

IMPACT OF SELECTED FEDERAL COST RECOVERY INITIATIVES ON THE AGRI-FOOD SECTOR

Economic and Policy Analysis Directorate
Policy Branch

September 1998

IMPACT OF SELECTED FEDERAL COST RECOVERY INITIATIVES ON THE AGRI-FOOD SYSTEM

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This report was produced by the Economic and Policy Analysis Directorate, Policy Branch,
Agriculture and Agri-Food Canada.

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To obtain additional copies, contact:

Information Production and Promotion Unit
Economic and Policy Analysis Directorate
Policy Branch
Agriculture and Agri-Food Canada
Ottawa, Ontario
K1A 0C5
Tel: (613) 759-7443
Fax: (613) 759-7034
E-mail: ipp@em.agr.ca

Electronic versions of EPAD publications are available on the Internet at: www.agr.ca/policy/epad

Publication 1985/E

ISBN 0-662-27236-6

Catalogue A22-181/1998E

Project 98067r

Aussi disponible en français sous le titre de :

*RÉPERCUSSIONS DE CERTAINES INITIATIVES FÉDÉRALES DE RECOUVREMENT DES
COÛTS SUR LE SECTEUR AGROALIMENTAIRE*

Acknowledgements

This report was made possible through the efforts of many people, particularly the members of interdepartmental and industry advisory committees. We would like to acknowledge and thank the following people and associations for their contributions.

Industry Advisory Committee

Atlantic Farmers' Council
Canada Grains Council
Canadian Cattlemen's Association
Canadian Dehydrators Association
Canadian Federation of Agriculture
Canadian Feed Industry Association
Canadian Horticulture Council
Canadian National Millers' Association
Canadian Pork Council
Canadian Poultry & Egg Processors Association
Canadian Produce Marketing Association
Canadian Seed Growers Association
Canadian Seed Trade Association
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Office of the Auditor General
Pest Management Regulatory Agency
Policy Branch, AAFC
Prairie Farm Rehabilitation Administration
Privy Council Office
Transport Canada
Treasury Board of Canada Secretariat
Research Branch, AAFC

Project Team

Brian Paddock Project Leader

Analysis

Cameron Short	Principal Investigator and Author
Ravinderpal Gill	Analytical Support
John Giraldez	Analytical Support
Gary Fisher	Farm Level Analysis
Robert Koroluk	Industry Level Analysis
Peter Chen	Industry Level Analysis

Project Management

Robin Chiponski	Project and Services Coordinator
Catherine Clarkin	Logistics Support
JoAnne Provost	Logistics Support
Kerry Best	Logistics Support
Susan Foget	Digital Design
Betty Lorimer	Editing Services
Charlene Saunders	Production Assistant
Matt Van Neste	Communications Services

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Acronyms

AAFC	Agriculture and Agri-Food Canada
AH	Animal Health
ARFAA	Atlantic Region Freight Assistance Act
ASRA	Assurance-stabilisation des revenus agricoles
BAP	Business Alignment Plan
BIT	Business Impact Test
BQU	Basic Quota Units
BSE	Bovine Spongiform Encephalopathy
CALURA	Corporations and Labour Unions Returns Act
CAP	Common Agricultural Policy
CCG	Canadian Coast Guard
CFC	Chicken Farmers of Canada
CFIA	Canadian Food Inspection Agency
CGC	Canadian Grain Commission
CITT	Canadian International Trade Tribunal
CSI	Canadian Seed Institute
DEIP	Dairy Export Incentive Program
DFAIT	Department of Foreign Affairs and International Trade
ECU	European Currency Unit
EEP	Export Enhancement Program
FAIR	Federal Agriculture Improvement and Reform (US)
FPIB	Food Production and Inspection Branch
FF&V	Fresh Fruit and Vegetables
FIMCLA	Farm Improvement Marketing and Cooperative Loans Act
FPIB	Food Production and Inspection Branch
GH	Greenhouse
GRIP	Gross Revenue Insurance Program
GST	Goods and Services Tax
ISTA	International Seed Testing Association
LPG	Livestock and Poultry Grading
MFRA	Maritime Freight Rates Act
MH	Meat Hygiene
MISB	Market and Industry Services Branch
MNE	Multinational Enterprises
MNSF	Marine Navigation Service Fees
NAFTA	North American Free Trade Agreement
NISA	Net Income Stabilization Account
NTSP	National Tripartite Stabilization Program
OECD	Organization for Economic Co-operation and Development
OPP	Other Processed Products
PFC	Production Flexibility Contract
PFRA	Prairie Farm Rehabilitation Administration
PH	Plant Health
PMMRF	Pari-Mutuel Monitoring Revolving Fund
PMRA	Pest Management Regulatory Agency
PSE	Producer Subsidy Equivalent
RIAS	Regulatory Impact Analysis Statement
ROA	Return on Investments

RSE	Registered Seed Establishments
SIC	Standard Industrial Classification
TB	Treasury Board
USDA	US Department of Agriculture
WGTA	Western Grain Transportation Act
WTO	World Trade Organization

Executive Summary

This report provides a comprehensive assessment of the cumulative impact of selected federal cost recovery initiatives on the agri-food sector. The analysis was initiated in response to widespread interest in clarifying the direct impacts (amounts paid for government services) and the indirect impacts (effects on costs and prices) of all relevant cost recovery fees introduced by federal agencies and departments.

The scope of analysis excludes consideration of other changes in federal policies, changes in non-federal policies (such as provincial cost recovery activities, and foreign government initiatives), and any related effects on industry competitiveness. Neither does the analysis consider the value and the benefits of the services being cost recovered. Qualitative information in both these areas has been appended to this report, so as to provide a more complete context for consideration of the report findings.

From 1994-95 to 1997-98, cost recovery fees affecting the agri-food sector increased 28%, from \$109 million to \$139 million. The cost of services previously available from government but now provided by the private sector amounted to a further \$5 million.

In 1997-98, fees levied from within the agri-food portfolio were \$110 million, or 79% of total fees affecting the sector. The Canadian Grain Commission (CGC), the Canadian Food Inspection Agency (CFIA), and the Prairie Farm Rehabilitation Agency (PFRA) accounted for 46%, 30% and 11% of total portfolio fees, respectively. The remaining 21% of fees affecting the sector, totalling \$29 million, originated as follows: Transport Canada and related agencies (14%), Health Canada, particularly the Pesticide Management Regulatory Agency (PMRA) and veterinary drugs (4%), Fisheries and Oceans, particularly the Canadian Coast Guard (CCG) (3%), the Department of Foreign Affairs and International Trade (DFAIT) (less than 1%), and Industry Canada (less than 1%).

In 1997-98, 40% of these cost recovery fees were related to the provision of marketing services, primarily in the grains and oilseeds sector. Other services provided directly to farms and to processors each account for a further 13% of total fees. Cost recovery fees based on farm inputs, imports and exports contributed 10%, 6% and 16% to the total, respectively.

Where fees originate from, what services they are applied against, and who initially pays for the services are not always good measures of the final incidence of impact, as it is often possible to pass such costs either back to input suppliers or forward to customers. As such,

this analysis used conventional economic models to simulate agri-food production and marketing relationships. Cost recovery fees from all sources were identified with the specific economic activity affected, and then aggregated and expressed as a share of the price associated with that activity. Changes in prices and quantities resulting from the imposition of cost recovery fees were then determined. The final effects on individual industries and firms are comprised of the additional costs they bear directly because of the fees and indirectly because of changes in prices of both inputs and outputs.

Table 1 provides an overview of the estimated average impact of all relevant federal cost recovery initiatives on the agri-food sector. The impact of total adjusted fees on consumers (domestic and foreign) totals \$35 million, or 25% of all fees. Of the remaining \$103 million (75% of total fees), \$93 million (67%) impact at the farm level and \$11 million (8%) at the processing level.

Table 1: Impact of Cost Recovery on the Agri-food Sector

	Net Operating Income*			Share of Total Impact (%)
	Baseline (\$'000)	Impact (\$'000)	Impact (%)	
Cattle Farms	532,565	17,235	3.2	13
Hog Farms	265,627	2,349	0.9	2
Dairy, Poultry & Egg Farms	1,385,429	514	0.0	0
Grain & Oilseed Farms	2,506,051	62,672	2.5	46
Potato Farms	92,942	2,478	2.7	2
Other Farms	785,915	7,039	0.9	5
Red Meat Processing	291,113	9,888	3.4	7
Other Processing	1,298,773	779	0.1	1
Consumers, Others		34,589		25

* The baseline for net operating income is 1995.

Expressed as a percentage change in net operating income, the impact on the various industries that make up the agri-food sector ranges from virtually zero to 3.4%. The four most affected industries are red meat processors, cattle farms, potato farms and grain and oilseed farms.

Red Meat Processors

Cost recovery rates for this industry are relatively low, at approximately 15% of estimated costs of services, and cost recovery fees are a relatively new occurrence. The industry has virtually no capacity to pass on these costs to their input suppliers, nor to their customers. Estimated fees of almost \$10 million have the consequence of reducing average operating income by 3.4% (twice the average reduction for the entire agri-food sector).

However, this impact is very dependent on firm size. Generally speaking, large firms are very profitable, and are as a result, little affected by cost recovery; small and medium size firms tend to have low profitability, and are more significantly affected by cost recovery. As well, smaller firms have a smaller output base across which to prorate “fixed fee” charges. The considerable restructuring that is on-going in the industry and the absence of recent/current profitability data make further conclusions impossible.

Cattle Farms

Estimated fees of more than \$17 million represent, on average, a 3.2% reduction in net operating income (almost double the average impact on the entire agri-food sector).

However, most of these fees are for grazing cattle on community pastures in Saskatchewan and Manitoba. These services are only available in selected regions, and are used by farmers on a fully voluntary basis. Farmers in other regions, without such services, must pay the full ownership or rental costs of land used for grazing.

Potato Farms

While the average reduction of net operating income on all potato farms is estimated at 2.7% (well above the average reduction for the entire agri-food sector of 1.7%), for seed potato farms in New Brunswick and PEI the average reduction for large farms was as low as 1.6% of net operating income, while for small farms it ranged up to 7.5%.

In this case, cost recovery rates are relatively low, but the industry relies to a very high degree on a wide range of government services. Seed potato farms, in particular, are heavy users of government inspection services. These services appear to contribute significantly to successful domestic and export seed potato sales, and to the relatively high net operating incomes realized by seed potato growers.

Grain & Oilseed Farms

Estimated cost recovery fees paid by this industry total over \$62 million, more than three times the amount paid by any other single agri-food industry. These fees have been in place for some time; in fact, the total amounts paid have recently begun to decline. Expressed as a percentage of net operating income, the effect is a reduction of 2.5%.

Grain and oilseed farms use government services primarily associated with marketing and exports, and pay 100% of the cost of these services. This situation is not unlike that for most industries that utilize quality assurance systems delivered by governments.

The estimated average impact on all other agri-food industries is less than 1% of net operating income.

Chapter 1: Introduction

1.1 Objectives of the Report

Until recently Treasury Board (TB) guidelines for cost recovery consultation and impact analysis were limited to evaluating the effects of individual fees. However, both the agri-food industry and Parliament are concerned that, though the impacts of each individual cost recovery initiative might be small, the cumulative impact of several initiatives undertaken by different departments might have a significant impact on a particular sector of the economy.

In response to this concern, the TB mandated a cumulative impact analysis as an integral part of cost recovery implementation, as outlined in the TB's revised guidelines (April 1997). Agriculture and Agri-Food Canada (AAFC) is the first federal department to undertake this type of multi-departmental impact assessment¹.

The Economic and Policy Analysis Directorate (EPAD) of AAFC was subsequently asked to formulate a suitable methodology and undertake an analysis of the cumulative impacts of selected cost recovery initiatives.

This report is a comprehensive evaluation of the impact of cost recovery initiatives of all relevant federal departments and agencies on the agri-food sector. An Industry Advisory Committee and an Interdepartmental Advisory Committee guided the study. Cumulative cost recovery evaluation requires an open and consultative approach. This openness with stakeholders assures that the analysis encompasses the most significant cost recovery initiatives and the most potentially affected enterprises. Consultation with other departments facilitates data collection and interpretation and establishes a framework whereby program changes may be considered if the analysis reveals that this is appropriate. This approach conforms closely to the TB's revised directives for cost recovery and enables government to deal more effectively with cost recovery issues raised by stakeholders.

1. The Hickling report looked at the cumulative impact of cost recovery initiatives on commercial shipping for Transport Canada and the Department of Fisheries and Oceans.

1.2 Scope of the Analysis

The scope of this analysis is larger than previous impact assessments because:

- it includes both direct impacts (amount paid for government services) and indirect impacts (effects on costs and prices); and,
- it includes cost recovery fees of all federal agencies and departments affecting the agri-food sector.

Other changes in federal policy and the effects of changes in non-federal initiatives, such as provincial cost recovery activities, for example, are excluded.

The scope of the analysis is quite broad. At the same time, it is limited to evaluating the direct and indirect impacts of federal government cost recovery initiatives. The advantages of delineating the scope of the analysis in this way include:

- The scope corresponds with current TB definitions of cost recovery and mandate for cumulative impact analysis.
- There have been dramatic changes in many policies in recent years, but stakeholders have focused on just some recent cost recovery initiatives. The current scope of the analysis will facilitate government's response to these concerns.
- Industry and departments concerned were consulted and agreed with the current scope as a pragmatic compromise between a narrow analysis and a much larger, perhaps unworkable, assessment of all costs and benefits.
- The current scope of the analysis is very ambitious in terms of the requirements for data collection and analysis. Expanding the scope would make it more difficult to complete the analysis in a timely fashion.

In the course of the study a number of factors emerged which, while they are not part of cost recovery policy, add context which assist in understanding its impact and the response to it. One aspect of this relates to the benefits associated with cost recovery. Briefly, these include, in principle, a more client responsive delivery of services and the introduction of costs/prices into the factors that affect the demand for such services. A second aspect relates to the other policy adjustments which were occurring at the same time as cost recovery was being introduced. These include a reduction of overall government support for the sector, the introduction of the NAFTA and the WTO Agreement on Agriculture obligations, and changes in federal taxes and other regulations which may affect production and marketing costs. Cost recovery can be viewed as one of a number of initiatives to which the agri-food sector has had to adapt.

Following extensive discussions, both the Interdepartmental and Industry Advisory Committees agreed that issues beyond the scope of the analysis should be qualitatively outlined so that results could be interpreted from an appropriate contextual basis. The contextual information regarding other policy reforms is provided in Appendix A while that regarding the benefits of cost recovery, and related services is found in Appendix B.

1.3 Methodology

There are four stages in the analysis as illustrated in Figure 1.1. The first stage focuses on identifying the federal departments and agencies that have cost recovery initiatives which affect the agri-food sector.

The second stage involves the primary analysis of the cost recovery data of each department or federal agency. Fees are classified according to whether they are paid by the agri-food sector or other sectors. Within the agri-food sector, they are further desegregated to individual commodities. Also, they are classified according to the economic activity affected, that is, whether the fees are levied against production, export or import establishments. Fees on imports act like a tariff: they tend to 'protect' domestic producers at the expense of consumers. Fees on exports have the opposite effect, rather like a tariff levied by Canada's trading partners. Fees against establishments or production may raise costs, but are neutral in terms of trade.

Figure 1.1 : The Stages in the Analysis

Stage 1:	Identify departments and agencies which have fees that affect agriculture
Stage 2:	Collect information and classify cost recovery fees that may affect agriculture <ul style="list-style-type: none"> • classify fees by department or agency • determine increase in cost recovery since 1994 due to new and increased fees • determine amounts paid by agriculture and agri-food, other sectors, and distribution by agriculture commodity • determine economic activity affected (production, imports, exports)
Stage 3:	Market level analysis <ul style="list-style-type: none"> • market analysis to determine extent fees may affect commodity prices and costs of inputs • sectoral analysis to specify/identify overall impact on the industry
Stage 4:	Farm level analysis <ul style="list-style-type: none"> • effects on selected benchmark farms • effects on selected processing establishments

The analysis of the impact of cost recovery normally evaluates the effect of either the increase of a single fee or the introduction of a completely new fee with reference to specific legislation. Only the effects of the increase in fees are considered. For example, fees for services such as the Marine Pilotage were excluded in the Hickling Report because they had not significantly changed as a result of the Major Marine Initiatives.

The analysis in this report encompasses the cumulative effect of cost recovery fees levied by all federal departments and agencies. In reporting cost recovery revenue (Chapter 2), the increase in cost recovery revenue since 1994-95 is highlighted as well as total cost recovery revenue expected in 1997-98. Identification of the department and agencies levying the fees and the amount of cost recovery revenue from the sector are a major part of the analysis. The cumulative analysis, however, evaluates the effects of the total amount of cost recovery, not just the effect of the recent increases in cost recovery fees.

The market level analysis in stage three has two main objectives. The first is to determine the incidence of fees levied through the system. The market analysis estimates the changes in prices, as well as other related costs throughout the primary production and processing systems resulting from cost recovery initiatives. The second objective is to determine how these changes would affect agri-food operating margins at both national and provincial levels in the agri-food sector.

Market or industry level results may hide important differences in impacts on individual farms and processing firms. Therefore, the analysis in stage four is undertaken to show the impact on several different benchmark farms and prototypical processing establishments.

Chapter 2: Cost Recovery and the Agri-food Sector

2.1 Introduction

This chapter presents a description of the data used in this report. Section 2.2 describes the source of the data while Section 2.3 presents the data according to which department or agency collects the fee. Subsequently, Section 2.4 classifies the revenue according to the activity (exports, imports, production, etc.) which it affects. Since fees have different impacts according to the activity to which they are applied, this classification is important for the analysis which follows. A number of adjustments were required to make the data suitable for use in the impact analysis. Section 2.5 describes these adjustments.

2.2 Data Sources

Data were collected from diverse sources and expressed in consistent units for cumulative impact analysis. The TB data base, (Table 2.1), includes actual cost recovery revenues for 1994-95 and 1995-96. For this impact assessment, cost recovery revenues in 1997-98 are also needed. For the most part, departmental budget documents (Estimates Part III, Performance Reports, or Business Plans) are used as the primary data source. In these, data for 1996-97 are actual and data for 1997-98 are estimates, based upon the 1996-97 actuals. Cost recovery revenue paid by the agri-food sector is reported with revenue from other sources. In many instances, the department or branch providing the service has singled out the relevant cost recovery revenue based upon data in their accounting system. In others, estimates are made based upon distributions of sales and other similar criteria. The cost recovery revenue reported here gives the result of this screening to show the dollar amount of cost recovery from the agri-food sector.

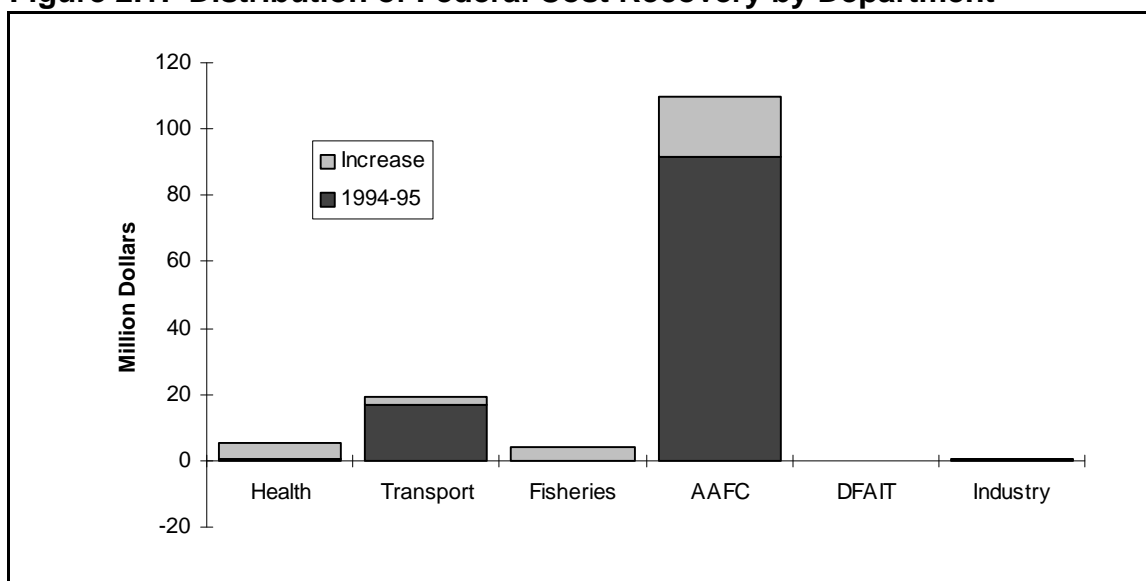
2.3 Cost Recovery Revenue by Department

Total cost recovery fees are listed by department and/or agency in Table 2.1, for the four fiscal years 1994-95 to 1997-98. Only fees affecting the agricultural and agri-food sectors are reported. Fees levied by these agencies and departments on other sectors as well as charges for services now provided by industry are not included.

Total cost recovery fees levied by all federal departments in the agri-food sector are approximately \$139 million in 1997-98. In addition to the fees listed in Table 2.1, the cost of services, formerly provided by government but now provided by the private sector, amounted to another \$5 million.¹ Total cost recovery in 1994-95 was \$109 million, so cost recovery increased by 28% over the four years, or \$30 million. The impact of this, plus the \$5 million of additional expenses for services transferred to the private sector, is reported as the impact of cost recovery initiatives.

In 1997-98, cost recovery fees levied by the AAFC portfolio amounted to nearly \$110 million, or about 79% of the total (see Figure 2.1). Health Canada accounted for a further 4%, from the Pest Management Regulatory Agency (PMRA) and fees on veterinary drugs. Fees levied by Transport Canada and its agencies account for another 14%. Fees levied by Fisheries and Oceans (3%) are all for Canadian Coast Guard services which were part of Transport Canada in 1994-95. The fees levied by DFAIT and Industry Canada are less than 1% of the total.

Figure 2.1: Distribution of Federal Cost Recovery by Department



AAFC accounts for 61% of the increase in cost recovery initiatives that were introduced between 1994-95 and 1997-98. The AAFC share of total fees declined by about 5% from 84% of the total in 1994-95, to 79% in 1997-98. The introduction of new fees by Health Canada and for the Canadian Coast Guard in this period makes them stand out disproportionately in the cost recovery initiatives, relative to existing fees.

1. These fees are included to provide a comprehensive assessment of the cost recovery policy. The position taken in the report is that the transfer of these services to the private sector was, at least indirectly, a result of cost recovery policy. Therefore, additional costs, imposed on the sector as a result of the transfer, are treated as a result of cost recovery policy, but are not included in the summaries of cost recovery revenue in this chapter since they do not in fact accrue to government.

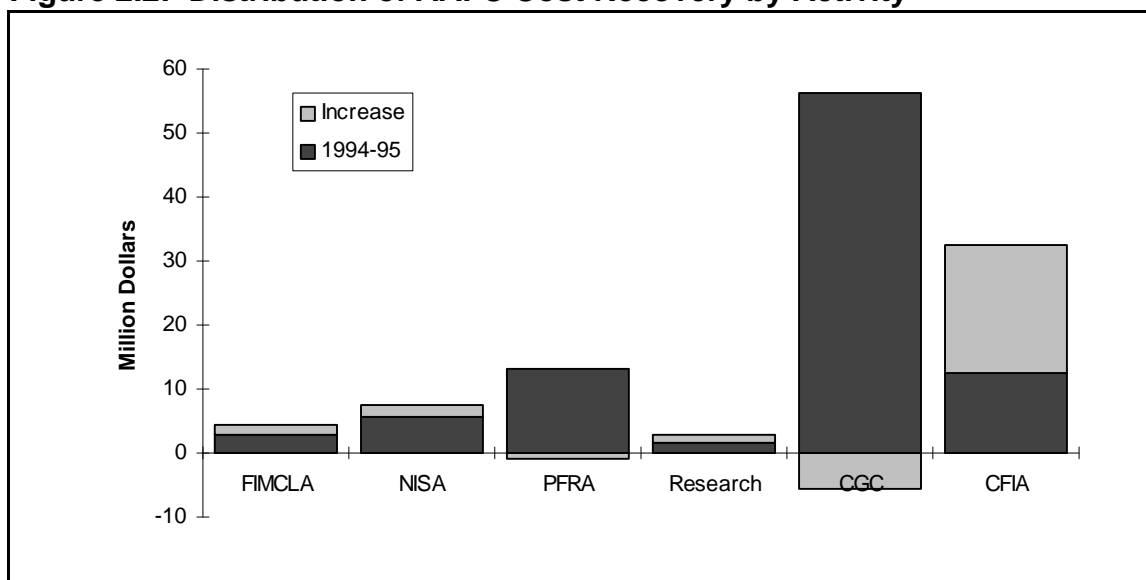
**Table 2.1: Cost Recovery Revenue from the Agri-food Sectors,
1994-95 to 1997-98 (\$'000)**

Department or Agency	1994-95	1995-96	1996-97	1997-98 *
Agriculture and Agri-Food				
FIMCLA	2,758	1,860	2,444	4,250
NISA	5,550	6,564	7,510	7,510
PFRA	13,001	14,300	14,600	12,000
Research Branch	1,453	2,369	2,777	3,177
SUBTOTAL	22,761	25,093	27,330	26,937
Canadian Grain Commission	56,197	46,730	42,967	50,425
Canadian Food Inspection Agency				
Animal Health	662	2,003	2,891	3,562
Fresh Fruit & Vegetables	2,566	2,514	3,933	4,245
Livestock & Poultry Grading	3,039	3,658	1,743	995
Plant Health	1,021	2,306	3,141	3,147
Seeds	1,544	1,666	2,457	2,692
Meat Hygiene	3,364	12,419	15,632	15,183
Other Processed Products	190	458	1,408	2,696
SUBTOTAL	12,386	25,025	31,204	32,519
AGRICULTURE AND AGRI-FOOD SUBTOTAL	91,344	96,848	101,501	109,881
Foreign Affairs and International Trade	290	409	436	435
Health Canada				
PMRA	229	0	4,200	4,200
Veterinary Drugs	0	0	1,067	970
SUBTOTAL	229	0	5,267	5,170
Industry Canada	168	164	172	158
Fisheries and Oceans	0	0	3,026	4,135
Transport Canada	1,915	2,623	3,153	2,333
Marine Pilotage	14,835	15,398	16,058	16,577
Seaway Commercialization	0	0	0	415
TOTAL	108,781	115,441	129,613	139,104

* Projected.

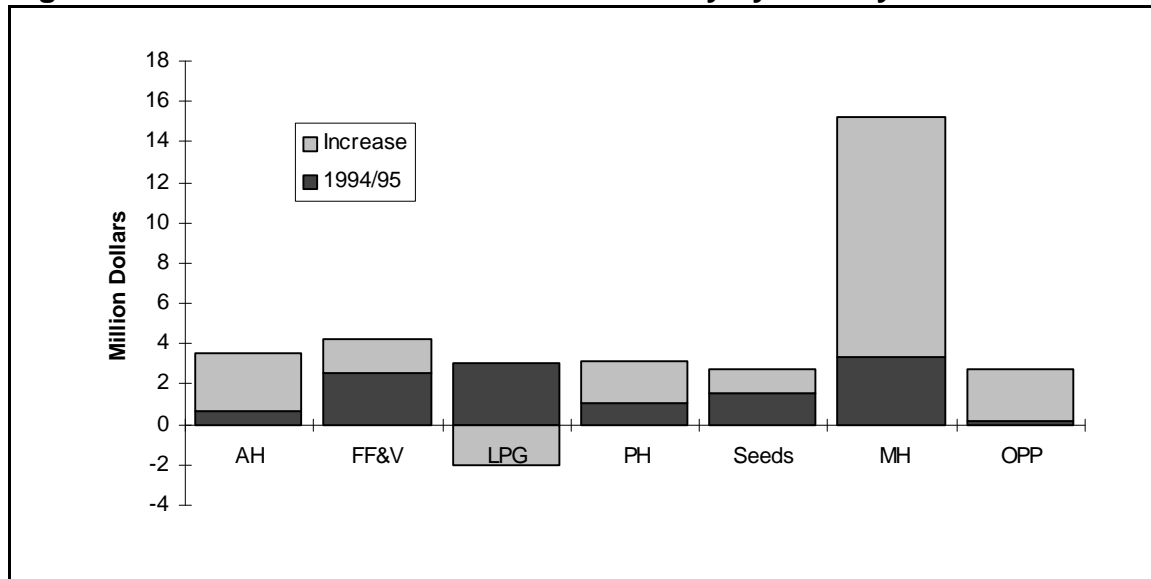
Most of the cost recovery fees within the AAFC portfolio are paid to the CGC and the CFIA. In 1997-98 they accounted for 46% and 30%, respectively (see Figure 2.2). The PFRA is the next largest, accounting for 11% in 1997-98.

Figure 2.2: Distribution of AAFC Cost Recovery by Activity



In terms of the increase in cost recovery revenue since 1994-95, the CFIA is clearly the dominant source of cost recovery in the AAFC portfolio. This is because cost recovery has been used for a long time for other AAFC programs and agencies. The CFIA and its predecessor, the Food Production and Inspection Branch, have also used cost recovery fees for many years, but fees were set at nominal levels and recovered only a small portion of the cost of the services provided. The reorganization of the Branch following the Program Review and the implementation of the Business Alignment Plan (BAP) resulted in many changes to the food inspection system, including greater reliance on cost recovery.

For the most part, significant fee increases have been distributed throughout CFIA activities as shown in Figure 2.3. An exception is the livestock and poultry grading (LPG) where the industry has eliminated poultry grading and taken over responsibility for red meat grading. The Meat Hygiene (MH) program accounts for nearly 60% of the increase and accounts for nearly 50% of cost recovery revenue in 1997-98. The largest relative increase is for the programs grouped together here as other processed products (OPP), for inspecting and registering other types of processing plants and products. Cost recovery increased by 208% and 438% for plant health (PH) and animal health (AH) programs respectively. Moderate increases for fresh fruit and vegetable (FF&V) and seeds were 65% and 74% of 1994-95 cost recovery revenue, respectively.

Figure 2.3: Distribution of CFIA Cost Recovery by Activity

The CFIA cost recovery anticipated at this time is far below the original targets and forecasts for 1997-98. The BAP called for \$56 million in cost recovery by 1997-98. The current forecast, provided by the agency, is \$38.5 million in revenue. This does not include revenue related to services taken over from other departments. Of this, \$2.6 million is unrelated to cost recovery and \$3.3 million is cost recovery revenue that we estimate will be paid by other sectors. This leaves \$32.6 million, which is included in the impact analysis here.

2.4 Level and Activity Affected

Each cost recovery revenue source is classified according to whether it affects farm input suppliers, farms, marketing, trade, and processing establishments directly. Tables 2.2 to 2.7 show where the fees listed in Table 2.1 affect the agri-food sectors.

Cost recovery revenue classified in Table 2.2 as affecting farm inputs, is usually paid by input suppliers. This includes such things as Health Canada fees levied on the agricultural inputs (PMRA and veterinary drugs), CFIA inspection fees for fertilizer products and on veterinary biologics, Research Branch Royalties, and FIMCLA (*Farm Improvement Marketing and Cooperative Loans Act*) fees. The final incidence of these fees depends on how much is absorbed by the manufacturers and how much is passed on as price increases.

Table 2.2: Cost Recovery Revenue Based on Farm Inputs (\$'000)

Input Affected	1994-95	1997-98	Increase
Royalties	1,453	2,777	1,323
Purebred Livestock	59	317	258
Credit	2,758	4,250	1,493
Pesticides	229	4,200	3,971
Veterinary Drugs and Supplies	225	2,181	1,956
Fertilizer	90	149	60
TOTAL	4,813	13,874	9,060

Cost recovery revenue classified as affecting farms directly is grouped in Table 2.3 by farm type. This includes the Net Income Stabilization Account (NISA) administration fees, PFRA fees, and CFIA fees for seed crop inspections. Farm types are based upon the Taxfiler classification used by Statistics Canada; for example, farms are classified as cattle farms if 51% or more of sales are cattle and calves.

Table 2.3: Cost Recovery Revenue from Farms Directly (\$'000)

Farm Type	1994-95	1997-98	Increase
Cattle	10,678	10,080	-598
Hog	527	707	180
Poultry & egg	89	149	60
Dairy	858	841	-17
Grain & oilseed	5,778	7,343	1,565
Potato	673	912	239
Fruit & vegetable	250	362	112
Greenhouse & nursery	267	397	130
Others*	987	1,153	165
TOTAL	20,107	21,943	1,835

* Livestock combination, tobacco and other types.

It is more difficult to identify who is paying the fees levied on the marketing and trade of primary products. For some these are paid directly by farmers, by wholesale traders, or processing firms involved with primary products. Where a farmer-owned marketing agency is involved, the fees are paid by the cooperative or pool and these may or may not be reported back to the farmer separately from other costs associated with operation of the agency. The revenue from these fees is aggregated in Tables 2.4 to 2.6 by primary commodity affected. The agricultural commodities are grouped in categories which correspond to the farm types in Table 2.3. Each farm type actually produces a mix of outputs; cattle farms also produce grains and oilseeds so fees affecting marketing of grains and oilseeds will be of concern to them as well.

On the other hand, revenue based on the export of processed commodities listed in Table 2.6 are most likely nearly all paid by the corresponding processing industry. A substantial portion of the revenue from imported processed products listed in Table 2.5 may also be paid by the corresponding processing industry. Similarly, the processing industry may be affected by the fees on the primary products and industries as these may affect input prices.

Table 2.4: Cost Recovery Revenue Affecting Primary Commodity Marketing (\$'000)

Commodity	1994-95	1997-98	Increase
Cattle	1	6	5
Hog	0	2	2
Poultry & egg	242	660	418
Dairy	0	0	0
Grains & oilseeds	57,944	53,960	-3,984
Potato	216	357	141
Fruits & vegetables	696	1,145	449
Greenhouse & nursery	3	6	2
Others*	73	85	12
TOTAL	59,175	56,220	-2,955

* Livestock combination, tobacco and other types.

Table 2.5: Cost Recovery Revenue Affecting Imports (\$'000)

Commodity	1994-95	1997-98	Increase
Cattle & calves	35	190	155
Hog	1	6	5
Poultry & egg	42	196	154
Dairy	0	0	0
Grains & oilseeds	812	1,298	486
Potato	46	95	48
Fruits & vegetables	1,403	2,722	1,320
Greenhouse & nursery	83	184	101
Other primary products	721	1,052	331
Meat	287	844	558
Poultry products	85	124	40
Processed dairy products	79	116	37
Processed fruits & vegetables	0	10	10
Feed	527	799	272
Other processed products*	51	88	37
TOTAL	4,173	7,726	3,553

* All other SIC 10 industries such as vegetable oil mills, bakery product industries, etc.

Table 2.6: Cost Recovery Revenue Affecting Exports (\$'000)

Commodity	1994-95	1997-98	Increase
Cattle & calves	178	957	779
Hog	54	292	238
Poultry & egg	5	28	22
Dairy	0	0	0
Grains & oilseeds	9,035	12,553	3,518
Potato	326	569	243
Fruits & vegetables	1,065	1,704	639
Greenhouse & nursery	119	544	424
Other primary products	1,712	2,031	319
Meat	151	334	184
Poultry products	0	0	0
Processed dairy products	30	167	138
Processed fruits & vegetables	0	9	9
Feed	1,599	2,426	827
Other processed products*	0	19	19
TOTAL	14,275	21,634	7,359

* All other SIC 10 industries such as vegetable oil mills, bakery product industries, etc.

Revenue from the processing industries in Table 2.7 include such things as CFIA registration and inspection fees and are listed by processing industry. Generally, the department or agency would invoice these fees directly to farmers or processing establishments.

Table 2.7: Cost Recovery Revenue Affecting Processors Directly (\$'000)

Processing Type	1994-95	1997-98	Increase
Red meat	4,242	11,212	6,969
Poultry	1,733	3,697	1,964
Dairy	39	1,020	980
Fruit and vegetable	5	677	672
Feed	206	453	246
Other processing industries*	11	650	638
TOTAL	6,237	17,708	11,670

* All other SIC 10 industries such as vegetable oil mills, bakery product industries, etc.

In 1997-98, 40% of all cost recovery affecting the agri-food sectors was related to marketing, with nearly all of this paid by the grains and oilseeds sector. Cost recovery fees paid by farms and by processing industries directly were both 13% of the total. The farm level cost recovery is spread evenly across farm types with two exceptions: cattle farms because of grazing fees paid to PFRA and grain and oilseed farms because of the size of this industry. Cost recovery

revenue from the processing industry is concentrated on meat and poultry processing. Fees paid by farm input suppliers account for 10% of the total in 1997-98 and their impact, too, is evenly spread across farm types. Cost recovery from exports and imports are 16% and 6% of the total, respectively.

The distribution of the increases in cost recovery revenue is different from the distribution of the level of cost recovery in 1997-98. A large portion of cost recovery in 1997-98 is for large long-standing programs; in these cases, cost recovery is static or revenue collections are actually expected to decline. Fee increases are concentrated in services which have been provided free or at only a nominal fee. Cost recovery on marketing shows a decline, and cost recovery on farms as a whole increases by only 6% for some farm types. Cost recovery for farm input suppliers and processors increase the most rapidly.

As a result, farm input suppliers and processors account for 30% and 37% of the increase in cost recovery revenue between 1994-95 and 1997-98. Exports account for 25% of the increase, imports 12%, and farms only 6%.

2.5 Adjustments to Data

Cost recovery revenue described in Chapter 2 is, implicitly or explicitly, an estimate of multiplying cost recovery fees by an estimate of the quantity of the service provided (the fee base). Impact analysis needs to focus on the effect of the fee itself rather than trends in the number of users. In some instances, cost recovery revenue is adjusted to impose a consistent base on the impact analysis.

A related issue concerns the treatment of services provided by industry itself, but which were previously provided by the federal government. Should the report encompass these services or not? It is reasonable to argue that the cost of these services is not paid to the government, and therefore should not be included in cost recovery. It is equally reasonable to argue that industry has had to pay for the increase in cost associated with their continued use of the service.

Inclusion of costs for this type of service introduces important methodological problems. It is difficult even to know about the existence of all privatized costs, if a service was transferred some years ago. More generally, when industry takes over the provision of a service, the service often changes in many ways from the what was offered by government, so much so that costs are no longer comparable. Privatized airports are a case in point. In this case, shopping and business service facilities may be so enhanced that it is difficult to know what part of airport revenue should be attributed solely to these additional activities and what part to the traditional airport activities managed by government.

Even if the service offered has not changed substantially, it is difficult or impossible to get a good estimate of the cost of providing the privatized service because the information is no longer in the public domain. The costs for these services could be based upon estimates in departmental budgets made before the privatization decision and other direct data were available. However, services are selected for privatization because it is believed that the private sector can provide them at a lower cost than the government. Hickling, for example, assumed that private sector dredging would result in a 15% savings relative to departmental budget forecasts.

The solution to all of these problems is to include selected services now provided by industry in the impact analysis in Chapters 4 and 5 but not in the data on cost recovery presented in Chapter 2. The services selected are those that have been taken over by the private sector since 1994-95. These are:

- red meat grading
- some laboratory services
- dredging
- harbours and ports

These amount to a total of about \$5.1 million in 1997-98.

The impact of the fees is evaluated against a baseline of production, trade, and domestic disappearance in 1995. This baseline is used because it is the most recent with the requisite data availability. Fees for 1997-98 were adjusted slightly for the lower volumes in 1995 compared with those anticipated in generating the 1997-98 numbers. The effect of these adjustments is to lower the total by \$6.6 million. The impact analysis therefore is based on total costs to the sector of \$138 million rather than \$139 million.

Chapter 3: Cost Recovery Impact Assessment

3.1 Introduction

This chapter describes the basic methodology used in the cumulative impact assessment. Section 3.2 outlines the methodology used in the assessment of individual fees for the purpose of comparison. The assessment of the cumulative impact of cost recovery raises a number of new issues and methodological difficulties. Some of the problems of estimating cost recovery charges, identifying who is affected and aggregating them across departments have been illustrated in the previous chapter.

Section 3.3 develops the framework for assessing the extent to which cost recovery fees, levied at a particular point in the production and distribution system, may be passed as higher prices or costs to other participants in the market, thereby mitigating or compounding the direct impact of fees imposed at that point. Section 3.4 reports price and quantity changes that result from cost recovery. Essentially, this involves estimating the impact of cost recovery fees. Section 3.5 presents a summary of the impacts.

3.2 Assessment of the Impact of Individual Fees

Generally, cost recovery initiatives are established through regulatory change. The TB requires that a Regulatory Impact Analysis Statement (RIAS) be prepared for all regulatory changes. The RIAS provides a description of what the government is going to deliver, how Canadians have been consulted and what they have said. It includes an estimate of the benefits and costs of any change in fees. The benefits must exceed the costs when the interests of all Canadians are considered for all regulatory changes.

Consultation provides businesses an opportunity to raise competitiveness issues concerning cost recovery and the agri-food sector. The Business Impact Test (BIT), or equivalent analysis, must be undertaken to assess the effect that major regulatory proposals will have on Canadian businesses. The BIT is basically a survey to assess the financial impact, including the effect on competitiveness of Canadian companies.

TB policy requires that departments, through consultation, assess the impact of service charges on users and other affected parties. Consultation does not imply consensus or agreement, but rather provides a mechanism to identify all potential impacts, so these may be weighed against benefits and assure that implementation minimizes adverse impacts.

The RIAS analysis of the impact of cost recovery of a single fee is incremental. The focus is on the effect of the change of a single fee. If, for example, it was proposed that a fee of \$100 for a particular service be increased to \$102, the RIAS assesses the impact of the \$2 increment on the users of the service. The effects of fees already in place by the same agency or department and those levied by other departments and agencies are not considered.

3.3 Framework for Assessment of the Cumulative Impact

In a recent evaluation of PMRA fees it was assumed that all fees imposed on pesticide manufacturers and importers would be passed on to end users. A recent study evaluated the impact of the CFIA Business Alignment Plan, in which fee increases were spread among input suppliers, farmers and processors. It was implicitly assumed that no fees are passed on to subsequent users. These results reflect an assumption that most of the final incidence of fees levied on the agri-food system affect producers. Indeed, these may be the best simplifying assumptions for the specific markets concerned in the two studies, but they are clearly only approximations of what really happens.

Three things can happen when a cost recovery fee is levied at any point in the food production and marketing chain. There can be:

- a transfer of some costs to input suppliers, in the form of lower prices;
- a transfer of some costs to buyers, in the form of higher output prices;
- some reduction in operating margins at the level where the fees are levied.

The extent to which each of the three takes place will depend upon the nature of the input and output markets. The impact of cost recovery is best explained by viewing each commodity chain as a series of activities as illustrated in Figure 3.1. Prices at each level are all linked. Thus a disturbance, such as imposition of a cost recovery fee at one level, has impacts throughout the system.

because benefits of the innovations get transferred down the food production and marketing chain in the form of lower prices. But, because the demand for most food products is inelastic, changes in costs tend to result in changes in consumer prices.

This is far less the case in Canada because of the critical role of trade. Many Canadian product markets are integrated into a single world or North American market. In this case, attempts by Canadian processing firms to transfer cost increases to suppliers or consumers are limited by the scope for increased trade in both these markets.

Aside from market structure, the other major determinant of the impact of a cost recovery fee is the nature of the fee itself. A fee on exports of farm products, for example, would tend to have effects similar to a tariff imposed by our trading partners. It would divert production from the export market to the domestic market. This would reduce costs domestically for the processing industry and perhaps further down the chain at the consumer level. There may also be an adverse affect going in the other direction, reducing prices at farm or input supply levels.

In a similar way, cost recovery on imports acts like a Canadian tariff, raising prices at the level of the food chain where the cost recovery fees are levied. By reducing competition from imports, a cost recovery fee on imports may raise domestic commodity prices, thereby increasing the price paid by domestic processors or consumers.

The impact of cost recovery on prices is found by a multi-market analysis. The analysis uses conventional economic models which simulate the production and marketing relationships, as illustrated in Figure 3.1. Cost recovery from all sources is identified with the specific activity affected. It is then aggregated and expressed as a share of the price associated with that activity. The models are then solved with these aggregate unit fees as wedges in the particular markets concerned. The models' solutions give the changes in prices and quantities resulting from the imposition of cost recovery fees.

One of the features of this analytical framework is that the final incidence of fee is the same, whoever initially pays the fee. Whether the supplier or buyer of the commodity actually pays the fee, prices will adjust such that the incidence is the same. It is important to know which commodity market is affected by the marketing fees rather than whether the fees are paid by farmers or not.

The last section of this chapter reviews the market impact for the principal agri-food commodities. In the next two chapters, the changes in prices are combined with information on the initial distribution of direct charges, to determine the impact on a wide range of farms and processing companies. In all cases the effect of cost recovery is found by comparing the changes that result from cost recovery with a baseline.

3.4 Market Impact

The earlier section discussed the importance of examining not only the industry-wide impact of cost recovery fees, but also the individual commodity or market impacts. To understand better the impacts, a model was created as a tool to help simulate the changes in net operating income and prices in various markets. The remainder of this chapter reports these results.

Grains and Oilseeds

The situation of the grain industry illustrates how cost recovery fees can have a very different impact on various stakeholders and why these differences are an important factor in the impact analysis of cost recovery for the various interrelated industries in the agri-food sector.

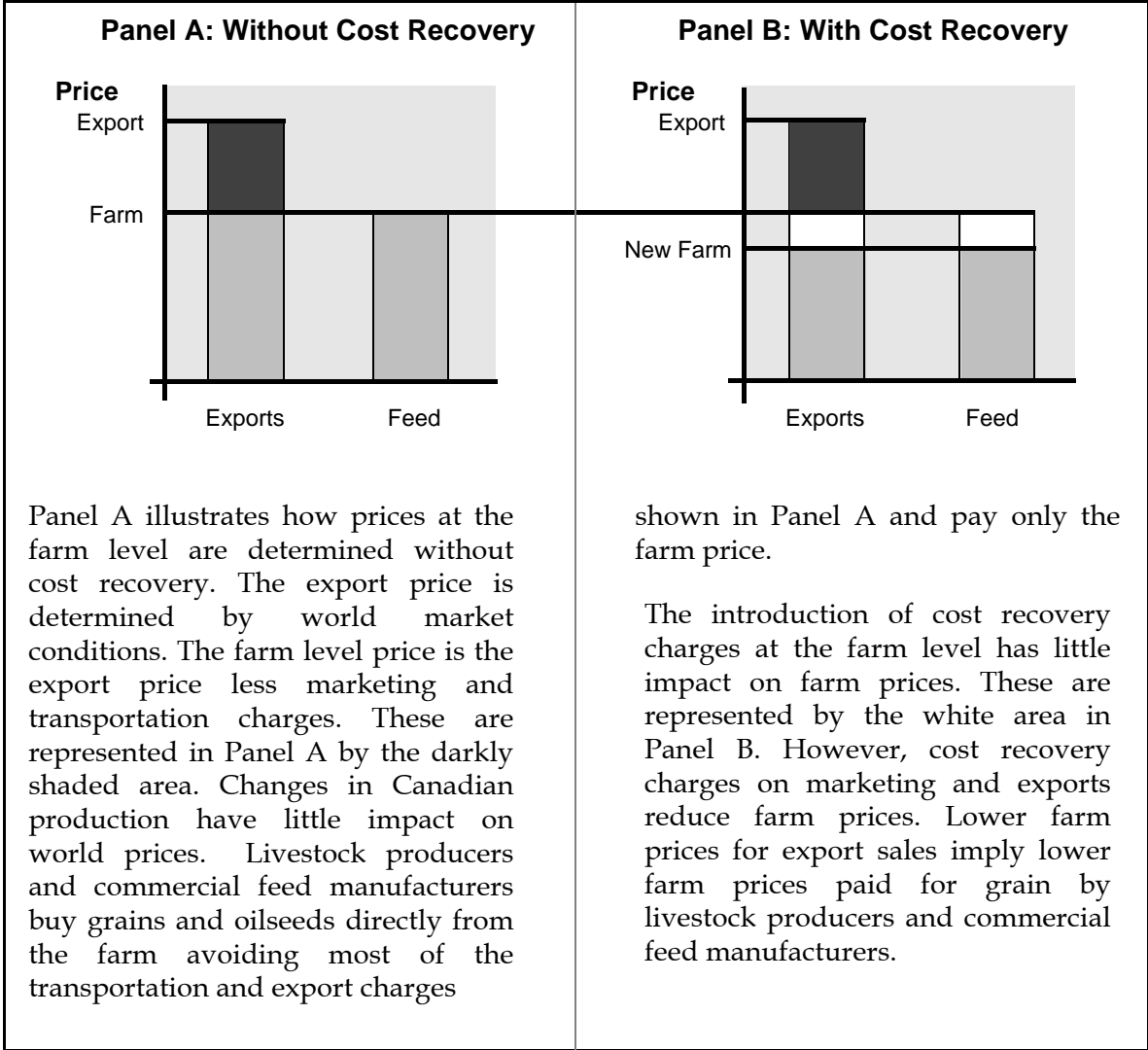
The adjustment to cost recovery fees by the grains and oilseeds industry is in turn determined by the global nature of these markets and Canada's position as a price taker. Most fees affecting the grains and oilseeds sector are imposed on marketing and exports. Canada has about 20% of the world market for wheat and a smaller share of the feed grains and oilseeds market. Despite Canada's reputation for quality, our ability to pass on cost increases to consuming nations is limited given that the demand facing Canadian grain and oilseed exports is very price sensitive.¹

Figure 3.2 illustrates how cost recovery fees influence prices of grains and oilseeds. Almost all fees for post farm gate services get pushed back to producers in the form of lower net prices. This effect reduces producer prices by 0.75% and cause output to fall as much as 0.31%. As a result, exports fall by 0.9% and export customers pay slightly higher prices. (Import fees raise the landed price of imported feed grains and soybeans. This plus lower domestic grain prices combine to reduce imports by 7.4% but this effect is small because of the relatively small size of imports in the domestic market.)

The livestock industry and the feed milling industry are two major users of grains and oilseeds within Canada. Both of these industries are able to buy grains and oilseeds at farm level prices, avoiding the cost recovery fees levied on marketing and marine transportation which affect export sales. In turn, this lowers costs of production for these industries and offsets, at least in part, the cost recovery charges which affect these industries directly.

1. This is not to say that these services are not worth their cost and more. It simply reflects the fact that the additional quality is already factored into the price regardless of who pays the cost. However, the price-sensitive nature of demand does preclude passing new costs to the buyer without large reductions in quantity.

Figure 3.2: Effect of Cost Recovery on Grain for Feed



Processed Feeds

The processed feed industry faces increased fees. However, as indicated above, it also benefits from lower feed grain prices as a result of cost recovery. Purchase of grains and oilseed meals account for just under 20 percent of the costs of the industry. The decrease in this part of its costs more than offsets direct cost recovery charges on the industry. On the other hand, a large number of farmers are able to mix feeds on farms and lower grain prices make this a more attractive alternative. This type of competition tends to lower commercial feed prices with some of the benefits being shared with farmers.

Cattle

The impacts of cost recovery on the cattle industry are by far the most complex to measure. First, in terms of feed markets, the PFRA fees on grazing raise the cost of forage, thereby affecting the cow-calf part of the industry (production costs up 0.55%). Second, the fees on the grain and oilseed industry reduce the cost of feed to feedlots. Despite other direct cost recovery charges, the net effect on feedlots is a reduction of costs by 0.02%. The first of these

impacts thereby reduces feeder supply while the second impact will increase feeder demand. Taken together, this implies that relatively more cattle would be produced in feedlots.

The second major impact arises from the fees on exports. Cost recovery on exports reduces prices by about 0.09%. This is unambiguously negative for the cow-calf operator. Prices of slaughter cattle and feeder cattle are both slightly lower than they would otherwise be.

Besides these two factors, the other fees affecting farms (such as NISA) and farm inputs (such as the fees affecting veterinary drugs) have a smaller impact on both types of producers. The net effect for the industry as a whole is that there is virtually no change in net production for the entire cattle industry (up 0.02%), although prices received for slaughter animals are down 0.07%.

Hogs

The situation for hogs has similarities to beef, but the end result is quite different. Once again, higher export fees result in lower exports and increased supplies on the domestic market, resulting in a reduction in price of 0.03%. At the same time, higher fees result in higher production costs.

Since 70% of hog feed is assumed to be purchased from feed mills, the hog sector benefits much less from lower feed grain prices. Therefore, the lower grain prices are insufficient to offset completely the increased costs and lower prices. As a result, output falls by 0.13%.

Red Meat Processing

Plant inspection fees represent a significant portion of fees paid by the red meat sector. In addition, there are fee increases for both imports and exports of meat. Increased fees on meat imports provide some latitude to pass on fee increases to consumers. Any further increases on prices would result in increased imports. Similarly, higher export fees on live cattle which result in lower cattle prices provide some offset to high plant fees. Beyond that, however, attempting to push fees back to the producers would mean that domestic processors would become uncompetitive with export demand and prevent them from obtaining sufficient supplies of finished animals. Hence, processors are limited in their ability to pass fee increases either forward or back by way of changes in prices.

Dairy and Poultry

The adjustment of the supply managed industries to cost recovery is different from the rest of the sector because of the institutional mechanisms for determining prices and production. Most imports enter at "within-quota" tariffs which are low, but the volume of imports eligible for these tariffs are also low. Beyond these import volume levels, high tariffs discourage any further imports. Farm prices are established through negotiations with processors and other stakeholders, based on considerations such as the cost of production at the farm and processing levels. Quotas are set which limit sales on the domestic market. However, the levels of quotas have to be commensurate with prices.

Given the barriers to import competition, the relative insensitivity of consumption to prices and the national coordination of quota levels in the different provinces, there is little incentive for producers to absorb cost recovery fees in order to maintain demand. Similarly,

processing firms are aware that their competitors are subject to the same fees as they are and that there is little effect if prices are raised to offset the fees. The pass through of fees to consumers is consistent with recent experience such as:

- Reductions in the dairy subsidy resulted in higher consumer prices for dairy products.
- Dairy processors (specifically, ice cream manufacturers) argued before the Canadian International Trade Tribunal that cost reductions from sugar/butter fat blends would be passed on to consumers even though such blends would not be used by all manufacturers.

It was therefore concluded that the most likely outcome would be for the fees to be passed on to consumers and quotas reduced to match the reduction in consumption.

The pass through of fees to consumers is much less likely for products which are exported or which compete directly with imports. Prices for these products are determined by the cost of the competing imports and international markets; cost recovery fees for these products are borne by processors or producers. These products account for 13% of dairy production, 5% of poultry and 20% of egg production.

For poultry, consumer prices rise 0.13% while quantities fall 0.09%. Dairy prices rise 0.01% and consumption falls 0.01%. Quotas are changed to adjust total production by an equivalent amount.

Fruit and Vegetables

Fruit and vegetable markets in Canada are highly influenced by climate and consumer preferences for fresh fruit and vegetables. The total wholesale market is \$3.7 billion, which is comparable in size to the dairy industry. Canadian production of fruit in 1995 was \$0.5 billion, while vegetable sales amounted to \$0.9 billion. Exports accounted for \$0.3 billion of Canadian production while imports amounted to \$2.7 billion.

Cost recovery fees imposed on fruit and vegetable markets are small: fees on farm input suppliers, farms and primary commodity marketing are about 0.13% to 0.14% of gross farm production, while fees on exports and imports are 0.57% and 0.10% of those flows. The fees on imports are particularly significant because imports, being a large share of consumer expenditure, are important in determining consumer prices. As a result, consumer prices rise a small amount (0.05% to 0.06%) despite the strong diversion of Canadian exports to domestic markets. Overall demand falls slightly as imports too are reduced.

The effect of cost recovery on consumer prices ameliorates some of the effect on farm prices but the push back from both export and domestic markets reduces farm prices by 0.14% for vegetables and 0.22% for fruit. Overall production reduces from 0.07% to 0.16%.

The cumulative affect of cost recovery on the fruit and vegetables sector is a simplification since it averages the full costs across the entire sector, when in fact, there are parts of the sector not affected. This is particularly true with CFIA fees where many commodities are not affected, but others such as apples, potatoes and onions are significantly affected. The special case of seed potato producers is examined in more detail in Chapter 4 to illustrate the potential impact on more significantly affected producers of fruit and vegetables as well as potatoes. There are, too, important differences between regions.

Potatoes

There are three different potato markets in Canada depending on end use. Processing potatoes are sold on contract. Three fourths of table potatoes produced in Canada are sold domestically, with most export sales going to the US. There is roughly an equal amount of competing imports, coming from the US. In contrast, Canada is a large net exporter of seed potatoes (imports are negligible) with most exports going to the US but also serving a wide range of other countries. In 1995, the value of shipments was \$186 million (processing), \$274 million (table) and \$57 million (seed). Seed potatoes generally have higher prices and are more expensive to produce, but the table potato market provides a floor for seed potato prices in years of a seed supply surplus.

Processing potatoes are subject directly to a small amount of cost recovery for such things as NISA and, indirectly, through cost recovery on inputs. In addition to the above, table potatoes are affected by cost recovery charges which affect domestic shipments and exports. The situation for table potatoes is similar to fresh fruit and vegetables, though marketing charges are relatively higher at 0.22% of sales. Fees for field inspections and other charges affecting marketing of seed potatoes amount to 3.1% of the value of sales. This is an order of magnitude higher than charges on any other market.

Cost increases that affect all potato and processing producers are taken into consideration in the contracts negotiated by processors and producers. The effect of cost recovery on table potato producers is an interesting contrast with that on fruit and vegetable producers. Because imports are much smaller, the diversion of exports to the domestic market depresses consumer prices; farm prices fall by 0.13%. Lower domestic prices cause total domestic demand to go up 0.02%. Finally, as a result of lower prices and higher input costs, total production falls by 0.42%.

The seed potato industry is less a price taker than most other farm industries in Canada. There are virtually no other competing imports. Export markets vary from year to year, depending on shortages in other countries but are essentially niche-like in any given year. The result of this market structure is that there is more scope to push some of the effect of cost recovery down to customers. The large amount of cost recovery in this market, therefore, results in a price increase of 0.6% for domestic market consumers (and 1.1% for exports). This is not sufficient to cover the 3.1% increase in costs. There are large shifts in the disposition of production in the industry with exports down 1.9% and domestic production lower by 1.5%.

3.5 Summary of Impacts

As the previous section demonstrated, the impact of cost recovery varies significantly by sector. It is important to take these differences into account. However, it is also useful to have an aggregate view of the impact of cost recovery on the agri-food sector and how the impacts are distributed within. Adjusted fees total \$138 million. The ultimate incidence of these fees is shown in Table 3.1. The impact on the agri-food sector is \$103 million (75%), of which processing is \$11 million (8%) and \$93 million (67%) is the cost at the farm level. The rest of the impact on consumers, both domestic and foreign, and various input suppliers amounts to \$35 million or 25% of the total.

Table 3.1: Final Incidence of Cost Recovery on the Agri-food Sector

Type Enterprise	Number of Enterprise	Net Operating Income Reduction		Share (%)
		Percent	Amount (\$'000)	
Farm Types				
Cattle	60,735	3.2	17,235	13
Hogs	9,550	0.9	2,349	2
Poultry & Eggs	4,550	0.1	206	0
Dairy	23,800	0.0	308	0
Grains & Oilseeds	101,155	2.5	62,672	46
Potato	1,590	2.7	2,478	2
Tobacco	1,840	0.4	428	0
Fruit & Vegetables	7,720	1.2	1,980	1
Greenhouse & Nursery	2,895	0.9	1,129	1
Other	22,595	0.9	3,502	3
SUBTOTAL	236,430	1.7	92,286	67
Processing Establishments				
Red Meat	457	3.4	9,888	7
Poultry	100	0.1	149	0
Fruit & Vegetable	194	0.2	818	1
Dairy	270	0.0	190	0
Feed	466	-1.4	-2,648	
Other	1478		2,270	2
SUBTOTAL			10,667	8
Agrifood			102,953	75
Consumers / others			34,589	25
TOTAL			137,542	100

Chapter 4: Farm Level Analysis

4.1 Introduction

This chapter describes the effect of cost recovery on the various farm level industries. In Section 4.2, the impact of cost recovery on average farms for each of the major farm types is described. The average impact of cumulative cost recovery is found to be small, in relative terms, for all farm types. However, the average impact may obscure some more severe impacts on more specialized farms. The rest of the chapter describes the same analysis applied to selected benchmark farms.

The benchmark model farms are not representative of all farms. They represent one farm with a given set of characteristics within a particular commodity sector and designated province. The farms were selected either because they are typical, producing one or more of the major commodities or because they had the potential to be most adversely affected by cost recovery. Benchmark farms were selected for this analysis in consultation with the two advisory committees.

4.2 Impact on Agricultural Industries

The average impact on specific industries is found by combining the results for the changes in prices described in the previous chapter, with changes in costs for an average firm in the industry. Changes in costs may result from direct charges paid by the firms because of cost recovery and from indirect changes such as changes in the price of feeds.

Each of the average farms described here is based on the 1995 Taxfiler data set. All information is based on the "Statement of Farming Activities" completed in compliance with the Income Tax Act. The data set is a 15-20% sample of the farms with revenue greater than \$25,000 in 1995. Farms are classified according to principal source of farm revenue. If 51% or more of a farm's revenue is from sale of cattle and calves, then it would be classified as a cattle farm. Out of the 236,000 farms represented in the data set there are less than 23,000 truly mixed farms, with less than 50% of sales from any one commodity type.

The 50% threshold describes the least specialized farms of each type. An average farm of each type is more specialized. The average share of revenue from specialized livestock farms ranges from 84% for both dairy and hog farms to 93% for poultry farms. The average share ranges from 87% for potato growers to 99% for greenhouse and nurseries.

The impact on each agricultural industry is shown in Table 4.1. Under the heading of “Baseline”, the three lines show average farm revenue, operating costs and operating margin for each farm type. For the average farm in 1995, revenue was \$138,772; operating costs were \$115,219, leaving an operating margin of \$23,553. Operating margins were highest for potato, poultry, dairy, and greenhouse and nurseries at \$56,896, \$50,468, \$48,541 and \$41,271 respectively. Operating income for cattle producers was far below the average at \$8,485.

The line for “Direct Charges” represents expenses to farmers for cost recovery charges and additional expenses for services which have been transferred from government to industry. Direct charges for potato producers are far higher, at \$1,164, than charges faced by any other group. This is due principally to charges associated with seed potato production, which comprises a third of the industry. Cattle producers also have a lot of direct charges, due mostly to the costs associated with community pasture services and mainly affecting producers in Saskatchewan and Manitoba.

The three items under the heading “Change” show the entire cumulative impact of cost recovery on each farm type. Revenue changes because of the changes in prices as shown in Chapter 5. The largest price changes are in grains and oilseeds which affect all farm types (because each farm type produces some grains and oilseeds). But the revenue of grain and oilseed farms is affected the most, falling by \$523. Direct charges are a factor in the change in costs; costs are a factor of other effects of cost recovery, such as changes in costs of feed and other inputs. On livestock farms, the net effect of cost recovery on operating costs is lower than the direct charges but higher than direct charges on crop farms. The change in operating margin is the sum of revenue and operating costs. These three numbers are in relative terms under the heading “Percent Change”.

The reduction in operating margins is greatest in absolute terms for potato producers at \$1,558. The next largest absolute impact is on grain and oilseed producers at \$620. There is almost no impact on poultry and dairy producers, because costs are passed back to consumers as described in Chapter 3. In relative terms, the impact on operating margins is largest for cattle, potato and grain farms in that order. The impact on cattle producers is due mainly to their relatively low operating incomes.

Table 4.1: Average Cost Recovery Impact by Agricultural Industry

	Cattle	Hog	Poultry	Dairy	Grain & Oilseed	Potato	Fruit & Vegetable	Greenhouse & Nursery	Total
Number of farms	60,735	9,550	4,550	23,800	101,155	1,590	7,720	2,895	236,430
Baseline									
Revenue	129,137	292,389	452,197	193,680	97,735	352,933	141,858	401,170	138,772
Operating Costs	120,652	264,821	401,729	145,139	73,580	296,037	120,818	359,899	115,219
Operating Margin	8,485	27,568	50,468	48,541	24,155	56,896	21,041	41,271	23,553
Direct Charges	196	76	34	41	76	1,164	47	137	107
Change									
Revenue	-129	-255	-149	48	-523	-235	-162	-176	-291
Operating Costs	155	-9	-103	61	97	1,323	95	214	99
Operating Margin	-284	-246	-45	-13	-620	-1,558	-256	-390	-390
Percent Change									
Revenue	-0.1%	-0.1%	0.0%	0.0%	-0.5%	-0.1%	-0.1%	0.0%	-0.2%
Operating Costs	0.1%	0.0%	0.0%	0.0%	0.1%	0.4%	0.1%	0.1%	0.1%
Operating Margin	-3.2%	-0.9%	-0.1%	0.0%	-2.5%	-2.7%	-1.2%	-0.9%	-1.7%

4.3 Impact on Livestock Producers

Some of the increased cost recovery fees have a direct impact on farms through the cost of grading, previously provided free. The most important impact however, is the increased meat and poultry processing fees described in the previous section. These direct and indirect impacts, on quantity produced and farm gate prices, were applied to the 1995 incomes of selected livestock farms. These farms, with specific locations, represent the various types and sizes of livestock operations. The potential impacts on net farm income are summarized in Table 4.2.

Table 4.2: Cost Recovery Impact on Net Farm Income of Benchmark Livestock Farms

Crop	1995 Net Farm Cash Income	Impact (\$)	Impact (%)
Alberta Cow-calf	45,852	-716	-1.6
Saskatchewan Cow-calf	38,041	-1,173	-3.1
Alberta Farrow-finish	55,535	-280	-0.5
Quebec Farrow-finish	35,635	-200	-0.6
Quebec Broiler	36,684	-216	-0.6
Ontario Broiler	42,835	-231	-0.5
Alberta Feedlot	121,222	3,471	2.9

4.3.1 Cow-Calf Farms

The Alberta benchmark cow-calf farm is medium size, located in the southeastern part of the province (Crop District 1). In the base year 1990, the farm had 118 cows and a total land base of 2,900 acres. In addition to the cow-calf enterprise, the farm has approximately 1,000 acres of cropland, producing primarily barley and wheat. The farm produces much of the feed used in the cow-calf enterprise. Livestock sales account for 70% of total farm revenue with the balance coming mostly from grain sales. The operator participates in NISA and has other farm revenue of about \$12,000. The farm has about 80% equity.

The Saskatchewan benchmark farm is a medium-sized, mixed, cow-calf/grain farm, using 1992 and 1993 Saskatchewan cow-calf data. It has 74 cows and 1,100 cultivated acres. Grain sales in 1995 represent 57% of net farm income. Crop production consists of wheat, barley, canola and other small grains. The farm produces almost all the feed used in the cow-calf enterprise. The operator participates in NISA and Crop Insurance and has other farm revenue of about \$13,000. Ten-percent of the herd (the provincial average) is on community pasture. The farm has about 80% equity.

The Saskatchewan benchmark cow-calf farm has a larger impact from cost recovery compared to other livestock farms (\$1,173 per year). The largest individual impact (\$590) is on the farm's grain sales which represent 57% of total sales. The cost recovery impact for the

Alberta benchmark farm is \$716, of which \$373 are from grain sales. Cost recovery results in a 1.6% decrease in net farm income for the Alberta farm and a 3.1% decrease in income for the Saskatchewan farm.

If the Saskatchewan grain farm had one third of its cows on community pastures then the total cost recovery impact would increase by \$915 to \$2,088 or 5.5% of net farm income.

4.3.2 Farrow to Finish Farms

The Alberta benchmark hog farm is a medium-large, farrow-to-finish hog farm. It is based on provincial data from annual hog surveys by Alberta Agriculture. The farm has 96 sows and markets 1,500 hogs with a total area farmed of 627 acres. The revenue from sales of market hogs, weaners, culled sows and boars account for 70% of total farm revenue with most of the balance resulting from grain sales. Other sources of farm income are crop sales, NTSP, and NISA payments. The balance sheet for 1994 shows an owner's equity of approximately \$528,000 and a debt asset ratio of 0:36.

The Quebec benchmark farm is farrow-to-finish with 140 sows and producing 2,250 market hogs per year. The farm was developed from data collected in 1991 by Groupe de recherche en économie et politique agricoles. According to 1991 Census data, the size of the sow herd places this farm within the seventh decile of sow inventories. The revenue from sales of market hogs, weaners, boars and culled sows account for 73% of total farm revenue. Other sources of farm income are crop sales, other livestock sales, custom work, provincial stabilization payments (ASRA) and NTSP (which was terminated in 1994).

The cost recovery impact of proposed fees on the farrow-to-finish farms is \$280 and \$200 annually for the respective Alberta and Quebec benchmark farms. The cumulative level of effects for the Alberta farrow-to-finish hog farm would be a decrease of \$190 in farm receipts and an increase in expenses of \$91. The Quebec farm experiences a \$168 decrease in income and a \$32 increase in expenses.

Like the beef industry, the increase in grading fees combined with other cost recovery fees will affect finishers more than farrowing enterprises. To put the fee increase into perspective, the net incomes of Alberta and Quebec farms, which exceed \$55,000 and \$35,000 annually, would decrease by 0.5% and 0.6%.

4.3.3 Broiler Farms

The Quebec benchmark broiler farm is medium size, starting with 25,000 Basic Quota Units (BQU) or 20,000 birds in 1987. It is assumed in the model that the producer's global quota increases by 1% per year. At a maximum annual production of 9.5 kg. liveweight per BQU, 190,000 kg. (liveweight) of chicken will be produced assuming six cycles or flocks per year. Total revenue accounted for by chicken sales stays constant at approximately 90%. Chick and feed costs are related directly to the level of chicken production. Other farm operating expenses are a function of the chicken sales and other farm revenue.

The Ontario benchmark broiler farm is medium-large size. It is based on cost of production data from Taxfiler, the Ontario Broiler, Hatching Egg and Chick Commission, and the Chicken Farmers of Canada (CFC). Starting with 28,000 (BQU) in 1987, it is assumed that the producer's global quota increases by 1% per year. At maximum production of 9.5 kg.

liveweight per BQU and six cycles per year, the average flock size is 23,000 birds per cycle. Chicken sales are constant at 90% of total revenue. Chick costs and feed costs are related directly to the level of chicken production.

The impact on net income of the Quebec and Ontario benchmark farms from increased fees will be relatively small. The cumulative impacts for both farms is less than 1% of operating income. The Quebec broiler farm will pay around \$90 in increased feed and grading costs while the Ontario broiler farm pays almost \$48. However, increased farm prices compensate for these additional costs. The lower income is all attributable to the effect of reduced quotas and production.

4.3.4 Alberta Feedlot

The Alberta benchmark feedlot operation has sales of 5,000 head per year. The farm feeds as well as finishes most of its stock, purchasing 450 to 550 pound animals and selling them at about 1,100 to 1,200 pounds. Almost all inputs are purchased. The farm is assumed to have a debt of \$1.2 million which is about 30% of total assets.

The Alberta benchmark farm could expect a positive impact on net income of \$3,471. The impact of the decline in price of slaughtered steers affects net income less than the decline in price of feed and feeder calves.

4.4 Impact of Feeder-Pig Certification on Exporters

4.4.1 Feeder-Pig Production and Exports

A total of 14.9 million feeder pigs were produced in Canada in 1995. The average value is difficult to determine because most are retained on the farm and are transferred from the farrowing unit to a feeder enterprise. Their value depends on their age and weight at the time of transfer. Some producers specialize in farrowing, others in feeding. An estimated average price based upon these transactions is \$58 per pig, with total production of \$862.1 million.

The value of feeder pig exports to the United States has grown rapidly in recent years with most originating in southern Ontario and Manitoba.

Year	Head	Value (\$million)	Price/head
1992	226,308	10.0	44.25
1993	280,813	14.8	52.71
1994	401,541	19.5	48.62
1995	650,748	27.6	42.41

However, even in 1995 only 4.4% of feeder pigs were exported at an average value of \$42.41 per head for a total export value of \$27.6 million. (Export values per pig are lower because they are lighter weight on average.) Feeder-pig exports remain a small component of industry exports. Exports of pure-bred and slaughter pigs were worth \$163.5 million and pork exports were valued at \$739.6 million.

4.4.2 Cost Recovery and Certification

AAFC Animal Health Export Certificates verify that exported pigs are free from infectious diseases and meet US health requirements. Each shipment is inspected at the border. In 1994, these certificates were issued without charge. Based on the number issued and operating costs, CFIA estimates that the cost of issuing is about \$600,000. This estimate takes into account some cost savings made possible by the new fee structure. Some shippers present larger shipments for inspection thereby reducing the cost of issuing the certificates.

Under the new fee the charge is \$15.00 for the first animal in the shipment, \$0.50 per pig for the next 50, and \$0.15 per pig for the rest of the shipment. This will result in an average charge of \$0.26 per pig for a load of 300 head. CFIA expects that this fee structure will cover about 50% of the total costs of issuing these certificates in 1996.

4.4.3 Impact of Cost Recovery on the Canadian Industry

It is not possible for producers to pass cost recovery charges on to American buyers since they have a small share in a market with very close substitutes. Exporters may divert some of their production to the domestic market for feeding in Canada. This would tend to reduce the price of feeders (benefiting finishers) but the small numbers result in the effect being unnoticed. For the most part, the impact of cost recovery on a feeder pig producer depends on the share of production that is exported.

A benchmark Ontario farrowing farm has 95 sows producing 1680 feeders (as well as cull animals, etc.). With no fees total revenue is \$143,000, costs are \$121,500 yielding a net farm income of \$21,500. Depending on the share of feeder-pigs exported, the farm income reduces as shown in Table 4.3. With all sales going to the US, net farm income is lower by 1.6%. With only 4% of sales going to the US (the industry's average), farm income reduces by 0.2%.

Table 4.3: Impact on Net Farm Income of Benchmark Ontario Farrowing Enterprises*

	Share of Pigs Exported (percent)				
	4	25	50	75	100
Income Reduction (\$)	42	95	190	286	349
Income Reduction (%)	0.2	0.4	0.9	1.3	1.6

*Average shipment size assumed to be 300 feeders.

4.5 Impact on Seed Potato Farms in Prince Edward Island and New Brunswick

4.5.1 Industry Structure

The analysis of the 1992 to 1996 taxfiler data for specialized potato farms includes various sizes of seed potato farms, with total farm sales ranging from \$50,000 to over \$500,000. The seed potato farms grow both seed potatoes and processing potatoes plus rotational cereal and forage crops. Sixty-five percent of the potato acreage is seed production with the balance being processing potatoes. In reality some seed farms, particularly in PEI, sell some seed potatoes as table potatoes while for other seed farms, all are sold as seed potatoes.

In 1994, PEI and NB seed potato production accounted for 50% of Canadian exports to the US and 100% of exports to the rest of the world. PEI and NB produce about 50% of Canadian potato production and depend greatly on exports to other provinces and other countries. It is assumed that 10% of PEI and NB seed production is exported to non-US countries and affected by increased export fees. Because export fees are generally higher to these countries, these producers would receive the highest impact. However, individual farms in other regions that fit the profile of the Atlantic farms would receive a similar impact.

4.5.2 Cost Recovery Fees

The largest individual recovery cost is the field inspection fees. These fees combine charges for field inspection, bulk bin movement, issuing of tags, and movement certificates, into a single application fee and per-hectare fee.

Field inspection fees increased from \$12.50 per hectare in 1993 to \$20.00 per hectare plus \$50 per farm in 1997. The total amount paid by seed potato farmers for field inspections was \$0.7 million in 1997. The balance of the fees that affect seed potatoes are recovered from phytosanitary certificates and export inspections paid by non-farmers. Seed potatoes are also affected by additional charges for laboratory tests not paid to the government.

4.5.3 Results

The impact on seed potato farms is summarized in Table 4.4. Cost recovery has a greater impact on smaller farms due partly to their lower profit margins and partly to the fee structure. The net impacts per farm range from \$405 to \$3,451. Smaller farms experience a greater percent decrease in net income, up to 7.5% in NB. The largest farms (in PEI) experience a 2.3% decrease in net farm income (or \$3,451). In general, larger farms have a larger impact in absolute terms but a smaller impact in relative terms.

The impact on expenses is largely due to field inspection and lab charges. The average impact on costs is \$1,815 for NB and \$2,150 for PEI. The negative impact of increased costs is somewhat counteracted by small increases in selling prices which generate income of \$262 for NB and \$314 for PEI.

Table 4.4: Cost Recovery Impacts on the Seed Potato Farms

Province and Sales Category	Net Farm Cash Income 1992-1996	Impact (\$)	Impact (%)
Prince Edward Island:			
\$50,000 - 99,999	8,916	-628	-7.1
\$100,000 - 249,999	30,020	-1,004	-3.3
\$250,000 - 499,999	54,860	-1,755	-3.2
\$500,000 +	153,330	-3,451	-2.3
All Farms	50,569	-1,836	-3.6
New Brunswick:			
\$50,000 - 99,999	8,503	-405	-7.5
\$100,000 - 249,999	23,475	-1,271	-5.4
\$250,000 - 499,999	55,362	-1,652	-3.0
\$500,000 +	133,170	-2,164	-1.6
All Farms	42,182	-1,553	-3.7

Source: AAFC & Statistics Canada Compilation.

4.6 Impact on Seed Growers in Western Canada

4.6.1 Industry Structure

In Canada, approximately 4,500 producers grow seed (grains, oilseeds, pulses, forages) as a major enterprise on their farms. Post-harvest processing which includes cleaning, inspection, grading, and bagging of seeds occurs on 1,400 Registered Seed Establishments (RSEs). Canada is a major importer and exporter of seeds with most trading done by about 150 members of the Canadian Seed Trade Association.

Some stakeholders may be only seed growers, RSEs or trading companies but there is a large overlap. Many growers own and operate an RSE processing facility as a separate enterprise. Some RSEs may also do their own imports and exports. The large seed companies involved in international trade may contract all their seed production to growers or they may be vertically integrated.

There are significant differences between forage seed growers and other seed growers. Forage seed production is generally a secondary enterprise carried out on marginal lands. It is characterized by low rates of return in most years interspersed with periodic price and income spikes. Grain, oil crop and pulse seed production is usually a major farm enterprise located on higher quality soils. Income generated from such enterprises is generally higher and less variable in comparison with forage seed production. Like forage seed growers, grain, oil crop and pulse seed growers usually produce several species and varieties of seed crops.

While grain, oil crop and pulse seed production is substantially larger than that of forage seeds, a higher percentage of forage seed is exported. Grass and forages accounted for 40% of total seed exports in 1995. For most seed crops the majority of trade occurs with the US as shown in Table 4.5. This is important because most of the proposed fee increases for exports will affect trade to countries other than the US.

Table 4.5: Share of Canadian Seed Exports Going to the US, 1994 and 1995

Grass and Forage Seeds		Cereal and Oilseed Seeds	
Crop	Share (%)	Crop	Share (%)
Orchard Grass	100	Peas	88
Wheat Grass	99	Maize (seed)	76
Lucerne (alfalfa)	98	Soybean (seeding)	63
Rye Grass	95	Canola (seeding)	53
Kentucky Blue Grass	91	Sunflower (seeding)	27
Creeping Red Fescue	85	Oats (seed)	19
Sweet Clover	83	Flax	19
Brome Grass	82		
Birdsfoot Trefoil	70		
Red Clover	68		
Alsike Clover	67		
Clover	59		
Timothy	47		
Fescue	42		

4.6.2 Cost Recovery Fees

The analysis here is for the level of fees that become effective in 1998. The industry has formed the Canadian Seed Institute (CSI) to privatize some functions previously carried out by the CFIA.

Canadian agriculture traditionally engaged in partial cost recovery in all stages of seed production and trade. In 1993, receipts from field inspections were \$618,000. Under the new fee structure, these are expected to increase to \$1.3 million by 1998.

Cost recovery fees affecting RSEs are expected to increase to \$1.4 million from \$264,000 in 1993. Seed testing fees, required for both domestic and international sales will increase from \$97,000 in 1993 to \$518,000 in 1998. These fees are levied primarily on RSEs and members of the Canadian Seed Trade Association but the large number of farm-based processors means that some cost recovery fees will be paid directly by seed growers.

Fees affecting the seed industry include CGC, AAFC, field inspection, fees for RSE inspections and fees for testing and export certification. The field inspection, inspection and testing charges will increase from \$1.3 million to \$2.4 million by 1998.

4.6.3 Results

The impact on selected enterprises is shown in Table 4.6. The maximum impact is about \$400 per enterprise for both cereal and oilseed seed, and about \$150 for grass and forage seed enterprises. Assuming two or three such enterprises per farm for typical cereal and oilseed growers, total charges will range from \$600 to \$900 per farm, depending on the crops grown and farm size. The impact on typical grass and forage seed growers will be smaller in absolute terms because they grow fewer seed crops and seed varieties and have fewer acres devoted to seed production.

Table 4.6: Cumulative Impact of Cost Recovery on Seed Enterprises

Crop	Net Enterprise Cash Income 1993-1995	Impact (\$)	Impact (%)
Cereal and Oilseed Seed Enterprises:			
Spring Wheat	14,689	-213	-1.5
Durum	15,353	-218	-1.4
Barley	13,385	-201	-1.5
Canola	31,895	-345	-1.1
Flax	18,358	-234	-1.3
Oats	8,659	-169	-2.0
Lentils	44,865	-398	-0.9
Grass and Forage Seed Enterprises:			
Wheat Grass	2,042	-113	-5.5
Clover	3,106	-122	-3.9
Rye Grass	6,042	-134	-2.2
Alfalfa	7,185	-148	-2.1

For the various cereal and oilseed seed enterprises, the income decline ranges from 0.9% for lentils to 2.0% for oats. For the grass and forage seed producers, the relative impact is larger ranging from -2.1% to -5.5%. The relative impact of increased fees is greater for them because of their lower net incomes in comparison to seed-grain producing farms.

Higher export fees may affect the seed industry in one of three ways: lower prices passed to producers, higher prices passed forward to importers, or lower margins for exporters. Without knowing the margins for the RSEs or exporters and without knowing the structure of the market, it is very difficult to predict how the effect of the fees might be ultimately distributed. The structure of the export market is also important in determining the impact of

increased inspection fees on growers, RSEs and exporters. For some forage seeds, Canada is a leading exporter and thus can be expected to pass on part of the fee increases to importing nations.

The most important export fee is for seed tests required for export certificates issued by the International Seed Trade Association (ISTA). The fee is not required for seeds sold to the US and some other importers but is required by the EU. As the US is our most important market, most of our grass and forage seed exports, and nearly all cereal and oilseed seed exports, will not require ISTA fees. In the analysis here, the ISTA fee is proportioned according to the export shares (Table 4.5), and it is assumed that all of these are passed back to seed growers. This represents a worst case assumption. These export fees are already incorporated in the direct impacts for grasses and forages even though they will be paid by export enterprises rather than seed growers.

4.7 Economic Impact of Cost Recovery on Black-soil Grain Farms in Saskatchewan

The benchmark black-soil grain farm in Saskatchewan has 1,400 acres with 1,250 acres in regular rotation. The rotation includes spring wheat, barley, canola, oats and CPS wheat. There are no livestock but there is some off-farm income. The farm has about 73% equity. For this analysis, only the farm income was considered.

The direct impacts on this farm are outlined in Table 4.7. The most significant dollar change was in the price decline for grains and oilseeds. However, the \$1,360 decline in revenue represents less than 0.8% of total farm revenue. When expenses are calculated, net farm income is reduced by 4.5%. The effect upon the western grain farms is more significant than the effect upon the average farm as reported in Table 4.1. Western grain farms are impacted more by CGC fees due to their dependence upon export markets.

Table 4.7: Impact of Cost Recovery on Black-soil Grain Farms in Saskatchewan

Detail	Baseline 1992-95	Impact (\$)	Impact (%)
Revenue			
Crop Sales and Final Payments	182,101	-1,360	-0.8
Other Cash Receipts	14,883	3	0.0
Total Gross Farm Receipts	196,984	-1,357	-0.7
Expenses			
Inputs	68,592	35	0.1
Other Expenses	92,751	197	0.1
Total Farm Operating Expenses	161,343	232	0.1
Net Farm Income	35,641	-1,588	-4.5

Chapter 5: Processing Level Analysis

5.1 Introduction

This chapter describes the impacts of cost recovery on food-processing firms of various sizes in five different processing industries. The impact of cumulative cost recovery is calculated on the basis of an average food-processing firm. The impact on individual firms may differ from the average depending on the size and initial probability.

The impact analysis for the processing industry is more difficult to do than for the farm sector because firm-level data sets, similar to those available for farms, are not as readily accessible. Data from several Statistics Canada sources were therefore used in the analysis. Description and source of the data are contained in Appendix C.

The analysis follows the same general methodology as for the farm level analysis, combining information from both data sources in each of five food-processing industries. The results are synthetic firms with cost structures similar to those found in both surveys. Changes in prices from the market-level analysis are combined with an estimate of cost recovery charges at the firm level. Special attention is given to the prices of the primary agricultural inputs as well, so that changes in input prices are also incorporated. The analysis focuses on the effect on the profit margin and the rate of return to assets. The calculated impacts on an average firm are a reference point for individual food-processing firms to compare. The impact on a specific firm cannot be measured due to the confidentiality and unavailability of the firm-level data.

5.1.1 Industry Analysis and Results

Industry-level estimates of the impacts of cost recovery on five food-processing industries are given in Table 5.1. The calculations are based on SIC-E¹ data collected from the Annual Survey of Manufacturers by Statistics Canada.

1. The acronym SIC-E refers to the Standard Industrial Classification system for enterprises. Similarly, SIC-C refers to company data. The differences have been discussed in the text.

Table 5.1: Average Cost Recovery Impact by Processing Industry using 1995 Data (\$'000 per establishment)

	Red Meat	Poultry Meat	Dairy	Fruit & Vegetable	Feed
Number of Enterprises	457	100	270	194	466
Baseline (Without Cost Recovery)					
Value of Shipments	22,471	27,812	34,837	22,390	8,390
Operating Expenses	21,834	26,815	32,803	20,008	7,988
Net Operating Income	637	997	2,034	2,382	403
Net Income	249	293	854	1,114	146
Operating Margin (%)	2.3	2.7	4.1	7.8	3.7
Profit Margin (%)	1.1	1.1	2.5	5.0	1.7
Direct Charges	32	38	5	4	2
With Cost Recovery					
Value of Shipments	22,475	27,845	34,846	22,390	8,386
Operating Expenses	21,860	26,849	32,812	20,012	7,978
Net Operating Income	615	995	2,033	2,378	408
Net Income	228	291	853	1,110	151
Operating Margin (%)	2.2	2.7	4.1	7.8	3.7
Profit Margin (%)	1.0	1.0	2.4	5.0	1.8
Change Resulting from Cost Recovery					
Operating Margin (%)	-0.1	0.0	0.0	0.0	0.1
Profit Margin (%)	-0.1	0.0	0.0	0.0	0.1

At the industry level, results indicate that impacts of cost recovery vary from one industry to another for all five food-processing industries. The red meat industry suffers a noticeable decline in operating income. This decline in income, about 3.4%, occurs because the red meat industry cannot pass its increased costs to suppliers and consumers as easily as some industries, such as the supply managed industries. Conversely, operating income in the feed-processing industry increases 1.4% because the decline in feed grain prices at the farm-gate more than offset the higher fees paid by the industry.

The following sections of this chapter examine the five food-processing industries in greater detail. Specifically, the analysis focuses on four different sizes of firms in each of the industries to determine detailed impacts of cost recovery at the firm level.

5.2 Firm-Level Impacts: Red Meat Processing Industry

5.2.1 Overview

Red meat processors produce a wide variety of meat products, ranging from fresh and frozen carcasses and cuts, to sausages, delicatessen meats, and cured, smoked, canned and cooked meat products. The red meat processing industry had sales of about \$10.1 billion in 1996 (Table 5.2). It is the largest food-processing industry in Canada with about 20% of total food-processing industry sales.

In 1995, there were 520 livestock slaughtering/processing plants which were federally registered. Federally inspected plants account for about 93% of the commercial production of red meats. In 1996, total sales to federally inspected plants were 2.8 million cattle and 14 million hogs. Total 1996 production was 0.9 million tonnes of beef and 1.14 million tonnes of pork. Canada exported 0.29 million tonnes of beef and 0.39 million tonnes of pork. Imports were 0.18 million tonnes and 0.04 million tonnes, respectively. The top four beef-processing plants account for about 75% of slaughter; two of the largest plants are US-owned. Pork processing is less concentrated with the top 10 plants accounting for 63% of slaughter; over 95% of firms are Canadian-owned.

The value of shipments in the red meat processing industry, measured in current dollars, increased from \$8.7 billion in 1988 to \$10.1 billion in 1996, an average annual growth rate of 1.9%. Shipments declined in 1991 and 1992. Production, measured in constant dollar terms, shown in the last column of Table 5.2, is flat, showing almost no change over the period. Investment in the industry is more variable and ranges between \$128.8 million and \$228.2 million over the 1988-95 period. Investment increased dramatically in 1996 to \$411.9 million and is expected to increase further to \$509.5 million in 1997. The investment was mostly for new equipment and upgraded facilities.

Table 5.2: Trends in Output and Investment in the Red Meat Processing Industry

Year	Gross Investment (\$million)	Investment Index	Value of Shipments (\$million)	Production Index
1988	141.5	100.0	8,744	100.0
1989	228.2	157.2	8,723	100.7
1990	128.8	88.5	8,927	99.1
1991	160.9	113.9	8,487	96.2
1992	164.3	123.4	8,251	97.3
1993	170.1	128.0	9,216	98.1
1994	195.5	139.0	9,530	100.5
1995	176.7	129.0	9,638	99.9
1996	411.9	299.5	10,097	99.7
1997	509.5	338.5		

Source: Statistics Canada, Manufacturing Industries, 1997, Catalogue No. 31-203.

There was a 15% decline in the number of establishments in the red meat and meat products industry in the 1988-96 period. This resulted in a 16% increase in the average sales per establishment in constant dollar terms. The increase in sales per establishment among large establishments was as much as 55%. During the same time period, labour productivity, as measured by real sales per employee, increased 23% for large establishments, but declined 7% for small and medium sized establishments. Clearly, the industry has been going through a significant restructuring in the 1990s.

Profitability in the industry was also highly variable in the 1990s, as shown in Table 5.3 for micro, small, medium and large firms. The data were obtained from Statistics Canada's CALURA data². Micro-size firms were defined as those (in Statistics Canada's sample) with annual sales of less than \$1 million. The firms in the sample with more than \$1 million sales were divided into three equally-sized groups, small, medium and large, on the basis of 1994 sales. The levels of sales obtained from calculating tertiles for 1994 were applied to the other years where data were available. The sample does not include firms in which less than 50% of revenue is derived from sales of red meat products. Unfortunately, multi-product conglomerates produce a large proportion of production and include many of the large-scale enterprises. Consequently, the results here are somewhat biased toward small- and medium-size firms.

The profit margin, defined here as net income before taxes as a percentage of total revenue, is generally less than 3% in the red meat industry. Profit margins are industry- and even firm-specific because they are closely related to the turnover rate. Turnover rate is measured by the amount of input transformed into output through a processing line in a given period of time. Firms with a high turnover rate can be very profitable even with a low profit margin, while firms with a low turnover rate can be failing with a high profit margin. The profit margin for micro-size firms is in fact negative for two of the five years and one of three years for the small-size firms.

The rate of return to assets (ROA) is net income plus interest paid, divided by total assets (Table 5.3). ROA is generally the best indicator of the competitiveness of a firm, though factors such as depreciation and extraordinary sources of income or costs can render this indicator misleading at times. During the period 1992-94 the ROA of all but the large firms was low while the large firms were very profitable. The performance of the profit margins of small and medium firms in 1995 and 1996 suggests that they too became more profitable in those years.

2. See Appendix C for a description of the data.

Table 5.3: Trends in Margins and Returns in the Red Meat Processing Industry

	Firm Size			
	Micro	Small	Medium	Large
Profit Margin (%)				
1992	-0.7	N/A	0.2	1.0
1993	0.5	N/A	1.1	1.7
1994	0.2	-2.2	0.4	2.6
1995	1.1	2.1	2.9	0.7
1996*	-0.2	1.6	2.6	0.7
Return to Assets (%)				
1992	1.5	N/A	2.9	8.6
1993	5.0	N/A	4.0	10.6
1994	1.1	-2.9	0.2	16.2

* Preliminary data based on tax returns.

5.2.2 Cost Recovery

Our analysis of the impact of cost recovery fees is based on a baseline defined as the average financial position of the firms in the four size categories for the period 1992-94. Net operating income is defined as revenue less cash expenses, while net income (before taxes) equals net operating income less depreciation. The return on equity (ROE) is presented in Table 5.4 because it is an important financial indicator for investors. The analysis of cost recovery includes the effects on revenue and costs, through changing the prices received for meat and the prices paid for live animals, as well as the increases in direct charges to the firm.

Table 5.4: Baseline Financial Position of Red Meat Processing Firms without Cost Recovery

	Firm Size			
	Micro	Small	Medium	Large
Total Revenue (\$'000)	341	1,820	6,855	50,014
Total Expenses (\$'000)	338	1,828	6,797	48,674
Net Operating Income (\$'000)	3	-8	58	1,341
Net Income (\$'000)	0	-41	23	889
Profit Margin (%)	0.0	-2.2	0.3	1.8
Return to Assets (%)	1.8	-2.9	2.6	11.9
Return to Equity (%)	0.0	-11.0	3.5	28.7

For the red meat processing industries, CFIA established fee schedules for slaughter facilities based upon the number of lines and annual hours of operation. Five fee categories, corresponding to CFIA's costs, were established for red meat processing facilities. Fees are based upon the operating hours per year of the processing establishments, the complexity of the operation and the risk to health and safety of the processing operation.

The proposed total cost recovery by all federal departments for meat inspection and other services is estimated to be \$12.4 million for the red meat industry. A breakdown of the total fees for the red meat processing industries by small, medium and large companies is given in Table 5.5. Estimates are based upon the proposed CFIA fee schedules and typical characteristics of firms in each size range. The fees from other federal departments, which are relatively minor, are added to the CFIA fees based on the level of sales. Smaller firms bear a relatively higher cost recovery burden than their larger counterparts because it is inherently more expensive to inspect smaller plants. Costs are spread over smaller production runs.

Table 5.5: Cost Recovery per Firm for Red Meat Processing

	Firm Size		
	Small	Medium	Large
Total Cost Recovery	\$13,900	\$27,900	\$58,200
Cost Recovery per Firm as a percentage of:			
Sales of Goods and Services	0.77%	0.42%	0.12%
Operating Expenses	0.76%	0.41%	0.12%
Total Assets	1.84%	1.82%	0.60%

Measured as a percentage of an average firm's asset value, cost recovery fees are 1.84%, 1.82% and 0.60% for average small, medium and large firms respectively. Note that these are direct impacts only, before any of the costs pass to consumers and farmers. Micro-size firms are assumed to operate only in local niche markets and pay no federal cost recovery fees.

5.2.3 Impact of Cost Recovery

The response to cost recovery fees by the red meat processing industry takes place on the quantity side because competition forces volumes to adjust. As shown in Table 5.6, the ROA increases 0.1% for micro-size firms because they pay no fees and because live animal prices decline while finished product prices increase. The ROA declines 1.7% for small firms. It is down for medium and large firms 1.6% and 0.4%, respectively. The profit margin does not change for micro firms. Profit margin is reduced for small, medium and large firms 0.7%, 0.4% and 0.1%, respectively, due to cost recovery.

Table 5.6: Impact of Cost Recovery on Red Meat Processing Firms

	Firm Size			
	Micro	Small	Medium	Large
With Cost Recovery (\$'000)				
Total Revenue	341	1,820	6,856	50,024
Total Expenses	338	1,841	6,823	48,717
Net Operating Income	3	-21	33	1,307
Net Income	0	-54	-1	855
Profit Margin (%)	0.1	-3.0	0.0	1.7
Return to Assets (%)	1.9	-4.7	1.0	11.6
Return to Equity (%)	0.2	-14.5	-0.2	27.6
Change Resulting from Cost Recovery				
Profit Margin (%)	0.0	-0.7	-0.4	-0.1
Return to Assets (%)	0.1	-1.7	-1.6	-0.4
Return to Equity (%)	0.1	-3.5	-3.7	-1.1

Large red meat processing firms perform well and will likely continue to do so after the imposition of cost recovery fees. Small- and medium-size firms encounter more difficulties in the current markets and will be most affected by cost recovery fees.

5.3 Firm-Level Impacts: Poultry Meat Processing Industry

5.3.1 Overview

The poultry meat industry consists of establishments primarily engaged in slaughtering, dressing, packing or canning chickens, turkeys, ducks, geese and game birds. The poultry meat processing industry has sales of about \$2.2 billion (Table 5.7) which account for 5.6% of the total sales of all food-processing industries in Canada. Poultry meat accounts for about one-third of total meat consumption. Sales of further-processed poultry meats, which are used as ingredients in other food products, are also growing. Federally inspected plants account for about 95% of the commercial production of poultry meat.

Table 5.7: Costs, Shipments and Value Added for the Poultry Meat Processing Industry, 1996

Wages	Cost of Materials and Supplies	Value of Shipments	Value Added
(\$ million)			
343	1,805	2,533	624

Source: Statistic Canada, Manufacturing Industries, 1997, Catalogue No. 31-203.

In 1995, there were 100 primary and further-processed processing plants of poultry meat in Canada, including about 90 federally registered. Total volume of slaughtering in federally inspected plants was about 650 million birds. Of the estimated \$3 billion in total poultry meat shipments in 1996, an estimated \$2.3 billion were for chicken, \$0.4 billion for turkey, and \$0.3 billion for poultry meat of other species (duck, geese and game birds). Poultry meat cuts accounted for about 40% of total industry shipments. Shipments of processed egg products were about \$0.1 billion.

The sub-sector industry is entirely Canadian owned and managed. Currently, the four largest processors of poultry meat operate two or more plants in two or more provinces and account for over 50% of total production. Ontario and Quebec are the major producing regions, accounting for 66% of shipments and 61% of plants in 1995. Ontario alone accounts for 41% of the shipments and 34% of the plants.

The industry is domestically-oriented, but trade is growing in importance. In 1996, exports were approximately \$77 million, compared to \$15 million in 1988, and accounted for about 2.6% of total production. Canada has also become a net exporter of turkey products. Poultry meat exports to the US have almost doubled since 1988 and now account for about 21% of the total.

At the same time, annual poultry meat imports have increased from \$82 to \$222 million, with 95% of that total coming from the US. Imports have increased partly as a result of the 1989 Canada-US Free Trade Agreement. The 1996 imports of \$222 million are composed of \$137 million of poultry meat (primarily chicken parts) and \$85 million of further-processed products. Imports of further-processed products are experiencing the greatest growth having increased from \$30 million in 1988.

5.3.2 Cost Recovery

In consultation with the poultry meat processing industry, the CFIA established fee schedules for each area identified, similar to the fee structure of the red meat slaughtering and processing establishments. Fees for poultry slaughtering facilities are based upon the number of slaughtering lines and annual hours of operation.

Table 5.8: Baseline Financial Position of Poultry Meat Processing Firms without Cost Recovery

	Firm Size			
	Micro	Small	Medium	Large
Total Revenue (\$'000)	132	2,692	5,539	52,930
Total Expenses (\$'000)	113	2,574	5,040	51,801
Net Operating Income (\$'000)	19	117	498	1,129
Net Income (\$'000)	14	9	181	641
Profit Margin (%)	10.3	0.3	3.3	1.2
Return to Assets (%)	5.5	3.0	7.3	8.1
Return to Equity (%)	6.0	8.7	55.1	15.0

For the poultry meat industry, the proposed cost recovery would be \$3.5 million. A breakdown of the total fees is given in Table 5.9 for small, medium and large companies. Estimates of fees are based upon the CFIA fee schedules and typical characteristics of firms in each size range. Similar to the red meat processing industry, smaller firms bear a relatively higher burden of cost recovery than their larger counterparts because it is inherently more expensive to inspect smaller plants. Costs are spread over smaller production runs. The high return on equity for medium-size firms should be noted. Medium-size firms tend to be cooperatives, with relative low levels of equity, resulting in a ROE being calculated.

Table 5.9: Cost Recovery per Firm for Poultry Meat Processing

	Firm Size		
	Small	Medium	Large
Total Cost Recovery	\$13,300	\$27,900	\$60,500
Cost Recovery per Firm as a percentage of:			
Sales of Goods and Services	0.49%	0.50%	0.11%
Operating Expenses	0.51%	0.55%	0.12%
Total Assets	0.76%	0.70%	0.46%

Measured as a percentage of an average firm's asset value, cost recovery fees are 0.76%, 0.70% and 0.46% for average small-, medium- and large-size firms, respectively. This is the direct impact of fees charged by all federal departments. The rate of return to assets would decline by this amount unless some of the costs pass forward to consumers in the form of higher poultry meat prices. Micro-size firms are assumed to pay no cost recovery fees.

5.3.3 Impact of Cost Recovery

A small decrease in live bird prices is anticipated under the market adjustments that occurs as a result of cost recovery. Table 5.10 shows the impact on micro, small, medium and large firms. The critical variable for the comparison is the rate of return on assets, since the return on equity also reflects the effect of debt structure, which can change rapidly as debt is renegotiated. Micro-size firms, who are assumed to pay no fees, show an increase of 0.1% because of a slightly higher price for their output. Small firms would show a 0.6% decline in their rate of return on assets while the rate for medium firms would decline 0.5%. The rate for large firms increases by 0.1%. The profit margin is up for micro firms by 0.1%, but down for both small and medium firms by 0.4%. The rate for large firms does not change due to cost recovery. With a supply managed structure in poultry, it is possible that larger poultry meat firms are less affected by impact of cost recovery than small firms, while input prices remain relatively fixed.

Consumer prices are adjusted to absorb all of the impacts of cost recovery on firms in the poultry industry. This means that the impact on the industry is entirely expressed as reduced production. However, the effect on individual firms can be quite different from the effect on the industry as a whole. Cost recovery per unit of product is not the same for all firms. Therefore, a firm with above average cost recovery fees will not receive sufficient compensation from the market in the form of higher prices. A firm with below average cost recovery fees may benefit as a result of the market adjustments due to cost recovery.

Table 5.10: Impact of Cost Recovery on Poultry Meat Processing Firms

	Firm Size			
	Micro	Small	Medium	Large
With Cost Recovery (\$'000)				
Total Revenue	132	2,695	5,545	52,991
Total Expenses	113	2,587	5,067	51,852
Net Operating Income	19	108	478	1,139
Net Income	14	-1	160	651
Profit Margin (%)	10.4	0.0	2.9	1.2
Return to Assets (%)	5.5	2.4	6.8	8.1
Return to Equity (%)	6.0	-1.2	48.8	15.2
Change Resulting from Cost Recovery				
Profit Margin (%)	0.1	-0.4	-0.4	0.0
Return to Assets (%)	0.1	-0.6	-0.5	0.1
Return to Equity (%)	0.1	-9.9	-6.3	0.2

5.4 Firm-Level Impacts: Other Dairy Processing Industry

5.4.1 Overview

The dairy processing industry is composed of two components. The first includes companies primarily engaged in the processing of raw milk into packaged fluid milk products. The second includes companies involved in processing industrial milk into other dairy products such as butter, ice cream, cheese and milk powders. The dairy processing industry had shipments valued at \$7.7 billion in 1995, making it the second largest component of the food and beverage processing industry after meat and meat products. About 16% of all food and beverage purchases are dairy products. Dairy products are also in demand by other food processors who use butter, cheese and milk powder as key ingredients in foods such as soups, pizzas, baked goods, confectionery products and frozen entrees.

Table 5.11: Costs, Shipments and Value Added for the Dairy Processing Industry, 1995

Wages	Cost of Materials and Supplies	Value of Shipments	Value Added
(\$ million)			
495	5,675	7,796	1,975

Source: Statistics Canada, Manufacturing Industries, 1997, Catalogue No. 31-203.

In 1996, the dairy industry processed 6.67 billion litres of raw milk and 14.6 million litres of raw cream. There are about 270 dairy processing plants that employ about 22,000 people. The dairy processing industry is domestically-oriented with relatively limited export and import

activity. The dairy industry generated a small positive balance of trade in 1996 (\$43 million), with exports of \$386.3 million. However, these exports represented only 3-4% of total food and beverage processing industry shipments and about 1.6% of all agri-food exports. The main products exported were cheese to the US and the EU and milk powder to a range of third-world countries. Imports totalled \$343.8 million in 1996 (4% of the domestic dairy market). Cheese, particularly specialty cheese, is the major import coming primarily from the EU and the US.

Dairy processing has followed the same rationalization process as some other food and beverage processing industries with a trend to fewer, but larger, plants operated by fewer companies. Since the early 1990s, the rationalization in the number of plants and firms has been accompanied by new investment and by a significant amount of merger and acquisition activity. Statistics Canada reports that the number of plants in 1995 were about half of the number of plants that existed in 1975. During 1990-96, capital investment in new buildings and state-of-the-art production equipment exceeded \$1.3 billion. Ownership has become highly concentrated, with foreign multinationals becoming more prominent players. Three organizations currently have annual dairy product sales in excess of \$1 billion. Ontario and Quebec account for over 60% of all plants and about 75% of all output. Ontario is the leading producer of fluid milk and ice cream, while Quebec is the leading producer of butter, cheese and yogurt.

5.4.2 Cost Recovery

Table 5.12 shows the baseline results for micro, medium and large firms before the imposition of cost recovery fees.

Table 5.12: Baseline Financial Position of Other Dairy Processing Firms without Cost Recovery

	Firm Size			
	Micro	Small	Medium	Large
Total Revenue (\$'000)	366	-	14,607	228,921
Total Expenses (\$'000)	338	-	14,096	219,413
Net Operating Income (\$'000)	28	-	511	9,508
Net Income (\$'000)	10	-	209	6,451
Profit Margin (%)	2.7	-	1.4	2.8
Return to Assets (%)	4.6	-	4.2	9.0
Return to Equity (%)	24.3	-	6.8	14.9

For the purposes of this chapter, only the further-processed dairy products (excluding fresh fluid milk) were included. As explained in Chapter 3, the dairy industry is not greatly affected by cost recovery fees because the increased cost recovery fees can be passed on to the consumers; the primary effect on industry would be a small decline in output, resulting from declining demand due to higher consumer prices.

Table 5.13: Cost Recovery per Firm for Other Dairy Processing Firms

	Firm Size		
	Small	Medium	Large
Total Cost Recovery	-	\$2,100	\$13,200
Cost Recovery per Firm as a percentage of:			
Sales of Goods and Services	-	0.01%	0.01%
Operating Expenses	-	0.01%	0.01%
Total Assets	-	0.02%	0.01%

Total cost recovery fees are expected to be about 0.01% of sales for the other dairy processing. Micro firms pay no cost recovery fees and data for small firms were not available.

5.4.3 Impact of Cost Recovery

An increase in the price of fluid milk would affect fluid milk processing plants equally (Table 5.14 shows the impact of market adjustment on micro, medium and large firms; data for small firms were not available.) Neither returns to assets nor profit margins change due to cost recovery, and micro firms' return to equity are affected only slightly.

Table 5.14: Impact of Cost Recovery on Other Dairy Processing Firms

	Firm Size			
	Micro	Small	Medium	Large
With Cost Recovery (\$'000)				
Total Revenue	367	-	14,610	228,980
Total Expenses	338	-	14,101	219,470
Net Operating Income	28	-	509	9,510
Net Income	10	-	207	6,453
Profit Margin (%)	2.7	-	1.4	2.8
Return to Assets (%)	4.6	-	4.1	9.1
Return to Equity (%)	24.4	-	6.8	14.9
Change Resulting from Cost Recovery				
Profit Margin (%)	0.0	-	0.0	0.0
Return to Assets (%)	0.0	-	0.0	0.0
Return to Equity (%)	0.1	-	0.0	0.0

* Estimates are not available for small other dairy processing firms.

5.5 Firm-Level Impacts: Fruit and Vegetable Processing Industry

5.5.1 Overview

The fruit and vegetable industry comprises two industries that are categorized according to their dominant method of processing. The first is the canned/preserved fruits and vegetables industry. The second is the frozen fruits and vegetables industry. These two industries are engaged primarily in canning, drying, preserving and freezing fruits and vegetables to produce juices, soups, pickles, ketchup and similar fruit and vegetable products.

Total shipments of processed fruit and vegetable products in 1996 were \$3.8 billion, which represented about 7% of total food sector shipments. In 1995, the latest year for which data are available, this industry consisted of 194 establishments employing 18,141 people. The industry is highly concentrated, with the top four firms accounting for more than 48% of production.

Table 5.15: Costs, Shipments and Value Added for the Fruit and Vegetable Processing Industry, 1995

Wages	Cost of Materials and Supplies	Value of Shipments	Value Added
(\$ million)			
358	1,923	3,760	1,781

Source: Statistics Canada, Manufacturing Industries, 1997, Catalogue No. 31-203.

In 1995, 159 canning/preserving establishments, including approximately 90 juice/drink plants, employed 12,467 people. This industry had \$2.5 billion in shipments in 1996. Many of the major canning companies in Canada are subsidiaries of US multinational enterprises (MNEs). Plants are located close to agricultural production areas, primarily in central Canada and British Columbia. The fruit and vegetable canning/preserving industry relies heavily on the domestic market with less than 10% of shipments exported.

In contrast, the frozen fruit and vegetable industry, about one-half the size of the canning/preserving industry, tends to be Canadian-owned. In 1995, 35 frozen fruit and vegetable establishments employed 5,674 people and had shipments of \$1.2 billion in 1996. The export orientation of this industry is greater than that of the canning industry. About 31% of production is exported. Moreover, the frozen fruit and vegetable industry is more concentrated than the canning industry.

Due in part to climate and other limitations on what can be grown, the processed fruit and vegetable industry consistently records trade deficits representing about 22% of the value of shipments. The bulk of trade is carried out with the US, a relationship that has strengthened since the 1988 Canada-US trade agreement. Since 1988, growth in imports has exceeded growth in exports, and the trade deficit for processed fruit and vegetable products increased by almost 50%. This aggregate trend masks the positive trade performance of frozen fruit and vegetable products. A \$107 million deficit in 1988 became a modest surplus in 1993, which grew to \$83 million in 1996.

The fruit and vegetable industry is one of the more diversified food industries. Agricultural growing seasons impose a seasonal pattern on many processing operations. Consequently, many firms attempt to counter this cycle by manufacturing products ranging from simple processed products to higher value-added products such as soups, condiments and juices, in many instances relying on imported inputs.

5.5.2 Cost Recovery

The baseline results are shown in Table 5.16 for micro, small, medium and large firms in the fruit and vegetable processing industry before the imposition of cost recovery fees.

Table 5.16: Baseline Financial Position of Fruit and Vegetable Processing Firms without Cost Recovery

	Firm Size			
	Micro	Small	Medium	Large
Total Revenue (\$'000)	363	2,436	5,299	87,256
Total Expenses (\$'000)	321	2,333	4,934	80,336
Net Operating Income (\$'000)	43	103	364	6,920
Net Income (\$'000)	28	70	257	5,318
Profit Margin (%)	7.8	2.9	4.8	6.1
Return to Assets (%)	5.4	9.6	9.3	9.4
Return to Equity (%)	7.1	34.7	19.9	15.3

Cost recovery fees are 0.13%, 0.06% and 0.01% of asset values for small, medium and large firms, respectively (Table 5.17). Micro-size firms are assumed to operate in niche markets and therefore do not pay cost recovery fees.

Table 5.17: Cost Recovery per Firm for Fruit and Vegetable Processing Firms

	Firm Size		
	Small	Medium	Large
Total Cost Recovery	\$1,000	\$1,900	\$6,500
Cost Recovery per Firm as a percentage of:			
Sales of Goods and Services	0.04%	0.04%	0.01%
Operating Expenses	0.04%	0.04%	0.01%
Total Assets	0.13%	0.06%	0.01%

5.5.3 Impact of Cost Recovery

The impact of market adjustment is shown in Table 5.18 for micro, small, medium and large firms. Neither micro nor large processing firms show any decline in their rates of return on assets as a result of cost recovery. Return on assets declines by 0.1% for both small and medium firms. The calculations indicate that the profit margin has hardly changed for any size of firm due to the low per firm-level of cost recovery for this industry.

Table 5.18: Impact of Cost Recovery on Fruit and Vegetable Processing Firms

	Firm Size			
	Micro	Small	Medium	Large
With Cost Recovery (\$'000)				
Total Revenue	363	2,436	5,299	87,256
Total Expenses	321	2,334	4,936	80,342
Net Operating Income	43	102	362	6,914
Net Income	28	69	255	5,311
Profit Margin (%)	7.8	2.8	4.8	6.1
Return to Assets (%)	5.4	9.5	9.2	9.4
Return to Equity (%)	7.1	34.2	19.7	15.3
Change Resulting from Cost Recovery				
Profit Margin (%)	0.0	0.0	0.0	0.0
Return to Assets (%)	0.0	-0.1	-0.1	0.0
Return to Equity (%)	0.0	-0.5	-0.1	0.0

5.6 Firm-Level Impacts: Feed Processing Industry

5.6.1 Overview

The feed processing industry is composed of companies that process and prepare feed for animals such as livestock, horses, fish and pets. In 1995, the feed processing industry had shipments valued at \$3.5 billion which accounted for 7.7% of the total sales of all feed processing industries in Canada (Table 5.19).

Table 5.19: Costs, Shipments and Value Added for the Feed Processing Industry, 1995

Wages	Cost of Materials and Supplies	Value of Shipments	Value Added
(\$ million)			
180	2,622	3,457	778

Source: Statistics Canada, Manufacturing Industries, 1997, Catalogue No. 31-203.

There are about 466 feed processing plants in Canada. The total number of employees of the feed industry is about 9,000. Value added as a percentage of shipments is 22%. Canada exported \$534 million of feed in 1996 while importing \$455 million, resulting in a trade surplus of \$80 million.

5.6.2 Cost Recovery

The baseline results are shown in Table 5.20 for micro, small, medium and large firms in the feed processing industry before the imposition of cost recovery fees.

Table 5.20: Baseline Financial Position of Feed Processing Firms without Cost Recovery

	Firm Size			
	Micro	Small	Medium	Large
Total Revenue (\$'000)	224	1,774	5,251	33,667
Total Expenses (\$'000)	235	1,698	5,074	32,378
Net Operating Income (\$'000)	-11	76	177	1,289
Net Income (\$'000)	-15	58	142	843
Profit Margin (%)	-6.7	3.2	2.7	2.5
Return to Assets (%)	-3.4	5.8	7.9	8.7
Return to Equity (%)	-9.8	7.6	12.0	18.4

Cost recovery charges are relatively low in the feed processing industry. Note that 81% of cost recovery fees originate with organizations other than the CFIA, and primarily represent charges by Transport Canada.

Cost recovery fees are 0.06%, 0.10% and 0.08% of asset values for small, medium and large firms, respectively (Table 5.21). Micro firms are assumed to pay no cost recovery fees.

Table 5.21: Cost Recovery per Firm for Feed Processing Firms

	Firm Size		
	Small	Medium	Large
Total Cost Recovery	\$800	\$2,200	\$12,200
Cost Recovery per Firm as a percentage of:			
Sales of Goods and Services	0.05%	0.04%	0.04%
Operating Expenses	0.05%	0.04%	0.04%
Total Assets	0.06%	0.10%	0.08%

5.6.3 Impact of Cost Recovery

A decline in the feed grain prices is anticipated and would affect feed processing plants equally. Table 5.22 shows the impact with market adjustment on micro, small, medium and large firms. The rate of return on assets is up by 0.1% for micro and small firms; it is up by 0.2% for medium and large feed processing firms. Profit margin increases by 0.1% for all sizes of firms due to cost recovery.

Table 5.22: Impact of Cost Recovery on Feed Processing Firms

	Firm Size			
	Micro	Small	Medium	Large
With Cost Recovery (\$'000)				
Total Revenue	224	1,773	5,249	33,651
Total Expenses	234	1,696	5,068	32,338
Net Operating Income	-11	77	181	1,313
Net Income	-15	59	145	867
Profit Margin (%)	-6.6	3.3	2.8	2.6
Return to Assets (%)	-3.3	5.8	8.0	8.9
Return to Equity (%)	-9.6	7.8	12.3	18.9
Change Resulting from Cost Recovery				
Profit Margin (%)	0.1	0.1	0.1	0.1
Return to Assets (%)	0.1	0.1	0.2	0.2
Return to Equity (%)	0.2	0.1	0.3	0.5

5.7 Concluding comments

This report measures the cumulative impact of selected federal cost recovery initiatives on the agri-food sector in Canada. Impacts are described in terms of aggregate effects across the entire sector, in terms of average effects on individual industries, and in terms of the effects on specific benchmark farms and processing establishments. Impacts are also expressed both in absolute dollars and as a percentage change in net operating income and/or other financial indicators. There is no established standard against which to judge whether a given impact, however expressed, is "too high or too low". No such judgements are made.

However, it may be useful to look more closely at those industries that are most affected by cost recovery. Expressed as a percentage change in net operating income, the impact on the various industries that make up the agri-food sector ranges from virtually zero to minus 3.4%. With the exception of the four industries further discussed below, the average impacts on other agri-food industries are less than 1% of net operating income.

Red Meat Processing

In general the impact of cost recovery is much smaller on the processing industry than on the primary production. The only exception to this is red meat processing, where cost recovery fees amount to 3.4% of net operating income. This impact, however, is very dependant on firm size. Net operating income is low for medium size firms and actually negative for small firms for the period examined (1992-94), but high for large size firms. In 1995 and 1996, the financial situation of small and medium size firms improved while that of large size firms deteriorated somewhat. Cost recovery lowers returns on assets by 1.7% and 1.6% for small and medium size firms, respectively, and by 0.4% for large firms. Cost recovery rates for red meat processors are very low, around 15% of the total cost of services. However, the industry has little scope for passing cost recovery fees on to either suppliers or consumers.

The industry has been undergoing rapid restructuring, with investment increasing by 200% and new large scale production facilities being established in western Canada. The changes in the WGTA and introduction of the NAFTA are primary factors which have increased the opportunities for the industry. The negative impact of cost recovery appears small, relative to other factors affecting the industry. However, because of its larger impact on smaller firms, cost recovery may further contribute to the forces behind restructuring of this industry.

Cattle Farms

On average, cost recovery fees represent 3.2% of net operating income. Most of the cost recovery fees affecting this industry are for grazing cattle on community pastures in Saskatchewan and Manitoba. These fees are for a service that is only available in specific regions; the farmers who use the service on a voluntary basis are in competition with farmers in other provinces who must pay all the ownership or rental costs of land used for grazing. Community pastures provide largely private goods, and appear appropriate candidates for cost recovery or private sector management.

Potato Farms

The average impact on all potato farms is estimated to be 2.7% of net operating income; for seed potato farms in PEI and New Brunswick, in particular, the impact varied from 1.6 to 7.5% of net operating income depending upon size of operation and the market being produced for. The seed potato industry uses a large amount of CFIA services relative to sales and cost recovery accounts for a small percentage of the cost of those services. Potato producers, including those in the maritime provinces, consistently have some of the highest net operating incomes of all farmers in Canada. On average, relatively high fees appear not to be out of balance with high incomes in the industry, and the high level of services demanded and used by the industry.

Grain and Oilseed Farms

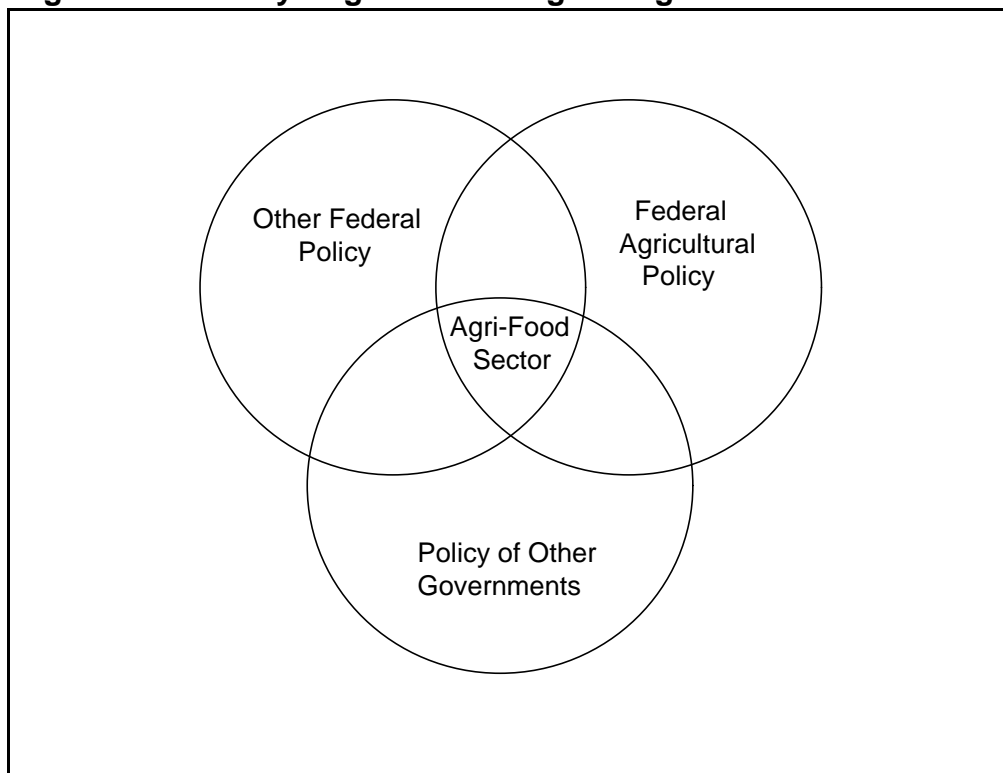
Grain and oilseed producers use services mostly associated with marketing and exports, paying 100% of the cost of those services. The impact on net operating income averages 2.5%. This high rate of cost recovery has been in place for some time, not different from the situation for most industries in other sectors of the economy. As well, similar quality assurance services for other agri-food industries tend to be fully cost recovered.

Appendix A: The Context for Cost Recovery in the Agri-food Sector

A.1 Introduction

Federal cost recovery is one of many issues which concern the agri-food sector. The sector is affected by conditions beyond government's control such as markets and climate as well as by policies of different governments. There are three main categories of policy identified in Figure A.1: federal agricultural policy, other federal policy and policy of other governments. The agri-food sector is at the centre of the overlapping circles of responsibility. In this appendix, the most significant changes in each of these policy areas are described.

Figure A.1: Policy Regime Affecting the Agri-food Sector



A.2 Federal Agriculture Policy

Significant policy reforms occurred both in Canada and internationally which coincided with changes in cost recovery. A number of factors contributed to these reforms including:

- fiscal difficulties faced by governments,
- disciplines arising out of the WTO Agreement on Agriculture,
- higher prices for some commodities, which reduced the need for income support, and
- a desire to reduce the role of government in the producer decision-making process, thus allowing resource allocation to better respond to market signals.

In Canada, government spending in the agri-food sector was significantly reduced as a result of policy and program changes:

- Subsidies for the transport of prairie grains were terminated in July 1995. The government commitment under the *Western Grain Transportation Act* peaked at \$726.1 million in 1992-93¹. Transition payments of \$1.6 billion (a capital payment to land owners) and \$300 million in complementary adjustment funding were provided to facilitate required adjustments.
- Feed freight subsidies, which totaled \$19.6 million in 1994-95, were eliminated in December 1995. Sixty million dollars in transition payments were provided to feed grain users over three fiscal years to assist in required adjustments.
- The *Atlantic Region Freight Assistance Act* (ARFAA) and the *Maritime Freight Rates Act* (MFRA) provided subsidies to shippers in the Atlantic region to reduce transportation costs for shipments to central Canadian markets. The subsidy costs about \$99 million per year, of which \$26.7 million benefited agricultural commodities. These were eliminated in July 1995, but a \$326 million transition adjustment program, to be paid over five years, implemented to facilitate adjustment.
- Safety net policies were restructured. Commodity-specific price/income supports (GRIP except in Ontario, NTSP, etc.) were replaced by a whole farm program (NISA) and province-specific companion programs. Federal spending on these programs, including Crop Insurance, now totals about \$600 million/year. This is much less than in some earlier years. Much of the previous spending was targeted to the grains and oilseed sector, in response to export subsidy programs maintained in the US and EU.
- The federal dairy subsidy was reduced from \$160 million to \$128 million and is scheduled to be phased out by February 2002.

1. Actual expenditures varied above and below the government commitment depending on the volume of grain shipped under subsidized rates. The PSE is a measure of support to the agri-food sector arising from agricultural policies.

Agricultural policy support, as measured by the Producer Subsidy Equivalent (PSE)², fell from 43% of the value of production in 1986-88 to 22% in 1995-97, as shown in Table A.1. The level and degree of decline in producer support varies by commodity. The reduction was particularly sharp for grains and oilseeds. The PSE for wheat fell from 53% in 1986-88 to 16% in 1995-97 and to 10% in 1997, when compensation for the termination for freight subsidies ended. The decline was smaller but still significant for beef, milk and pork. The levels in 1995-97 were remarkably similar to those observed in the period 1979-81³. The OECD does not estimate a PSE for horticulture. However, other data suggest that policy transfers to the horticulture sector have declined by about 23%.

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2. The measure includes benefits accruing from government expenditures and benefits accruing from regulated markets for inputs or outputs. The PSE can be expressed in terms of total PSE (eg. dollars), as the percentage of gross income or as transfers per unit of output (eg. dollars/tonne).
 3. The PSE measures changes in support from both federal and provincial sources.

Table A.1: Producer Subsidy Equivalents as a Share of the Value of Production for Selected Commodities and Countries

	Average			% Change	
	1979-81	1986-88	1995-97	95-97/79-81	95-97/86-88
All					
Canada	20.0	42.7	21.7	8	-49
US	14.0	30.0	15.0	7	-50
EU	35.3	48.3	44.7	26	-8
Australia	8.7	10.7	9.0	4	-16
Japan	60.0	73.3	72.3	21	-1
Wheat					
Canada	14.0	50.7	15.7	12	-69
US	13.0	54.3	24.7	90	-55
EU	33.0	56.3	37.0	12	-34
Australia	7.0	11.0	8.0	14	-27
Japan	95.3	101.0	100.0	5	-1
Beef					
Canada	8.3	20.0	13.3	60	-33
US	5.3	7.0	4.7	-13	-33
EU	44.7	50.7	64.3	44	37
Australia	8.0	9.7	6.3	-21	-34
Japan	41.0	49.0	41.7	2	-15
Pork					
Canada	12.0	16.0	11.0	-8	-31
US	5.0	5.3	5.0	0	-6
EU	7.0	6.7	9.0	29	35
Australia	6.0	4.3	5.0	-17	15
Japan	48.0	44.3	63.3	32	43
Milk					
Canada	53.7	77.3	57.7	7	-25
US	55.3	63.7	44.3	-20	-30
EU	53.3	64.3	58.3	8	-9
Australia	23.3	31.0	22.7	-3	-27
Japan	85.0	90.3	84.3	-1	-7

A.3 Policy of Other Governments

The federal government is not the only level of government that makes policy decisions affecting the agri-food sector. Representatives from the Industry Advisory Committee expressed concern with many policy changes by other levels of government which may affect them adversely. Some of the issues raised include:

- provincial and local cost recovery charges;
- foreign cost recovery charges levied on Canadian exports; and
- changes in domestic and foreign regulations which may result in increased production or marketing costs for Canadian exports.

At the outset, it was agreed that this analysis would be restricted to federal cost recovery fees only. To attempt to include provincial and local fees was viewed as likely resulting in an excessively complex undertaking, with little prospect for an early conclusion.

The Atlantic Farmers Council, in their draft report on cost recovery, describes how regulatory controls of foreign governments negatively affects the Canadian industry. Canadian exports must satisfy the various health and quality standards established by the importing country, or in some cases, region. Whether the inspections and tests can be performed in Canada by the CFIA, the CGC, etc. or the inspections and tests are done in the importing country, and whether the tests are paid for by the Canadian exporter or the foreign importer, the effect on competitiveness is the same as a tariff. Examples include requirements of several American states for the “California” or “Florida” tests for seed potatoes exports; the EU requirement for ISTA testing for grass and legume seed exports; and the residue testing of wheat and barley required for exports to Japan.

Although these are all important concerns, they tend to be specialized and localized to specific commodity markets. The Government of Canada manages these issues directly with the foreign governments concerned. Recent representations made to resolve difficulties in Canadian seed potato exports to Mexico are an example. If necessary, new trade agreements provide a legal means to obtain fair treatment for Canadian exporters. Cost recovery policy is not an appropriate tool to address these specific and localized problems. By and large, the Industry Advisory Committee agreed that these issues, while important, were not a direct concern of this analysis.

Some of the most important policies affecting Canadian producers are the policies of other governments supporting their agri-food sectors. Reductions in support for the Canadian agri-food sector have coincided with policy changes made in several other countries, most notably the EU in 1992 and the US in 1996. Some of these changes are now described.

A.3.1 United States

The US *Federal Agriculture Improvement and Reform (FAIR) Act* of 1996 continues the market-oriented trend of the farm acts of 1985 and 1990. With the reduction of government involvement in agricultural markets, farmers are expected to face increased price variability and make more use of new risk-management tools.

The *FAIR Act* replaced deficiency payments for major crops with “production flexibility contract” (PFC) payments, which are fixed in dollar amount and are not based on market prices or on a producer’s current production. While income support was largely unrelated to current production under previous legislation (because of land use restrictions and regulations), the current PFC payment scheme is far simpler with almost no planting restrictions. Mandatory land-idling has been eliminated, although voluntary programs for conservation purposes still exist. “Loan rates” now provide some protection against lower prices, but such support prices are set at relatively low levels.

Support prices for milk will gradually decline and government purchases will cease in 2000. Government loans will then be available to help dairy processors manage stocks. The *FAIR Act* requires the USDA to reform and consolidate federal milk marketing orders. Consequently, the USDA has proposed cutting the number of orders by two thirds and making the pricing more market responsive.

The *FAIR Act* did not significantly change the direction of US agricultural trade policy. The Export Enhancement Program (EEP) was retained, but funding is lower than permitted for the US under its WTO export subsidy commitments. The Dairy Export Incentive Program (DEIP) is to be used to the maximum extent allowable under WTO commitments. Another important export promotion program, the Market Access Program, was reauthorised, but with reduced funding.

In recent years, the USDA took steps to reduce operating expenditures. Initiatives included user fee increases and the introduction of new fees for some services. USDA’s budget proposal for the 1999 fiscal year contains US\$624 million in new user fees. Of this total, US\$573 million are proposed fees to recover the full cost of federal inspection of meat, poultry and egg products.

A.3.2 European Union

In 1992, the EU reformed the Common Agricultural Policy (CAP) to make agriculture more competitive and began lowering the dependence of producers on market price support in a few major commodity sectors (cereals, beef). Other major sectors were basically untouched by reform (sugar, wine, olive oil and, to some extent, dairy). The overall direction of CAP reform is for less reliance on market interventions (which affect prices directly) and toward more support of farm incomes (with greater reliance on government payments).

The most significant change was a 29% reduction in support prices for cereals. Direct payments, calculated per hectare and based on historic production and yield, were intended to compensate producers for the lower support price. Producers, except those on small farms, were required to remove a portion of their total arable land from production (“set-aside”). This portion has varied between 0% and 17%. Support for oilseeds and protein crops in the form of per-tonne payments was terminated in favour of per-hectare payments.

The beef sector experienced reforms similar to those in the grain sector with a 15% reduction of the intervention price and higher per-head direct payments. Maximum quantities of beef that could be purchased at intervention prices were set and the limit lowered gradually until the BSE crisis occurred in 1996. Some limits on per-head payments were placed on individuals and regions. The dairy sector saw a 5% drop in the intervention price of butter and a 1% reduction in the total production quota for milk.

In addition to direct or indirect support, the CAP also includes other types of measures such as programs which protect the environment and link agriculture to conserving nature and the countryside. Early retirement schemes encourage the transfer of land from elderly farmers to other farmers, and an afforestation scheme facilitates the use of land for activities other than farming.

The European Commission's proposal for the next stage of agricultural policy reform in the EU, part of Agenda 2000, calls for a further shift from price support to direct payments, particularly in cereals, beef and dairy.

For cereals, a one-time reduction of 20% in the intervention price in 2000 is proposed, along with higher per-hectare payments. Since domestic prices would be closer to world prices, mandatory set-aside acreage would be reduced to zero.

Support prices for beef are proposed to fall by 30% between 2000 and 2002 and higher per-head payments would compensate producers. Intervention buying of beef would end in 2003. Storage aid would then be available to help private companies deal with market downturns.

Intervention prices for butter and skim milk powder are expected to decrease by 15% over the implementation period. A new per-head fixed payment for dairy cows would be introduced. Dairy quotas would continue to 2006 and quota quantities would increase slightly.

Agenda 2000 also proposes giving member states the authority to cap direct payments to individuals. There would be EU-wide provisions for clawbacks on direct payments exceeding 100,000 ECU. Member states would be required to link direct payments with environmental objectives which they would determine themselves.

A.4 Other Federal Policy and Cost Recovery

The previous sections of this appendix have described how recent changes in agricultural policy have affected the agri-food sector. This section describes the significance of other federal policy, especially cost recovery policy.

Other departments establish policies in pursuit of various national objectives. Some of these may have important impacts on AAFC stakeholders even though these impacts may not always be a major consideration in policy formulation. Some examples of policies which concern the agri-food sector include:

- changes in federal regulations which may result in increased production or marketing costs,
- changes in taxes (income taxes, payroll taxes and the GST),
- the introduction of the NAFTA and the Uruguay Round obligation, and
- cost recovery.

While all of these are important for the agri-food sector, our concern here is restricted to cost recovery. Federal cost recovery policy is motivated by the needs for: fairness and equity in the provision of all government services; greater efficiencies and better prioritized government service delivery; and, improved fiscal control over government expenditures.

Treasury Board has been compiling a database of cost recovery fees by all federal departments and agencies for the period 1995-96 to 1996-97. This database was the starting point for this analysis. A list of all the programs that were thought to affect the agriculture and agri-food sector specifically was extracted. The list was reviewed in a meeting with the Industry Advisory Committee and the Interdepartmental Advisory Committee to ensure that all relevant cost recovery fees were included. Amendments suggested are incorporated in Table A.2.

After review, some exclusions were made. Crop insurance service fees were excluded because these fees are paid to the provinces. Some programs were excluded because there are no cost recovery fees in the period under review here: for example, ship safety fees for emergency response organizations and Canadian Coast Guard (CCG) fees for ice breaking.

Other programs were excluded because they do not collect fees from the agri-food sector. The cost recovery revenue for the Pari-Mutuel Monitoring Revolving Fund (PMMRF) is collected from the race tracks. Hopper car rental revenue comes from cars used in the United States. Landing fees are concerned with airport charges which mostly affect airline travel. The agri-food sector travels on business but the total fees collected in this way would be quite small. Temporary work visas are charged to immigrant workers themselves in the country of origin. Most of the fees in Industry Canada are like the example with airplane landing fees; only a very small amount could be charged back to the agri-food sector.

Table A.2: Federal Cost Recovery Fees by Department or Agency

Department / Agency	Reason Excluded			Included
	1	2	3	
Agriculture and Agri-Food				
CFIA Inspection Services				X
Pari-Mutuel Monitoring Revolving	X			
NISA Registration				X
Crop Insurance Service Fees		X		
MISB Service Fees (FIMCLA)				X
Research Privileges and Licenses				X
Research Service Fees			X	
PFRA Community Pasture Fees				X
PFRA Service Fees				X
CGC Inspection Fees				X
Health Canada				
PMRA				X
Veterinary Drugs				X
Transport Canada				
Hopper Car Rental	X			
Harbour, Wharfage, etc.				X
Ship Safety Fees			X	
Landing Fees	X			
Marine Pilotage				X
Foreign Affairs				
Import Export Permits				X
Work visas	X			
Fisheries and Oceans				
Coast Guard MNSF				X
Coast Guard Icebreaking			X	
Industry Canada				
Inspection Fees, Elec. & Gas	X			
Inspection Fees, Weights & Meas.	X			
Lab Fees	X			
Registration Fees, Small Business	X			
Canadian Intellectual Property Office	X			
Bankruptcy fees	X			
Incorporation fees				X

Reasons excluded: 1. No or almost no fees paid by agri-food sectors
2. Fees not paid to the federal government
3. No cost recovery fees paid

Appendix B: The Context for Cost Recovery in Government

B.1 Introduction

This report is an assessment of the direct and indirect impacts of cost recovery fees on the agri-food sector. It is not intended to be a comprehensive assessment of the benefits and costs of cost recovery. The report quantifies the negative impact of cost recovery fees on the agri-food sector. It does not present a corresponding assessment of the advantages of a system based on user charges, as opposed to financing these government services out of general tax revenue. There are two cases where financing government services out of user charges is practical:

- where you can reduce the overall tax burden by charging user fees to those groups using the services and gaining the benefits; and,
- where there are potential efficiency gains in the management of services through a system of charges as compared to when the service was provided for free.

Both of these aspects of cost recovery are described qualitatively in the next two sections of this appendix.

Another important aspect of cost recovery is the value of the corresponding services provided. The agri-food sector receives a diverse set of services which are subject to cost recovery fees. The ultimate beneficiary of these services may be the sector itself or, alternatively, benefits may be passed on to suppliers or consumers in the form of changes in prices and costs. These benefits should remain the same regardless of how the provision of services is financed, through user charges, general tax revenue or some combination of the two. These benefits are described in Section B.4 without any attempt to evaluate their quantitative value. The final section in this chapter describes the importance of confidence in the regulatory system, however it is financed.

B.2 Cost Recovery and Taxes

User charges shift the burden of financing goods and services from taxpayers generally, to those who benefit directly. Less than full recovery amounts to an implicit subsidy to users at the expense of taxpayers. The benefit to the taxpayer directly offsets, dollar for dollar, the negative impact of each additional dollar raised by cost recovery. Savings achieved by the federal government through cost recovery, benefit all Canadians because they translate into reduced taxes, reduced federal borrowing or increased revenue for other priorities.

Taxpayer benefits offset the cost of revenue gained through user fees. A cost benefit analysis of cost recovery is concerned with the costs and benefits of administering a system of fees versus the marginal administrative costs of higher taxes. The administrative costs of the general tax system are small, 1-2% of additional tax revenue (Deloitte & Touche 1983) though the “excess burden” of taxation may be a more significant factor. Administrative costs of a cost recovery program may, of course, be much higher. Hence, TB stipulates that “startup and ongoing costs of administration” must be outweighed by benefits. If this is not the case, a publicly provided good or service should not be priced even though it benefits individual consumers or businesses.

Administrative costs for pure public goods (which, in economic terms, are goods or services consumed collectively, making exclusion of any group difficult), are prohibitive and so, must be financed from general tax revenues. But pure public goods are not really all that common. Many government services are not used collectively. The practical issue becomes the cost of administering the system of user charges (basically the costs of offering the service on an exclusionary basis) versus the benefits in terms of greater efficiency because the service is priced to the user.¹

In addition to the benefits to taxpayers, user fees for services consumed individually generally result in greater equity. When services used by only some Canadians are provided free or are subsidized, the cost is effectively borne by all taxpayers. The tax system is designed in a manner in which fairness and ability to pay are primary considerations. Transfer payments generally increase the fairness of the tax system by providing payments based upon need. These are not considerations in the use of many government services since it is the user who decides how much of a particular service to use. Cost recovery is likely to result in a more fair distribution of who pays for the costs of government services in that it shifts costs from the population at large to those who demand the service.

B.3 Cost Recovery and Efficiency of Service Delivery

There are potential gains to be made in terms of efficiencies achieved in service delivery. The TB policy identifies cases where user charges may result in greater net benefits for all Canadians. Some examples of efficiency gains achieved because of the incentives of a cost recovery are shown in Figure B.1.

1. A system of user charges is practical only for services and program where specific users or beneficiaries of a service can be identified.

Figure B.1 : Efficiency Gained from Cost Recovery

More business-like approach to the management of government resources:

When new pesticides are developed, extensive testing and review are required to certify that they are effective and may be used in a safe and environmentally responsible way. In the past, Health Canada has taken 4-5 years to carry out the required review and analysis. At a 10% discount rate, each year in the approval process increases product development costs by 10%. The PMRA is charged with maintaining high standards but through better communications with industry, management of the review process, and ability to allocate resources, PMRA is reducing the average approval time by 2-3 years.

Improved operational efficiency:

In response to a request by the grain industry to reduce costs, the CGC introduced a new system for the official weighing of cars unloaded at terminal and transfer elevators. The lower fee was made possible by a change to a less labour-intensive service. Service fees will be cut from \$14.75 to \$5.90 per car, a 60% decrease which will result in a drop of \$2.4 million in cost recovery fees affecting grain and oilseed producers in 1998-99.

Greater opportunity for the private sector:

Stakeholders have taken over providing several government services even in cases where the level of cost recovery has not financed the full cost of government providing the service. This is the case for meat grading and small-seed certification programs. Clearly, the industries feel that they can deliver these services for less than the cost recovery charges proposed, so net savings result for the whole country.

The TB policy describes a number of ways in which properly structured user charges may promote greater efficiency in the provision of services. Appropriate charges introduce a market-type discipline to decisions relating to which services should be provided, in what quantity, and how they should be delivered. In the absence of such charges, government decisions on which and what levels of services should be offered are made without feedback on the value of the services offered. Cost recovery provides the same type of market signal that private sector firms enjoy, allowing the department or agency to compare the cost of providing a service with its value to the public. Services which are not in demand may be modified or cut back while those in high demand may be expanded.

A related aspect is the “user pay, user say” maxim of cost recovery. Meaningful and effective consultation is seen as a cornerstone of good policy development. When users are paying, they take a greater interest in how the service is produced and made available. In some cases, negotiations with client groups may result in a service better tailored to user needs and/or significant savings in the costs of providing the service.

Agencies outside the government may have the flexibility to deliver many services more effectively and efficiently. User charges make visible the cost of providing government services. This helps to identify instances where alternative delivery options may result in a more efficient delivery of service. Moreover, this flexibility provides the opportunity to expand or alter the service in a manner which makes sense for the sector affected.

One of the most important sources of efficiency gains from cost recovery is concerned not with the provision of services, but with the demand for them. A service provided to individuals free, or at a subsidized price, tends to be over-subscribed. Cost recovery may reduce or eliminate this excessive use; user charges create an incentive for users to consider the cost, and benefit, of those services. For example, processors when faced with costs of poultry grading, decided that grading was not justifiable. Potato growers often have their crop certified as seed potatoes and then sell the crop as table potatoes, thus requiring a second inspection. Faced with paying for the costs of inspection, users have an incentive to rationalize demand for inspection services.

B.4 Program Benefits

The federal government charges user fees for a diverse set of programs and services which benefit the agri-food sector in whole or in part. Some examples of programs with voluntary participation and/or programs with close substitute products provided by the market are:

- PFRA grazing fees,
- Research Branch royalties,
- fees for laboratory services,
- charges associated with the transportation system, and
- administrative costs of programs which benefit the agri-food sector directly, such as NISA and FIMCLA fees.

TB guidelines require that services be priced so as to be competitive and not undercut private providers. Otherwise, cost recovery fees should be no higher than the costs of providing the services. With participation voluntary, like a market transaction between a willing buyer and willing seller, it is safe to assume that benefits to buyers exceed the cost recovery fees they pay.

A large number of fees in the agri-food sector are levied for government quality assurance services. These include:

- grading and similar quality assurance programs,
- inspection and regulatory services which guarantee that products satisfy appropriate health and safety standards, and
- investigation and certification of drugs and pesticides to assure their efficacy and proper use, while considering human health, the environment and the interests of all Canadians.

There are a number of institutions and mechanisms outside government which serve, at least in part, an important function in assuring product quality. These include industry associations, standards councils, production contracts, brand names and franchises. The assurance of product quality is a growing aspect of the modern economy. Global markets foster the use of global standards in such voluntary arrangements as the ISO 9000 certification and international agreements to reduce differences among standards.

Quality assurance is an issue when it is not easy or costless for a buyer to evaluate the quality of a good or service he is purchasing. This arises for all goods that are shipped to buyers in different regions. It also occurs when it is technically difficult to evaluate product quality. In economic terms, the demand function for a good with quality assurance is much higher than the demand curve for a similar product of unknown quality. With reasonable cost efficiency in assuring that products satisfy agreed standards, the benefits of a quality assurance program may be many times the cost. This is a classic “win-win” situation where both consumer and producer are better off.

Inspection and quality assurance may be a small part of total production costs but may have a large impact on potential prices and an industry’s profitability. Some examples of the benefits from these types of programs are listed in Figure B.2. Although these studies were all undertaken about ten years ago, there is no reason to believe that quality assurance is less important to the consumer. If anything, consumers appear to be more aware of quality issues and less tolerant of sub-standard products especially when they concern health and safety. These demands for quality assurance may impose additional burdens on inspection and quality assurance services but since these two services tend to offset each other, it is very likely that benefit cost ratios will remain very high.²

2. The final section of this appendix shows how even these high benefit cost ratios may be an underestimate.

Figure B.2: Benefit Cost of Inspection and Grading

Brinkman and colleagues from the University of Guelph estimated the benefits and costs for several inspection and grading programs of the Food Production & Inspection Branch (FPIB) between 1985 and 1989. The work was conducted for the Program Evaluation Division of AAFC.

Brinkman et al. quantified the benefits of grading programs at all levels in the production and distribution system from primary producer through to consumer. They found benefits of the meat hygiene program at the producer, packer and retail level in reduced losses due to fraud and spoilage, and in improvements in human health. Most of the benefits of the seed assurance program went to commercial crop producers.

Their analysis of these programs showed that these systems have extremely high returns relative to the costs of the programs. They estimated overall benefit cost ratios as follows:

beef grading	12.0
pork grading	8.3
meat hygiene program	10.3
apple grading	9.6
table potato grading	2.6
seed assurance program	15.9

The lowest benefit cost ratio of 2.6 is for grading table potatoes. However even here, the program easily justifies public expenditure in providing the service. Brinkman et al. concluded that expenditures for these programs are good investments for Canadians and an effective use of public expenditure.

They also examined cost recovery and privatization as additional modifications to the pork and beef grading systems. They concluded that cost recovery and privatization likely would not affect overall benefits or ratios of benefits to costs.

Governments have traditionally played a large role in assuring that agri-food products satisfy health and safety requirements and in certifying that products meet other quality standards to facilitate trade. The large role for government in this sphere is because of many factors including:

- the biological basis of production which makes products highly variable and standardization difficult,
- the nature of the agri-food sector with production, processing and distribution dispersed across hundreds of thousands of different enterprises, and
- the difficulty of monitoring compliance and the costs and risks imposed by non-compliance.

The last point is of particular concern because of the potential health and safety issues involved. As a result, a system of government inspection to control quality is widely viewed as a better approach.

The special aspects of health and safety of agri-food products have an impact on the application of cost recovery policy. For most services, TB guidelines mandate that cost recovery be 100% of the cost of providing a service:

“Charges for amounts providing less than full recovery may be appropriate in certain circumstances such as . . . where full recovery would reduce the consumption of the good or service enough to compromise the program's objectives or other government goals.”

As a result, the CFIA cost recovery for services which assure health and safety are considerably less than the total costs, while full cost recovery is pursued for other services such as product grading (as described in Figure B.3).

Cost recovery fees for the costs of evaluating and regulating pesticides is another special type of “quality” issue. In this case, the agency concerned evaluates product efficacy and safety which is of concern to both the farmers and others who may use the product and to the pesticide industry. But environmental concerns are also evaluated, which is of course an interest to all Canadians-- not just those who benefit from using the pesticide directly or even indirectly in the foods available to them. As in the case of food safety, the benefits in terms of preventing the use of a dangerous product are likely many times the costs of administering a system of control. There are benefits for the general public but it may be appropriate for the producers and users who originate the risk to bear the costs of regulating it.

Figure B.3: Cost Recovery of CFIA Inspection Services: Health and Safety Versus Grading

The CFIA follows Treasury Board guidelines in determining cost recovery fees but the level of fee charged, relative to the cost of providing a service, depends on the type of service provided. If the service has important implications for health and safety, fees are assessed considerably below the costs of providing the service. For services not concerned with health and safety, cost recovery fees are charged at a higher level relative to the cost of providing the service. Effectively this means that a large part of the cost of food safety or animal and plant health services are paid for by taxpayers while other types of services are largely financed by the beneficiaries.

In determining the cost of providing a service, the first method calculates the direct costs of providing services to the industry or commodity. This does not include the 21% of the total cost of providing all CFIA services (e.g. overhead expenses such as administration and human resource management). Fees are set to cover up to 15% of the direct cost for services which have a substantial health or safety component and 100% for those which are mainly concerned with quality assurance, such as grading. Fees during a transitional period may actually be set at lower levels. Fees for services which have both types of aspects are set at an intermediate level; for example, fees for import inspection are expected to cover 50% of the adjusted direct program cost.

B.5 External Effects and Integrity of the Inspection System

In principle, the value of services provided by programs is separable from the method of financing the program. There is concern that cost recovery may affect the nature of the services provided. In particular, cost avoidance and cost reduction measures adopted in consultation with industry may result in less thorough inspection and, therefore, may increase the risk of loss of integrity of the system.

As long as an inspection system works well, program benefits are divided between consumers and producers involved in each transaction. However, when an inspection system breaks down and lets through substandard products, everyone using the system is affected, particularly if health and safety are involved.

For example, when salmonella is found in food, consumers are warned. They may avoid all similar foods for a few days until they can be sure that all the contaminated products have been identified and removed from the market. The cost to consumers and producers of similar products is an external effect. As long as the uncertainty is short-lived, these external effects are likely to be small.

The BSE outbreak in the UK demonstrates a more serious case when consumers lose faith in the integrity of an inspection system. In 1997, the British government spent £1.5 billion to destroy cattle as a result of BSE. Some perspective is needed in order to appreciate the significance of this number. First, the Canadian and UK meat industries had similar physical output levels in recent years. Total sales of cattle and calves in Canada amounted to \$4.2 billion in 1995 while shipments of beef were worth about \$3.6 billion. At current exchange rates, the amount spent to destroy cattle in the UK is comparable to the gross output of each of these industries. The total expenditure by the CFIA for meat hygiene in 1995-96 was about \$118.4 million. In other words, the cost of destroying cattle in the UK in 1997 is sufficient to pay for Canada's meat inspection program for 29 years. The investment needed to restore the integrity of the system may be much greater than the costs of inspection and prevention.

When the public loses faith in the integrity of the system, the demand for all products, even those that are uncontaminated, can fall dramatically. The integrity of an inspection/quality assurance system is a type of public good just like the recognition of a brand name in the private sector is an intangible asset (good will), with real value.

Inspection services are continually undergoing modification and change with or without industry consultations and cost recovery. The real issue is that inspection services, regardless of who pays, must maintain plant, animal and human health and safety as the primary consideration.

Appendix C: Data for Processing Level Analysis

Statistics Canada publishes two types of data on the processing industry. The first comes from the Annual Survey of Manufacturers and provides data on establishments on the basis of the SIC-E. Establishments, like Taxfiler farms, are classified by the principal product shipped. This gives the best estimate of the gross output of the various food-processing industries and the most detailed information on sales and production costs, including expenditure on primary inputs. However the cost side is incomplete because head office expenses are not included. These include costs associated with sales, including advertising, as well as interest and depreciation.

The second data set is the data collected under the *Corporations and Labour Unions Returns Act* (CALURA), where income statement and balance sheet information is transcribed from corporate income tax returns. The data collection, again using SIC definitions, is based upon legal corporate entities rather than establishments (SIC-C). The data set considers all costs, including interest and depreciation. The data set also contains additional information about financial positions such as assets, liabilities and equity. However, other details on costs and shipments are not available in this data set. It is not possible, therefore, to identify what portion of shipments comes from food-processing and what portion of costs is attributable to primary products from the agri-food sector.

In addition, companies are classified according to products shipped. Most establishments are highly specialized and ship products identified with a single four-digit SIC industry classification. Companies, on the other hand, are far less specialized. Many food-processing companies have several different establishments and ship products with different four-digit SIC codes. The CALURA data set includes only those firms that are specialized in a particular commodity. It is possible then, that a company like Cargill, which has large red meat processing facilities, is classified as a grain industry firm, thus excluding it from the red meat data.

