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March 30, 1990

VALUE OF AGRICULTURE AND FOOD SECTORS TO CANADIANS

J.A. MacMillan and L.M. Arthur[1]

Introduction

Why are measurements of **value** important? Why focus on agriculture and food sectors? Examination of changing values of critical agriculture and food sector variables is necessary for assessing performance of public policies, agricultural education programs, and other inputs into the agri-food system. We suggest that a systems approach is a useful concept for analyzing agri-food policy and measuring the value of outputs of the system. In addition the systems approach is useful for assessing alternative strategies for: 1) increasing the value of agriculture and food sectors to Canadians and 2) increasing the contributions of the agri-food system to the Canadian economy.

From a systems analysis point of view it is important to draw boundaries around the players in the agri-food system and assess the impacts of their activities relative to generally accepted policy goals for the system (see, for example, Figure 1). In this context government policies and regulations are major inputs to the system and have measurable impacts in terms of increasing the **value** of system outputs. We would also like to think that universities and faculties of agriculture across Canada provide inputs in terms of teaching, research and service which have a measurable impact on the output of the system. For example, increasing the entrepreneurial skills of all players in better assessing the market and nonmarket signals in the agriculture and food system will increase the value of the goods and services produced by players in the system.

A strategic planning process involves determining goals and objectives, as well as a means for assessing strategies to achieve the goals. A critical dimension relates to the annual monitoring of activities and programs relative to the desired objectives. Monitoring and evaluation of alternative programs can be based on the forecast of "value" generated per million dollars of program expenditure. For example, it is indicated in the agricultural policy review report[2] that by improving management skills and lowering costs, substantial increases in farm income can be expected. If costs can be reduced permanently by 15 percent, a saving results of $1.5 billion or 30 percent of the 1988 Canadian realized net farm income.

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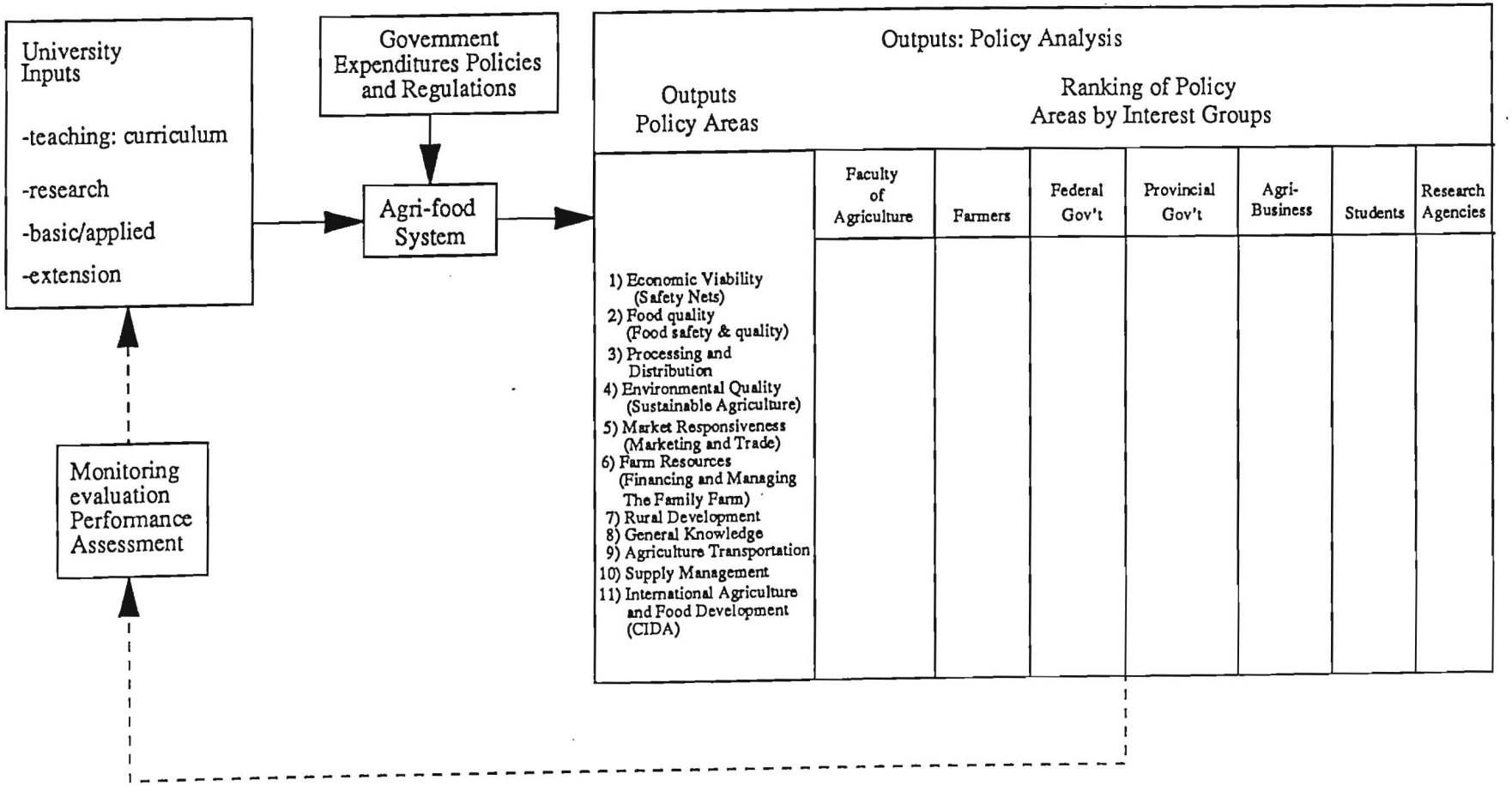
[1] Professors, Department of Agricultural Economics, University of Manitoba. Prepared for presentation to the Canada Grains Council, 21st Annual Meeting, Winnipeg, April 3, 1990.

[2] Growing Together, Agriculture Canada, Ottawa: minister of Supply and Services, 1989, p. 30.

Figure 1
Systems Analysis
Framework for Organizing
Strategic Planning in Agriculture



Producer net income can also be increased by research but a framework for assessing future impacts of alternative agricultural research project investments on net income is required[3]. Subsidies have been the major Canada agricultural expenditures program directed to resolving farm income problems.

Investments in sustainable agriculture projects and improving environmental quality can also be considered as long term investments in agriculture. It is possible that a redirecting of subsidies dollars to financial management training, research and sustainable agriculture projects with high producer net income impacts would significantly increase the "value" of the agri-food system and not make current subsidy recipients worse off.

Some agricultural scientists argue that efforts to describe and quantify the values of the inputs to and outputs from an agricultural and food system are too mechanistic and perform no useful function. For example, discussions are underway in Manitoba regarding the usefulness of strategic planning within the Faculty of Agriculture and the Manitoba Agricultural Services Coordinating Committee (MASCC). MASCC's function is to provide advice to the Deputy Minister, Manitoba Department of Agriculture, from Agriculture Canada, the University of Manitoba's Faculty of Agriculture, and professional committees. We (as economists) think it is important to have an overview of the agriculture and food system, such as summarized in Figure 1, to design effective strategies for improving the **value** of Manitoba's agriculture and food sectors to Manitobans and Canadians.

The Government of Manitoba and the University of Manitoba Faculty of Agriculture contributions to the agri-food System can be summarized by the broad "policy areas" listed in Figure 1. It is interesting to examine the list of eight output/policy areas suggested by the MASCC subcommittee relative to the seven policy areas being examined by Agriculture Canada in its Agri-food Policy Review.

The MASCC subcommittee suggested the following areas: economic viability, food quality, processing and distribution, environmental quality, market responsiveness, farm resources, rural development, and general knowledge. Discussions within the University of Manitoba Faculty of Agriculture resulted in the addition of "general knowledge" to Agriculture Canada's priorities. If universities are considered to be an important part of the agri-food system, the pursuit of "knowledge" is an important policy area. The policy area of "rural development" was suggested by the MASCC subcommittee but it does not appear on the Agriculture Canada list of policy areas under the Agri-food policy review; however, rural sensitivity is one of the Minister's four "pillars" on which the Agriculture Canada policy is built. Supply management was on the Agriculture Canada list but not on the MASCC policy area list.

MASCC then provides a collective process for determining priorities and strategies within each policy area. The assessment of performance or "value" will vary depending on the interest group completing the ranking of policy outputs. For example, University Faculties

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[3]MacMillan, J.A., A. Kolody, R.M.A. Loyns, and P.V.B. McVetty, "Economic Evaluation of WGRF Investments," Canadian Journal of Agricultural Economics, March 1990 (In Press).

of Agriculture place a "high value" on contributions to knowledge, in contrast to farmers and agribusiness who place a "higher value" on economic viability. Rural communities would clearly emphasize rural development goals. In addition, there is considerable concern in rural communities with respect emphasizing the operation of agri-food system in elementary and high school curricula. For example, "Agriculture in the classroom" committees have been set up across Canada to respond to this need.

An attempt will be made in the paper to outline a framework for measuring the value of the agriculture and food sector to Canadians. The framework must accommodate short-term annual snapshots of the linkages between the agri-food system and the Canadian economy and government policies. In addition, a longer term view is necessary to summarize impacts of business cycles, interest rate, commodity price cycles, and even non-market activities on the agri-food system.

Measuring Value

The theories underlying price or **value** in a market and a nonmarket context are fundamental to the "science of economics." Economic value is determined by the interplay of demand and supply forces. The willingness of consumers to pay for additional increments of scarce outputs of the agriculture and food sector. Investors and suppliers respond to increasing market values of individual commodities by capital expansion in production of profitable commodities and by exiting from production activities which are creating losses. Public policies and regulations will also help determine the "value of the goods and services" produced by the agriculture and food sectors.

There are three critical dimensions to determining the aggregate value of the agriculture and food system in today's economic-political-social environment: 1) assessing the static annual agriculture and food sector linkages which contribute to changing short-term annual income levels in Canada, 2) assessing changing demand and supply trends affecting the longer term, dynamic contributions of the agriculture and food sectors, and 3) valuing the non-market contributions of the agriculture and food sector to broader measures of social welfare in Canada relative to the costs.

Value in an economic context for private goods is determined by multiplying the price times the quantity of the physical unit being traded. For public goods, however, it is not possible for individuals to purchase a unit in the market place; the political process determines the amount of public revenue allocated to public goods such as national defense and the consequent level of defense services provided. Similarly, maintaining the "rural life style" in a Canadian context has social values determined by philosophical and political rather than market processes.

Determining the nonmarket values associated with the entire agri-food system involves establishing indicators of performance with respect to activities such as agricultural education, rural development, and international agriculture and food development programs of the Canadian International Development Agency (CIDA), in addition to the nonmarket areas identified in the Agriculture Canada agri-food policy review (e.g., food quality, environmental quality).

Static View of Annual Contributions to Canadian Income: Market Values

Major players in the agriculture and food system (Figure 1 & 2) include: farmers, farm suppliers, shippers and wholesalers, food processors, exporters, retailers, consumers and the accommodation and restaurant sector. Financial performance on a aggregate sectoral basis in Canada is measured by annual national income and product accounts. Statistics Canada produces annual commodity and sectoral estimates of gross output, income and employment. For example, the estimates for 1985[4] indicate that farm sector income (calculated as returns to labour and management) including subsidies amounted to $8 billion, with subsidies contributed $2.2 billion to the total (Statistics Canada). If the operating surpluses (additional returns to management) of $5 billion are added to farm incomes, and subsidies subtracted, we have a measure of "value added" in the Canadian economy by farmers ($10.8 billion for 1985). The income and value added is created by 513,394 farmers and workers in the agriculture sector.

From a national accounts point of view, the $36.3 billion gross output in the food processing sector represents the largest source of income, value added and employment in the agriculture and food sector (Statistics Canada, 1985). Income and value added in the food processing sector is created by 191,550 workers. The feed industry in Canada had total gross output of $3.5 billion in 1985 (Figure 3). The largest output component is the $1.9 billion output sold as feed to farmers with some output being sold to households and the export market.

Total income and value added from all Canadian sectors are "balanced" with the total final value of goods and services produced. The agriculture and food sectors' contribution to final demand in the Canadian economy can be measured by personal consumption expenditures on food, $33 billion, farm commodity exports, $4.8 billion, and processed agricultural product exports, $3.1 billion. Output from the fertilizer, farm machinery, grain handling and storage equipment, and agricultural service sectors should be measured and included in the total value of agri-food system output.

Dynamic View of Contributions to Long Term Income Growth: Market Values

From a dynamic or long term perspective, future growth in income and output in the agri-food system (Figure 1) is dependent on the profitability of capital investments by farmers and agribusiness. Investments in the agriculture and food sectors on land, buildings, equipment,new technology and research are dramatically affected by business, interest rate, and commodity price cycle.

The Canadian and world economies are currently in one of the longest economic expansions in history. The previous trough in the business cycle occurred in 1982, as

Figure 2

[4] Most recent data available from Statistics Canada in unpublished form.

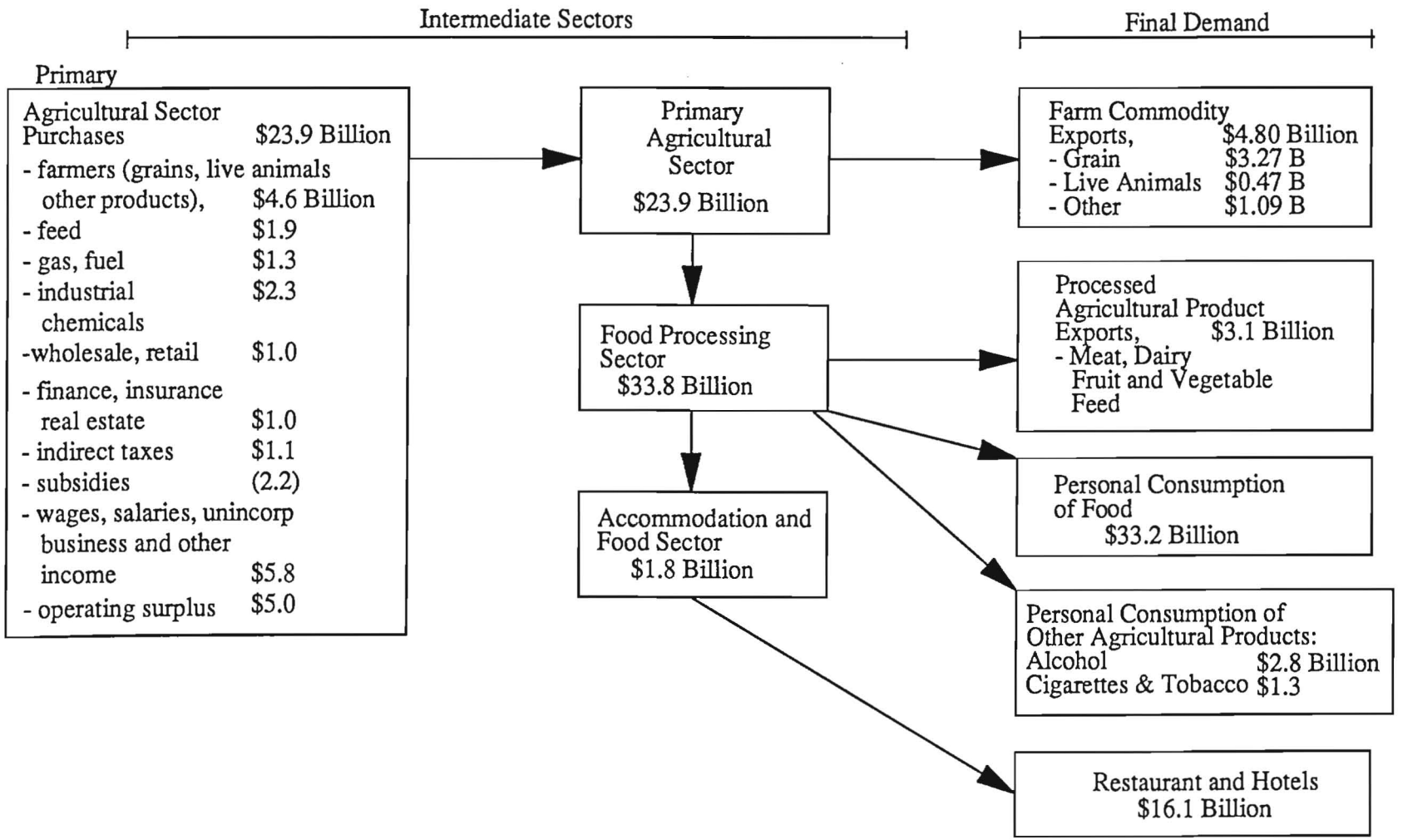

Figure 2

Value of Agriculture and Food in the Canadian Economy, 1985

Source: Statistics Canada, Input-Output Division, aggregation of unpublished data

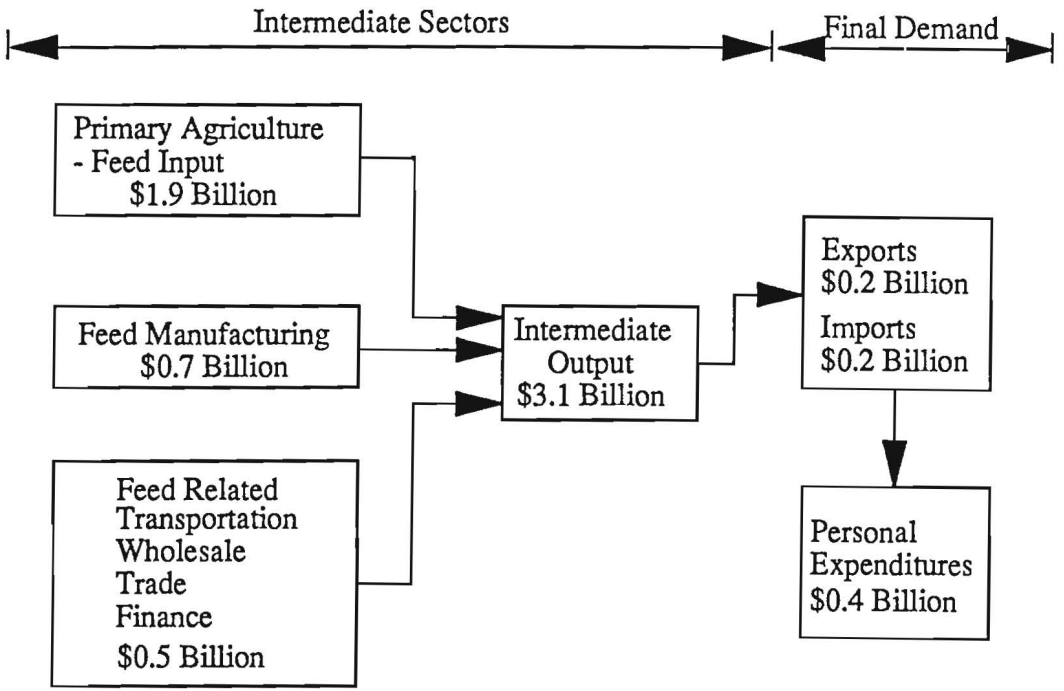

Figure 3
Value of Feed Industry Canada, 1985

Source: Statistics Canada, Input-Output Division aggregation of unpublished data

measured by two quarters of negative income growth in the Canadian and U.S. economies. Positive growth in income has occurred for the past 7 years. Most economic expansions last 3-5 years, although the 1961-70 expansion lasted 10 years. It is interesting to note that considerable historical analysis of U.S. and Canadian business cycles length, as well as trough and peak dates, has been completed. No comparable analysis has been completed for interest rates and agricultural commodities. Some analysis of cattle and hog cycles exists but wheat price cycles have received little attention.

In measuring the value of any asset it is critical to recognize the major swings in interest rates over the past cycle and the probability that the cycle may reoccur (Figure 4). Repetition of the interest rate cycle could result in another 22 percent bank demand note interest rate (the 1981 peak) sometime in the next few years. The importance of interest rate cycles to the agricultural sector is illustrated by events during the last cycle; a very large volume of agricultural assets suffered major writedowns due to the high interest rates of the early 1980's, the subsequent fall in farm commodity prices and drought.

With respect to commodity price cycles, the apparent long term decline in wheat prices from 1947 to 1968 (Figure 5) resulted in a low value of prairie grain assets, especially land. The dramatic increase in wheat prices, from just over $1 per bushel to over $4 in the early 1970's, and from $2 to $4 in the 1980's resulted in escalating prairie land prices. Some analysts believe that current land prices have bottomed at about 50% of the previous land price peak. Wheat farmers and agribusinesses should consider preparing long term financial and marketing plans for wheat prices fluctuating between $1 and $4 per bushel.

In the agribusiness sector investment plans are not only dramatically impacted by commodity and interest rate cycles but by the existence of major economies of size and efficiencies associated with new technology. Structural, technological and geographic rationalization of flour processing, meat processing, farm machinery and fertilizer manufacturing activities is occurring rapidly. New investments in plants of world scale size and technology may be required to achieve large volumes and low unit costs associated with survival on an international basis.

Profitability of capital investment projects is determined by comparing the present value of expected future net income with the cost of the project. Farmers and agribusiness firms can be expected to select projects with high profit/cost ratios. From an aggregate agri-food system perspective, greater employment and value added is associated with investments or subsidies in the food processing sector than with investments or subsidies in primary agriculture. For example, a world scale food processing plant might generate a satisfactory profit/cost ratio only if producers and processors share the costs and profits and jointly agree on meeting unique, market-determined volume and input requirements. A consortium organization of producers and processors may provide a means of achieving similar benefits with limited public sector market interference.

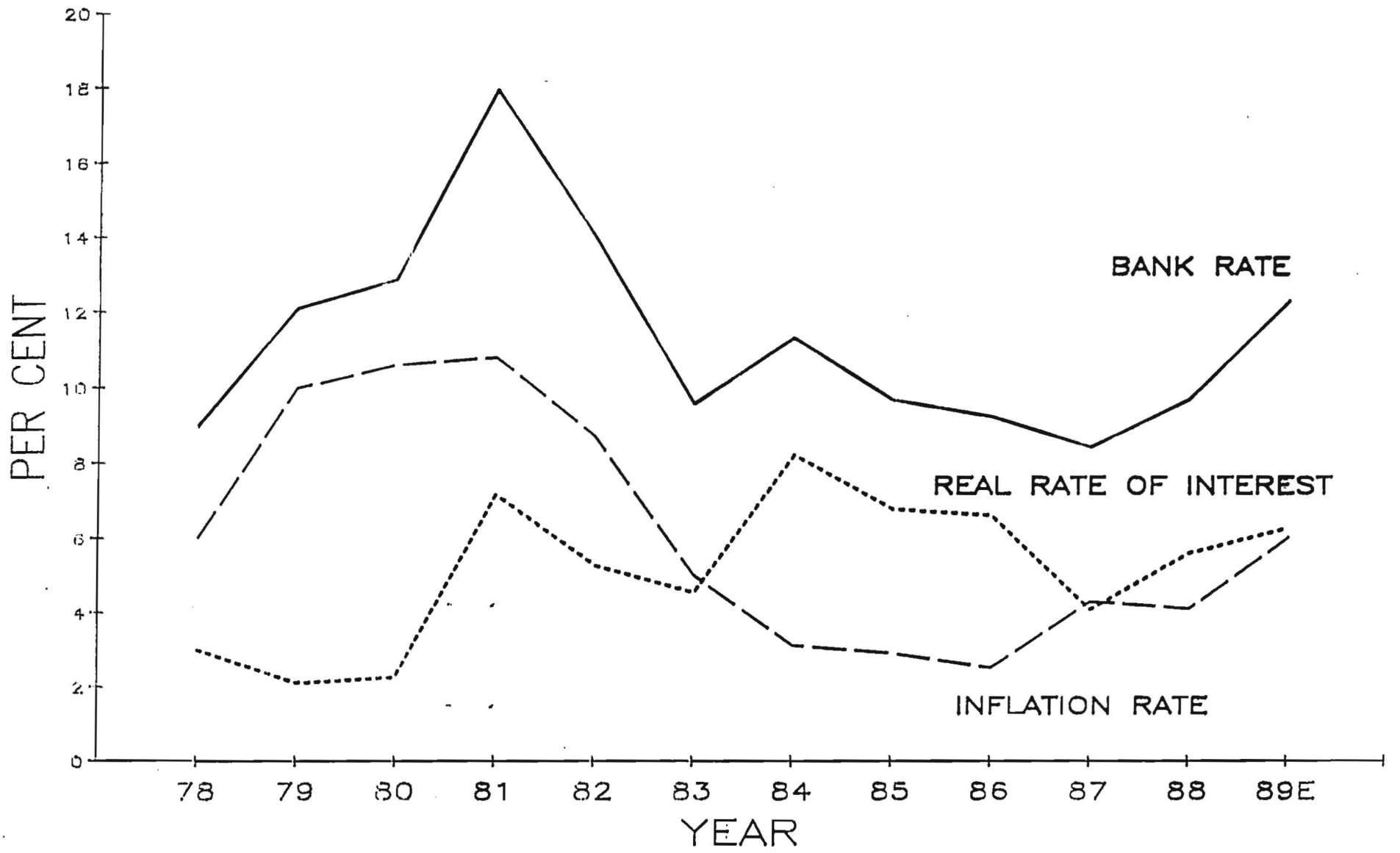

Figure 4

Manitoba Agriculture, J. Honey.

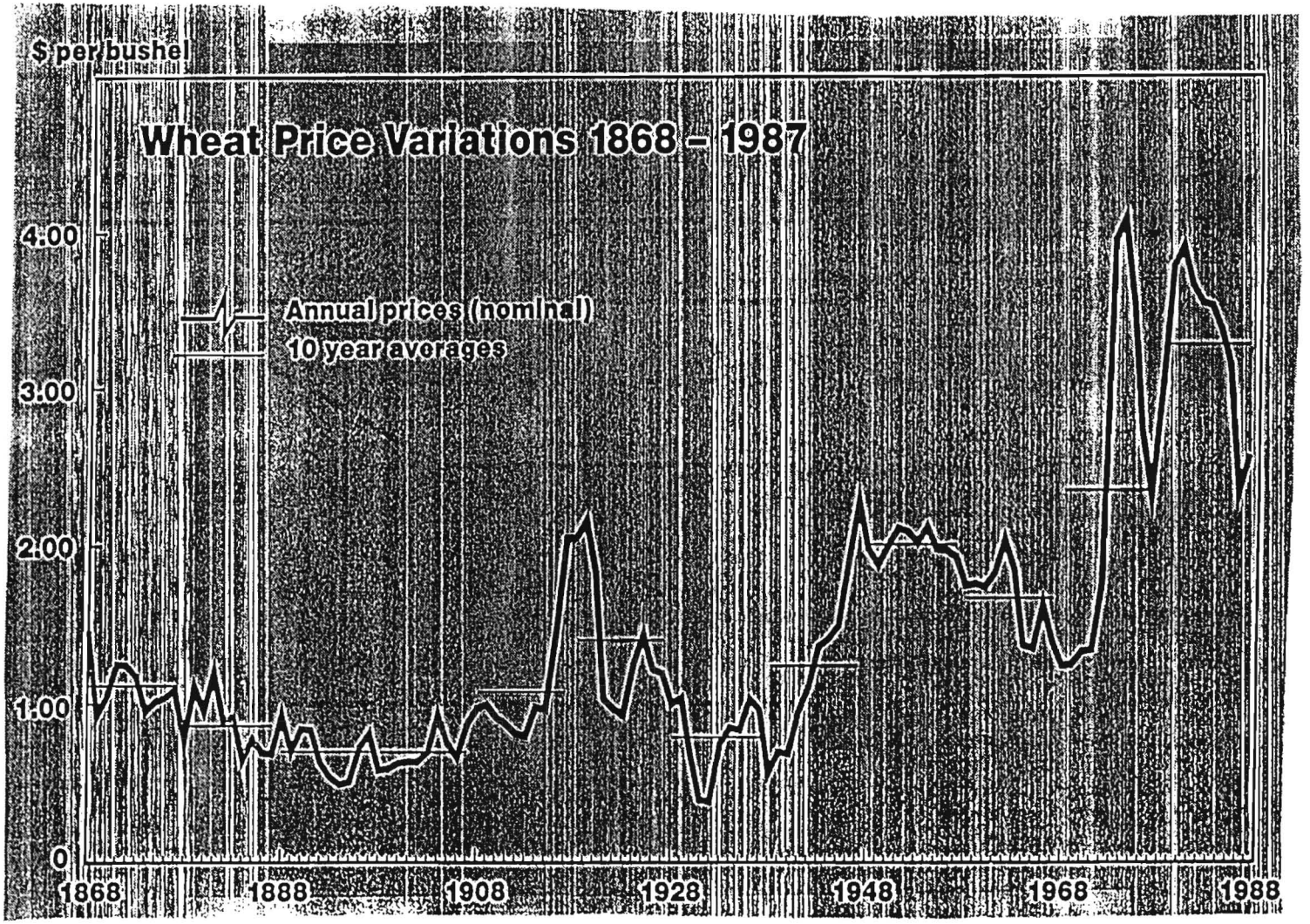

Figure 5

Source: Choices, The Magazine of Food, Farm, and Resource Issues, First Quarter 1989, February 1989, p. 22.

Multiplier Effects

To illustrate the multiplier benefits associated with exports of primary agricultural products versus processed products consider the impacts on gross output, value added and employment of $100 million exports of wheat or live animals from Canada. The initial or direct impact on farm sector production has additional or indirect impacts on agriculture-connected industries resulting in a multiplier effect. The impacts are greater if the live animals or grain is exported as processed food products; the impact should then be calculated for $300 million processed food output because the mark-up margin of processed product gross output value to primary product input value is 3:1[5]. Using the 1985 Canadian input-output model and the Agriculture Canada simulation framework,[6] the following preliminary multiplier estimates have been calculated:

1. $100 million wheat exports generate $240 million gross output 3.4 thousand employment, and $103 million value added;

2. $100 million live animals exports generate $28 million gross output, 4.2 thousand employment and $116 value added;

3. $300 million food processing generates 852 million gross output 9.8 thousand employment and $336 million value added.

The multipliers for food processed sectors are larger than for primary commodities, but not by a substantial increment. The large additional impact comes from the incremental activity involved in adding value to the primary grain or livestock prior to export. Input-output multiplier calculations existing excess capacity is required to meet new export requirements. If excess capacity does not exist prices increases instead of new output will result.

The additional value added associated with food processing activities results from the primary agricultural production associated with food processing. Given the limitations to increasing domestic consumption of processed food commodities in Canada, the primary opportunity for increasing the output of Canadian food processing industries is associated with increasing exports or substituting Canadian processed food products for imported processed product.[7] In this context there is a need to review the potential for increasing exports of processed food products and related agricultural input industry products. In 1987 prairie region exports of processed grains, special crops and meat products totalled $271 million out of a total agriculture and food product exports of $4.7 billion, only 6 percent. It is also important

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[5] The Input-Output Structure of the Canadian Economy, Statistics Canada, Ottawa: Minister of Supply and Services, 1988, p. 130.

[6] P. Thomasin and A. Andison, 1987. Agriculture Canada's Input-Output Model. Agriculture Canada Working Paper 6/87, Policy Branch, April, 1987.

[7] Sometimes the imported processed product uses Canadian raw product; examples include Italian pasta products and American canola oil.

to point out that agricultural product exports were almost 50% of total Manitoba exports, 66% of Saskatchewan exports, and 15% of Alberta's Exports (Appendix).

For Canada, live animals, food, feed, beverages and tobacco exports totalled $10.6 billion in 1987, which represented 9 percent of total Canadian exports. For Canada, processed food products are 39 percent of total primary and processed food products in 1985 (Figure 1). Consideration should be given to the job creation impacts per million dollars of public sector invested in food megaprojects compared to the job creation impacts per million dollars of public sector investment in oilsands, heavy oil upgrading, electricity and other energy megaprojects.

Nonmarket Value of Agriculture and Food to Canadians

Agricultural education, rural development and international agricultural development are clearly areas where the value of the outputs of the agri-food system are determined by nonmarket or political rather than market signals. Education, training, research and extension activities of the elementary, high school, community colleges and universities in Canada represent major public expenditures but often ignored in agricultural policy discussions. Efforts need to be made to integrate such programs into the more traditional, commodity-oriented activities of Agriculture Canada and provincial departments of agriculture.

Rural development can be viewed as an important policy area in a Canadian context. Canadian taxpayers have shown a willingness to transfer large sums of public dollars to rural communities and farmers to maintain and develop rural regions; a recent example is the apparent public support of the decentralization plan of the provincial government. This is not the case in the United States. Many rural regions have remained in a poverty classification for decades. Analysis indicates that rural development and massive transfer programs in Canada have been successful in moving some rural areas out of the depressed region class.[8]

International agricultural development expenditures by the CIDA, universities, agribusiness and nongovernmental organizations represent a major contribution of Canada's agriculture and food sector to the rural development and food security needs of developing countries. CIDA's policy statements highlight the orientation of development activities to the mutual benefit of developing countries and Canada. The spinoffs to Canada from such activities are large. Food aid and agricultural development projects have substantial multiplier effects on the agri-food system and related sectors. In addition, a major focus of such activities is to facilitate development in low income areas of the world, and thereby increase the world's social welfare.

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[8]J.A. MacMillan and E.A. Poyser, "Canadian Rural Regional Development," pp. 199-217. In Towards Rural Development Policy to the 1990's: Enhancing Income and Employment Opportunities. A Symposium sponsored by the Joint Economic Committee of Congress and Congressional Research Service, WAshington, D.C., September 11, 1989.

Increasing the general knowledge of agriculture by students in elementary, high schools and secondary school is being emphasized by Agricultural in the Classroom committees across Canada. Public expenditures directed to increasing agricultural knowledge indicates the existence of an non-market value of the agri-food system if the system is defined to include educational institutions. The market wage paid to professional agrologists can be viewed as a return to investments by public sector educational institutions and as well as students in agricultural education.

Conclusions

The current Agriculture Canada agri-food policy review would be facilitated by a systems analysis framework for organizing strategic planning in the Canadian agriculture and food sectors. The value of the agriculture and food sectors can be assessed with respect to annual snapshots of market contributions to Canadian income. The framework can be used to assess the impact on Canadian net farm income per million dollars of public program expenditure allocated to alternative programs such as financial management training) research and subsidies. A longer term view is required to accommodate business, interest rate and commodity price cycles. In addition, a nonmarket focus is required for evaluation of a substantial portion of the value of the Canadian agri-food system (Figure 1).

APPENDIX

Prairie Region Agriculture Export Data

Table 1
Summary 1987 Agricultural Exports
($million)

	Manitoba	Saskatchewan	Alberta	Prairie Region
A. Grains & Oilseeds				
Primary	942.4	2,290.4	1,101.3	4,316.1
Processed	65.2	30.3	124.7	220.2
Total	1,007.6	2,320.7	1,226.0	4,554.3
B. Special Crops				
Primary	77.1	50.4	33.0	160.5
Processed	20.4	19.2	11.2	50.8
Total	97.5	69.6	44.2	211.3
C. Meat Products				
Primary	57.6	16.9	124.2	198.7
Processed	100.2	75.2	219.8	395.2
Total	157.8	92.1	344.0	593.9
D. Ag/Industry				
Fertilizer	14.7	838.0	174.2	1,026.9
Farm Machinery	93.7	31.6	15.2	140.5
Total	108.4	869.6	189.4	1,167.4
Total	1,371.3	3,352.0	1,803.6	6,526.9

Source: Statistics Canada. International Trade, Domestic Exports by Province of origin, by class and country, 1987. Exports are defined by classes greater than $500,000.00 for exports from individual provinces to foreign countries: exports to other provinces are excluded from the totals. Cattle produced in the prairies but exported from B.C. export points are excluded.

TABLE 2
AGRICULTURAL EXPORTS 1987 PRAIRIE REGION

COMMODITY	MANITOBA	SASKATCHEWAN ($million)	ALBERTA		
A. Grains & Oilseeds					
Primary					
Wheat	643	1841.2	677		
Other Grains	103.6	184.3	222.3		
Rapeseed	94.5	203.6	190		
Flax & Mustard	99	61.3	12		
Sunflower Seed	2.3				
total		942.4	2290.4	1101.3	
Processed					
Flour, Meal, Oil, Feeds,Bev		65.2	30.3	124.7	
B. Special crops					
Primary					
Potato	1.5		2.1		
Dried peas, beans etc.	45.7	27.5	5.8		
Alfalfa	2.1	1.2			
Grass Seeds	21.3	7.8	25.1		
Birdseed	6.5	13.9			
total		77.1	50.4	33	
Processed					
Potato Products	11.9		0.6		
Honey	7.7	1.7	3.8		
Dehydrated Alfalfa	0.8	17.5	6.8		
total		20.4	19.2	11.2	
C. Meat Products					
Primary					
Beef	26	14.8	106.8		
Swine	28.5	1.3	14.9		
Other, sheep, poultry,bees	3.1	0.8	2.5		
total		57.6	16.9	124.2	
Processed					
Food Prod-Beef	16.2	8.7	70.3		
-Pork	67.8	62.9	95.5		
-Other	8.2	3.6	37.8		
Non-Food,hides, semen	7.9		16.2		
total		100.1	75.2	219.8	
D. AG/INDUSTRY					
Fertilizer	14.7	838	174.2		
Farm Machinery,parts,acc	93.7	31.6	15.2		
total		108.4	869.6	189.4	
TOTAL AG. EXPORTS		1371.2	3352	1803.6	6526.9

Source: Statistics Canada. International Trade, Domestic Exports by Province of origin, by class and country, 1987. Exports are defined by classes greater than $500,000.00 for exports from individual provinces to foreign countries: exports to other provinces are excluded from the totals. Cattle produced in the prairies but exported from B.C. export points are excluded.

TABLE X-4. EXPORTS BY PROVINCE OF ORIGIN

TABLEAU X-4. EXPORTATIONS PAR PROVINCE D'ORIGINE

thousands of dollars - milliers de dollars

PROVINCE OF ORIGIN / PROVINCE D'ORIGINE	YEAR / ANNEE	Live Animals / Animaux vivants	Food, Feed, Beverages And Tobacco / Aliments, provendes, boissons et tabacs	Crude Materials, Inedible / Matières brutes, non comestibles	Fabricated Materials, Inedible / Matières travaillées, non comestibles	End Products, Inedible / Produits finis, non comestibles	Special Transactions, Trade / Transactions spéciales commerciales	Total Domestic Exports / Total exportation nationales	Total Re-Exports / Total réexportations
		JANUARY TO DECEMBER - JANVIER A DECEMBRE							
Newfoundland	1985	5	366,511	41,473	395,777	8,813	9,341	821,920	7,082
Terre-Neuve	1986	39	557,471	30,154	390,856	7,644	17,617	1,003,781	14,658
	1987	8	613,914	413,688	472,614	8,442	590	1,509,255	8,596
Nova Scotia	1985	1,862	590,392	126,263	492,244	439,776	10,395	1,660,930	29,607
Nouvelle-Ecosse	1986	1,390	721,594	123,467	549,445	680,834	8,177	2,084,908	35,624
	1987	4,739	804,429	145,000	641,338	518,089	10,795	2,124,390	49,364
Prince Edward Island	1985	1,369	95,370	4,121	3,195	8,571	104	112,730	338
Ile-du-Prince-Edouard	1986	271	124,485	4,230	1,422	15,713	73	146,195	405
	1987	321	134,380	5,210	3,415	16,721	43	160,091	877
New Brunswick	1985	1,491	363,759	157,836	1,588,977	58,719	5,549	2,176,329	22,140
Nouveau-Brunswick	1986	1,046	407,263	137,048	1,995,929	60,913	5,089	2,607,888	21,223
	1987	634	453,085	166,218	2,260,420	73,062	5,172	2,958,591	18,861
Quebec	1985	23,627	1,010,365	2,418,288	8,711,139	6,789,317	65,008	19,017,744	697,885
Québec	1986	15,648	1,124,149	2,199,534	9,245,904	7,235,374	56,552	19,877,162	917,563
	1987	23,337	1,052,837	1,689,234	10,161,620	6,811,067	74,414	19,812,509	1,000,285
Ontario	1985	185,627	1,473,842	1,260,162	13,300,687	40,759,872	157,139	57,137,330	1,979,615
Ontario	1986	131,188	1,686,237	1,400,408	14,251,430	42,899,683	118,102	60,487,049	2,106,045
	1987	114,415	1,699,726	1,666,159	13,246,576	42,198,951	129,947	59,055,775	2,035,500
Manitoba	1985	76,490	937,814	330,417	595,049	582,469	22,855	2,545,094	73,379
Manitoba	1986	52,160	883,505	353,269	642,499	505,854	25,252	2,462,539	86,295
	1987	58,467	996,303	357,009	654,169	784,676	24,179	2,874,803	89,755
Saskatchewan	1985	42,840	2,328,603	1,836,328	1,077,549	98,428	2,652	5,386,401	18,041
Saskatchewan	1986	18,273	1,984,796	1,172,809	1,064,963	82,045	1,413	4,324,300	22,464
	1987	17,754	2,188,040	1,557,493	1,230,787	90,575	1,256	5,085,906	15,697
Alberta	1985	106,057	1,289,895	9,442,644	2,439,255	354,576	41,679	13,674,104	189,018
Alberta	1986	115,705	1,130,117	6,656,043	2,132,803	408,858	40,747	10,484,274	218,003
	1987	125,510	1,208,915	7,453,023	2,527,563	423,490	44,196	11,782,697	162,655
British Columbia	1985	27,278	733,930	3,775,155	8,237,502	768,092	50,133	13,592,091	310,903
Colombie Britannique	1986	12,840	890,088	3,141,743	8,116,516	793,385	43,548	12,998,120	508,134
	1987	20,810	1,074,499	3,134,451	10,539,941	1,027,949	37,251	15,834,901	238,489
All provinces *	1985	466,690	9,190,492	19,405,673	36,843,586	49,873,642	365,029	116,145,111	3,329,400
Ensemble des provinces *	1986	338,874	9,510,309	15,328,220	38,302,321	52,690,815	317,139	116,587,645	3,933,191
	1987	366,049	10,226,274	16,797,304	41,741,984	51,953,555	328,348	121,413,514	3,620,307

Source: Summary of Canadian International Trade, December 1987, Statistics Canada 65-001, Monthly. Reexports are exports of goods of foreign origin which have not been materially transformed in Canada (including goods withdrawn for exports from bonded customs warehouses). Total exports are the sum of Domestic Exports and Reexports.

Domestic exports include goods grown, extracted or manufactured in Canada (including goods of foreign origin which have been materially transformed in Canada).