serie Agriculture, Etude No. 10. Bruxelles, 1963.

Dams, Theodor J. "Co-ordination of Structural Policies For Agriculture - The Role of the EEC," International Journal of Agrarian Affairs, Vol. III, No. 6: Agriculture and the European Common Market II (August, 1963).

Dawson, John. Changes In Agriculture To 1970. Economic Council of Canada Staff Study No. 11. Ottawa: Queen's Printer, December, 1964.

de la Mahotière, Stuart. R. The Common Market. London: Hodder and Stoughton Ltd., 1961.

Dodds, Harold. "The Case For A Higher-Yielding Wheat," Country Guide, Vol. LXXXVI, No. 4 (April, 1967).

Downs, J. R. Export Projections To 1970. Economic Council of Canada Staff Study No. 8. Ottawa: Queen's Printer, December, 1964.

Drummond, W. M. and Mackenzie, W. Progress and Prospects of Canadian Agriculture. Royal Commission on Canada's Economic Prospects. Ottawa, January, 1957.

Economic Council of Canada and the Agricultural Economics Research Council of Canada. Proceedings of Conference on International Trade and Canadian Agriculture. Banff, Alberta, January 10-12, 1966.

Ellis, Harry B. The Common Market. Cleveland and New York: The World Publishing Co., 1965.

European Committee For Economic and Social Progress. Europe Needs the European Economic Community. Proposals of the German National Group of CEPES for maintaining the EEC. Translated from the German and distributed through the Committee For Economic Development. New York, September, 1965.

European Economic Community. "EEC Commission Submits Grain Price Proposals To Council of Ministers." Press Release, November 6, 1963.

European Economic Community, Commission Spokesman Group. Common Grain Price. Brussels, November, 1963.

European Economic Community, Official Spokesman of the Commission. Background to the Harmonization of Cereal Prices in the EEC. Brussels, December, 1964.

Farnsworth, Helen C. Determinants of French Grain Production, Past and Prospective. ("Food Research Institute Studies," Vol. IV, No. 3.) Stanford, California: Stanford University Press, 1964.

Farnsworth, Helen C. and Friedman, Karen J. Grains in German Farming: Past Developments and Prospects for 1970 and 1975. ("Food Research Institute Studies," Vol. VI, No. 1.) Stanford, California: Stanford University Press, 1966.

Fischer, Lewis A. Future of Canadian Wheat Exports to the Common Market Countries. Montreal: Macdonald College of McGill University, 1965.

Friedman, Karen J. German Grain Policies and Prices. ("Food Research Institute Studies," Vol. V, No. 1.) Stanford, California: Stanford University Press, 1965.

Hallstein, Walter. United Europe: Challenge and Opportunity. Cambridge, Mass.: Harvard University Press, 1962.

Hirsch, Hans G. The Fluctuation of EEC Variable Levies. U.S. Department of Agriculture, Economic Research Service, ERS-Foreign-141. Washington, September, 1965.

_____. The Uniform Grain Price in the European Economic Community. U.S. Department of Agriculture, Economic Research Service, ERS-Foreign-110. Washington, March, 1965.

Hiscocks, Geoffrey and Hulugalle, Lakdase. "Wheat in the EEC," International Journal of Agrarian Affairs, Vol. III, No. 6: Agriculture and the European Common Market II (August, 1963).

International Wheat Council. International Wheat Agreement 1962 and Rules of Procedure. London, 1962.

_____. International Wheat Prices. Secretariat Paper No. 1. London, December, 1961.

_____. Review of the World Wheat Situation. Annual. London.

_____. Trade in Wheat Flour. Secretariat Paper No. 5. London, March, 1965.

_____. Trends and Problems in the World Grain Economy, 1950-1970. Secretariat Paper No. 6. London, April, 1966.

_____. World Wheat Statistics. Annual. London.

Irvine, G. N. "Wheat and Its Quality." Paper prepared for the Board of Grain Commissioners for Canada, Winnipeg, 1967.

Jasny, N. Competition Among Grains. Stanford, Calif.: Stanford University Press, 1940.

Johnston, J. Econometric Methods. New York: McGraw-Hill Book Company Inc., 1963.

Junckerstorff, H. K. (ed.). International Manual on the European Economic Community. St. Louis, Missouri: St. Louis University Press, 1963.

Keaton, Clyde R. Competition in the Grain Market of Western Europe. U.S. Department of Agriculture, Foreign Agricultural Service, FAS-M-138. Washington, May, 1962.

Kindleberger, Charles P. International Economics. Homewood, Illinois: Richard D. Irwin Inc., 1963.

Kitzinger, Uwe. The Challenge of the Common Market. 4th ed. Oxford: Basil Blackwell, 1962.

Klein, Thomas M. The European Economic Community's Common Agricultural Policy and Its Impact on U.S. Exports. Board of Governors of the Federal Reserve System Staff Economic Studies No. 19. Washington, July, 1966.

Krause, Lawrence B. (ed.). The Common Market - Progress and Controversy. Englewood Cliffs, N. J.: Prentice-Hall Inc., 1964.

Krohn, Hans-Broder and Van Lierde, Jacques. "Proposed Criteria For Fixing the Prices of Agricultural Products in the EEC," International Journal of Agrarian Affairs, Vol. III, No. 5: Agriculture and the European Common Market I (June, 1963).

Lamfalussy, A. The United Kingdom and the Six. Homewood, Illinois: Richard D. Irwin Inc., 1963.

Lewis, J. N. "EEC's Policies - The Implications for International Commodity Plans and for Australia's Agricultural Exports," International Journal of Agrarian Affairs, Vol. IV, No. 2: Agriculture and the European Common Market III (April, 1964).

Lloyd, Gordon. Canadian Wheat Marketing. U.S. Department of Agriculture, Foreign Agricultural Service, FAS-M-140. Washington, July, 1962.

MacFarlane, David L. "Agriculture 1954," The Financial Post (Toronto), November 13, 1954.

MacFarlane, David L. and Black, John D. The Development of Canadian Agriculture to 1970. Montreal: Macdonald College of McGill University, 1958.

MacGibbon, D. A. "The Future of the Canadian Export Trade in Wheat," Contributions to Canadian Economics. ("University of Toronto Studies - History and Economics," Vol. V, 1932).

Malenbaum, Wilfred. The World Wheat Economy, 1885-1939. ("Harvard Economic Studies," Vol. XCII) Cambridge, Mass.: Cambridge University Press, 1953.

Mayne, Richard. The Community of Europe. London: Victor Gollancz Ltd., 1963.

Meade, James E. "The Common Market: Is There an Alternative?" Prologue to 2nd edition of U.K., Commonwealth and Common Market. ("Hobart Paper 17 Supplement") London: Institute of Economic Affairs, 1962.

Menzies, M. W. "The Canadian Wheat Board and the International Wheat Trade." Unpublished Ph.D. dissertation, University of London, 1956.

Montreal Star.

O'Donnell, P. E. "The Relation of Changes of Agricultural Trading Patterns in the Common Market to U.S. Exports of Agricultural Products," International Journal of Agrarian Affairs, Vol. III, No. 6: Agriculture and the European Common Market II (August, 1963).

Ogdon, Montell. Canadian Agriculture - Its Competitive Position. U.S. Department of Agriculture, Foreign Agricultural Service Report No. 110. Washington, July, 1958.

Organization For Economic Co-operation and Development. General Statistics. Annual.

_____. Main Economic Indicators (March, 1964).

Richmond, S. B. Statistical Analysis. 2nd ed. New York: The Ronald Press Co., 1964.

Riddel, W. "The Canadian Wheat Board - History and Functions." Pamphlet prepared for The Canadian Wheat Board.

Schertz, L. P. Basic Provisions of European Economic Community Grain Regulations. U.S. Department of Agriculture, Foreign Agricultural Service. Washington, June, 1963.

Schertz, L. P. and Neeley, K. L. Barriers to International Grain Trade in Selected Foreign Countries. U.S. Department of Agriculture, Foreign Agricultural Service Report No. 126. Washington, May, 1965.

Schmidt, S. C. Commodity Structure and Regional Distribution of EEC Imports: The Formative Years 1951-1959. Part I - Food, Beverages and Tobacco, and Oils and Fats. University of Illinois College of Agriculture Research Report AERR-70. Urbana, Illinois, February, 1965.

Scitovsky, Tibor. Economic Theory and Western European Integration. Stanford, California: Stanford University Press, 1958.

Shefrin, F. Trends in Canada's Agricultural Trade Pattern. Canada Department of Agriculture, Economics Branch. Ottawa, December, 1965.

Sinclair, Sol. Common Agricultural Policy of the EEC and its Implications for Canada's Exports. Sponsored by the Canadian Trade Committee of the Private Planning Association of Canada. Montreal, 1964.

_____. "EEC's Trade in Agricultural Products With Non-member Countries," International Journal of Agrarian Affairs, Vol. IV, No. 5: Agriculture and the European Common Market IV (April, 1965).

Soenen, M. et Pelshenke, P. F. Problèmes Relatifs à la Qualité du Blé Tendre, de la Farine et du Pain dans les Pays de la C.E.E., deuxième partie. Serie Agriculture, C.E.E., Etude No. 16. Bruxelles, 1965.

Statistical Office of the European Communities. Basic Statistics of the Community. 2nd ed. Brussels, 1965.

Tintner, Gerhard. Econometrics. New York: John Wiley and Sons, Inc., 1952.

Treaty Establishing the European Economic Community.

United Nations. Statistical Yearbook. Annual.

_____. Yearbook of International Trade Statistics. Annual.

_____. Yearbook of National Accounts Statistics. Annual.

United Nations, Food and Agriculture Organization. Agricultural Commodities and the European Common Market. Commodity Policy Studies - 13. Rome, 1962.

_____. "Agricultural Commodities - Projections For 1970," Commodity Review - 1962 - Special Supplement. Rome, 1962.

_____. International Trade Yearbook. Annual. Rome.

_____. "Long-term Developments and Contrasts in the Wheat and Coarse Grain Situations," Monthly Bulletin of Agricultural Economics and Statistics, Vol. XV (January, 1966).

_____. National Grain Policies. Annual. Rome.

_____. Production Yearbook. Annual. Rome.

_____. "Report on World Grain Situation," Monthly Bulletin of Agricultural Economics and Statistics, Vol. XV (May, 1966).

_____. "The Common Grain Policy of the European Economic Community," Monthly Bulletin of Agricultural Economics and Statistics, Vol. XIV (March, 1965).

_____. The State of Food and Agriculture, 1965: Review of the Second Post-War Decade. Rome, 1965.

_____. World Grain Trade Statistics (Exports by Source and Destination). Annual. Rome.

_____. World Crop Statistics, 1948-64. Rome, 1966.

United States Department of Agriculture. Analysis of Grain Export Programs. A Report of the Technical Committee on Grain Exports. Miscellaneous Publication No. 905. Washington, May, 1962.

_____. The World Grain Trade. Annual. Washington.

United States Department of Agriculture, Economic Research Service. Agricultural Policies of Foreign Governments Including Trade Policies Affecting Agriculture. Agriculture Handbook No. 132, revised. Washington, March, 1964.

_____. Agricultural Trade of the European Economic Community 1959-1964, A Statistical Reference. Foreign Report No. 165. Washington, November, 1966.

_____. Italian Agriculture: Projections of Supply and Demand in 1965, 1970, and 1975. ERS-Foreign-68. Washington, January, 1964.

_____. The Grain-Livestock Economy of the European Economic Community: A Compendium of Basic Statistics. Statistical Bulletin No. 351. Washington, November, 1964.

_____. The Grain-Livestock Economy of the European Economic Community: A Historical Review, 1951-63. Foreign Agricultural Report No. 31. Washington, July, 1966.

_____. Statistics on the European Economic Community. Vol. I; Agricultural Trade and Finance. ERS-Foreign-43. Washington, December, 1962. Supplement (May, 1964).

_____. Statistics on the European Economic Community. Vol. II; Agricultural Production and Consumption. ERS-Foreign-46. Washington, July, 1963.

_____. The Western Europe Agriculture Situation. Annual. Washington.

_____. The World Agricultural Situation: Review of 1965 and Outlook for 1966. Foreign Agricultural Economic Report No. 28. Washington, December, 1965.

United States Department of Agriculture, Foreign Agricultural Service. Canadian Wheat Marketing. FAS-M-140. Washington, July, 1962.

_____. Common Market Grain Production and Trade Statistics, 1950-51 Through 1961-62. Washington, March, 1963.

_____. France's Key Role in the Grain Sector of the European Common Market. FAR-122. Washington, April, 1963.

_____. The European Common Market and U.S. Agriculture. Washington, December, 1962.

University of Illinois, Department of Agricultural Economics, Agricultural Experiment Station. Illinois Agricultural Economics. Semi-annual. Urbana, Illinois.

Volin, Lazar and Walters, Harry. Soviet Grain Imports. U.S. Department of Agriculture, Economic Research Service, ERS-Foreign-135. Washington, September, 1965.

Vredeling, Hendrikus. "The Kennedy Round and Agriculture," Common Market Farm Report, No. 30 (March 20, 1967).

Warden, Thomas A. U.S. Agriculture's First Year Under EEC Variable Import Levies. U.S. Department of Agriculture, Economic Research Service, ERS-Foreign-134. Washington, July, 1965.

Waugh, Frederick V. Demand and Price Analysis, Some Examples from Agriculture. U.S. Department of Agriculture, Economic Research Service, Technical Bulletin No. 1316. Washington, 1964.

Wilgress, L. D. The Impact of European Integration on Canada. Sponsored by the Canadian Trade Committee of the Private Planning Association of Canada. Montreal, 1962.

Wold, Herman in association with Juréen, Lars. Demand Analysis - A Study in Econometrics. New York: John Wiley and Sons Inc., 1953.