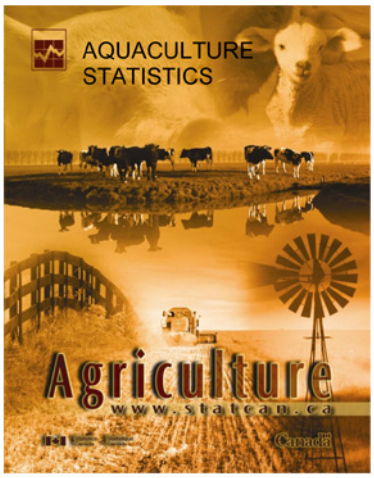
Catalogue no. 23-222-XIE

Aquaculture Statistics

2001



Statistics Canada
Statistique Canada

Canada

How to obtain more information

Specific inquiries about this product and related statistics or services should be directed to: Agriculture Division, Statistics Canada, Ottawa, Ontario, K1A 0T6 (telephone: (902) 893-7251).

For information on the wide range of data available from Statistics Canada, you can contact us by calling one of our toll-free numbers. You can also contact us by e-mail or by visiting our Web site.

National inquiries line	**1 800 263-1136**
National telecommunications device for the hearing impaired	**1 800 363-7629**
Depository Services Program inquiries	**1 800 700-1033**
Fax line for Depository Services Program	**1 800 889-9734**
E-mail inquiries	**infostats@statcan.ca**
Web site	**www.statcan.ca**

Ordering and subscription information

This product, Catalogue no. 23-222-XIE, is available on Internet free. Users can obtain single issues at http://www.statcan.ca/cgi-bin/downpub/freepub.cgi

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner and in the official language of their choice. To this end, the Agency has developed standards of service which its employees observe in serving its clients. To obtain a copy of these service standards, please contact Statistics Canada toll free at 1 800 263-1136.

Statistics Canada
Agriculture Division

Aquaculture Statistics

2001

Published by authority of the Minister responsible for Statistics Canada

October 2002

Catalogue no. 23-222-XIE

Frequency: Annual

ISSN: 1703-4531

Ottawa

La version française de cette publication est disponible sur demande (n° 23-222-XIF au catalogue).

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Symbol Legend

The following standard symbols are used in Statistics Canada's publications:

. not available for any reference period

.. not available for a specific reference period

… not applicable

p preliminary

r revised

x suppressed to meet the confidentiality requirements of the Statistics Act.

E use with caution

F too unreliable to be published

Note: Due to rounding, totals may not add.

Acknowledgement

This publication was prepared under the direction of:

- **Mark Elward, Chief**
  Livestock and Animal Products Section
- **Debbie Dupuis, Survey Manager**
  Livestock and Animal Products Section
- **Bernadette Alain, Industry Analyst**
  Livestock and Animal Products Section
- **Patricia Dow, Production Manager**
  Livestock and Animal Products Section
- **Jennifer Cleary, Statistical Officer**
  Livestock and Animal Products Section

TABLE OF CONTENTS

HIGHLIGHTS

Aquaculture Statistics, 2001

Revenues from Canada's aquaculture industry declined moderately last year after a decade of steady growth, in the wake of significantly lower prices for farmed salmon.

The industry reported total operating revenues of $704.5 million in 2001, down from $722.9 million the previous year. Sales of products and services totalled $675.2 million, a 2.5% decline. Of that, finfish, mostly salmon, accounted for $602.0 million, or almost 90% of total sales.

Despite an increase in production and a jump in exports, finfish sales fell 4.4%. Significantly lower prices for farmed salmon, due mainly to larger supplies in the United States, had a major impact on revenues.

On the other hand, sales of molluscs reached $65.2 million, representing 9.7% of total sales in 2001, compared to 8.0% in 2000. Prince Edward Island fish farmers generated $28.2 million in mollusc sales in 2001, over 40% of the national total.

British Columbia remained Canada's largest aquaculture producing province, with sales of $293.4 million. Farmers there accounted for 43% of the country's total aquaculture sales. An increase in finfish production was offset by falling prices of farmed salmon. As a result, total sales of finfish in 2001 declined 2.8%, while sales of molluscs totalled $18 million, up 38% from 2000.

New Brunswick sales, which reached $279.1 million in 2001, also fell as a result of lower prices. British Columbia and New Brunswick accounted for 84% of aquaculture revenues last year.

Nationally, product expenses (the cost of products and services purchased from other businesses excluding capital and labour costs) totalled $466.4 million in 2001, down 1.7% from 2000. Feed costs, which accounted for over 40% of all product expenses for finfish producers, increased slightly to $191.8 million.

During the past decade, the export market has consistently expanded, driven in large part by demand for salmon in the United States. In 2001, the value of aquaculture exports, which totalled $444.3 million, increased 17% from the previous year, more than triple 1992 levels.

The aquaculture industry produced a gross output – including sales, subsidies and growth in inventories – of $738.9 million in 2001, down 4.8%. The gross value added by the industry to the economy, the difference between gross output and total product expenses, reached $274.7 million, a 9.6% decrease from 2000.

CONCEPTS AND METHODS

Production and value of aquaculture

Statistics Canada defines aquaculture as an industry comprising establishments primarily engaged in farm-raising finfish, shellfish or any other kind of aquatic animal. The aquaculture production and value data, produced by species and province, represent the quantity of production and the farm-gate value of that production.

The series begins in 1991. Until 1994, these data were collected and released by Fisheries and Oceans Canada. Statistics Canada first published the time series in 1996.

The administrative data are provided annually from each of the provincial ministries responsible for aquaculture. Producers must report their production and value as part of their provincial licensing agreements. The data are supplemented through consultation with industry specialists and with data provided by Fisheries and Oceans Canada.

Generally, finfish production is reported as gutted head-on and the value is based on a farm-gate price. Shellfish is reported as whole, again with a farm-gate value.

Exports of selected aquaculture products

Canadian import and export statistics are derived by the International Trade Division of Statistics Canada from administrative records collected by Revenue Canada. The one exception to this process is Canadian exports to the United States and the imports from the United States into Canada. As of January 1, 1990, Canada and the United States have been using the other's import data to replace its own export data. Export data are presented by province of origin, which represents the province in which the product was grown or manufactured.

Exports for three categories of aquaculture products have been selected. All of these categories define the products as farmed, fresh or chilled and are based on the harmonised system of coding.

Mussels - code 3073110
Spring salmon - includes coho and spring (chinook) salmon, code 3021221
Atlantic salmon - code 3021211

Small quantities of fish fillets may be included in other categories that include products from the commercial fishery, however, as the exports under these categories are relatively small, the quantity of aquaculture products in the categories must also be small.

Aquaculture value added

Concepts

The aquaculture value added account is designed to measure the economic production (value added) of goods and services from aquaculture establishments. Economic production can be defined as any process that creates value or adds value to existing goods. Consistent with this definition, the Canadian System of National Accounts defines economic production as the production of goods or services, which are exchanged for money in the marketplace.

Starting in 1997, the account displays the inputs and outputs (mostly revenues and expenses except for the change in inventory values) on a calendar year basis. These data are displayed by province, except for the Prairie Provinces where aquaculture is a relatively small industry. Gross value added at factor cost is residually derived by subtracting product inputs, or purchases from other businesses, from the gross output of the sector.

Aquaculture is the managed production of fish. In Canada, the industry is dominated by the production of finfish, primarily salmon off the coasts of British Columbia and New Brunswick. Production of shellfish is smaller with Prince Edward Island and British Columbia being the major producing provinces.

Under the North American Industrial Classification System (NAICS), this industry comprises establishments primarily engaged in farm-raising finfish, shellfish, or any other kind of aquatic animal. These establishments use some form of intervention in the rearing process to enhance production, such as keeping animals in captivity, regular stocking and feeding of animals, and protecting them from predators.

The aquaculture industry includes hatcheries and sales within the industry, for example, sales from a hatchery to a grow-out operation are included. The aquaculture industry does not include sport fishing or the wild fishery.

The estimates also include the costs and revenues derived from processing where it is an integral part of the establishment, but not the main activity or source of revenue.

Definitions

A business entity and an establishment

A business entity is an economic transactor having the responsibility and the authority to allocate resources in the production of goods and services.

A statistical establishment is one production entity or the smallest grouping of production entities which produces as homogeneous a set of goods and/or services as possible; which does not cross provincial boundaries; and for which records provide data on the value of output together with the cost of principal intermediate inputs used and cost and quantity of labour resources used to produce the output.

The population of interest

The population of interest is all establishments classified to aquaculture under NAICS 112510 and operating for at least one day during the reference year.

Financial variables

Operating revenues are generated from the sale of: whole fish (fresh or chilled); fish eggs or live fish for grow-out; live fish; whole fish dressed and frozen; fish fillets; fish that are dried, smoked or in brine; molluscs (oysters, mussels, clams, scallops;) and, seed or larvae for grow-out. Operating revenue may also include revenue from other sources such as real estate rental, consulting or government subsidies. Non-operating revenues include income from interest or dividends.

Salaries and benefits include wages, salaries and benefits such as vacation pay, commissions or bonuses paid to employees as defined by Revenue Canada and requiring a T4 Supplementary Form. This item includes the employer portion of employee benefits for items such as health care insurance plans, Canada Pension Plan contributions, or Employment Insurance premiums.

The processing services are the costs incurred when another company provides services related to gutting, cleaning, slitting, or shelling.

Other operating expenses include a long list of items such as: energy (electricity, gasoline, diesel, propane); water; transportation; rental and leasing; maintenance and repair; legal; accounting; consulting; veterinary; financial services; insurance; advertising; travel; property taxes; licenses; permits; office; management; and depreciation.

Non-operating expenses relate to interest expenses on loans or the interest component of a capital lease.

Methods

These data are produced as part of Statistics Canada's Unified Enterprise Survey (UES) conducted in 1997 for the first time. The survey incorporates several annual business surveys into an integrated survey. It aims to ensure Statistics Canada receives consistent and integrated data from many types of surveys and sizes of businesses, with enough detail to produce accurate provincial statistics.

Target population

The target population for this survey is: all establishments classified to aquaculture under NAICS 112510 that operated for at least one day during the reference year.

Frame and sample design

Two sources of data are used to derive the estimates:

- a probability sample survey of aquaculture establishments with a gross business revenue greater than or equal to a cut-off that varied by province from $30,000 to $250,000.

- taxation data are used to estimate for businesses with a gross business revenue less than the cut-off.

The frame that is used for the selection of the probability sample is Statistics Canada's Business Register. This list frame is updated and verified prior to sample selection. For 2001, the frame included 726 establishments classified to aquaculture.

Before a sample is taken, the records are stratified by province. Within each province, to improve the efficiency of the sample design, strata are defined using the gross revenue variable on the Business Register.

The "must-take" stratum contains the enterprises (with all its associated establishments) with revenue greater than or equal to $25,000,000. All of these establishments are sent a questionnaire.

The "take-none" stratum contains the establishments with gross business revenue less than the cut-off. Data for these businesses are obtained from taxation data.

For the establishments not selected in the "must-take" (greater than $25,000,000) or "take none" (less than the cut-off), three strata are defined to improve the efficiency of the sample design. There is a "take-all" stratum (all establishments are sent a questionnaire) and there are two "take-some" strata (a sample of establishments are selected and sent a questionnaire).

The overall sample size for 2001 was 163 establishments.

Data collection

In the spring, respondents selected in the questionnaire part of the sample were asked to report their fiscal year transactions. The fiscal year data are subsequently aligned to produce calendar year data using provincial level industry indicators.

The survey is conducted by mail along with Computer Assisted Telephone Interviews. These data are examined for inconsistencies and errors using automated edits coupled with an analytical review. Data for non-respondents and no-contacts are imputed, partially with the assistance of tax data.

Estimation design

The sampling weights derived from the sample design are modified and improved if necessary, using post stratification. This is possible because, during the passage of time since the sample was selected, the Business Register is updated further with more complete information.

Analysis of the estimates

The last step of the process is analytical. The financial picture for aquaculture is assessed within the context of other related production statistics available from provincial regulatory sources. Although the two sources measure different things, the provincial administrative data are valuable in the analysis to assist in the reduction of error and in confirming the accuracy of the estimates.

Data quality

All surveys are subject to sampling and non-sampling errors. Statistics Canada uses a variety of methods to minimize all types of errors. Measures of sampling error along with other indicators of quality are provided.

The coefficients of variation (CV), a measure of sampling error, are computed. The quality of the estimates are classified as Excellent (CV is 0.01 to 4.99%); Very good (CV is 5.00% to 9.99%); Good (CV is 10.00% to 14.99%); Acceptable (CV is 15.00% to 24.99%); Use with caution (CV is 25.00% to 34.99%); and Unreliable (> 35.00%).

Using these ratings at the national level, the 2001 estimates are judged to be excellent, and at the provincial level, the estimates range from excellent to good. The estimates for New Brunswick and British Columbia, accounting for 84% of total operating revenue of aquaculture, are judged to be excellent.

Every effort is made to minimize the non-sampling error of omission, duplication, reporting and processing. When necessary, some records are imputed using information from tax files where possible.

For 2001, the response rates of the 163 sampled establishments receiving a questionnaire are: Completed: 56%; Refusal: 1%; Non-response (Non-response by survey deadline, Unable to locate, Change of Ownership, Amalgamation): 18%; Out-of-scope (Inactive, Out of Business, Duplicate, Out-of-scope): 25%. These response rates are considered normal for a business survey. The out-of-scope rate reflects the quality of the Business Register at the time of sampling. Of the original sample, 18% required imputation to complete the estimates. Reasons for imputation include partial response, failure to respond before the survey deadline, refusals, and inability to contact the respondent.

Finally, the aquaculture estimates were compared to and found to be consistent with administrative data sources obtained from the provinces, reinforcing confidence in the quality of the aquaculture statistics. All of the data are reviewed for accuracy and consistency and provide a reliable portrait of the aquaculture industry.

Table 1. Aquaculture: Production and Value, by Province and Canada, 1991

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production	tonnes										
Salmon	66	x	601	9,000	x	80	0	0	0	24,362	34,109 (2)
Trout	10	x	0	272	x	2,300	x	110	34	113	2,839 (2)
Steelhead	76	0	409	0	0	0	0	0	0	0	485 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	34 (1)
Total Finfish (3)	**152**	**37**	**1,010**	**9,272**	**1,500**	**2,380**	**x**	**110**	**34**	**24,475**	**39,004**
Clams	0	473	0	0	0	0	0	0	0	169	642
Oysters	0	1,227	55	136	0	0	0	0	0	4,482	5,900
Mussels	320	3,404	177	55	x	0	0	0	0	0	3,956 (2)
Scallops	2	0	0	0	x	0	0	0	0	0	2 (2)
Other	0	0	0	0	0	0	0	0	0	0	0
Total Shellfish	**322**	**5,104**	**232**	**191**	**90**	**0**	**0**	**0**	**0**	**4,651**	**10,590**
Total	**474**	**5,141**	**1,242**	**9,463**	**1,590**	**2,380**	**x**	**110**	**34**	**29,126**	**49,594**
Value	'000 of dollars										
Salmon	260	x	3,965	80,000	x	400	0	0	0	110,913	195,538 (2)
Trout	30	x	0	1,700	x	10,500	x	240	187	538	13,195 (2)
Steelhead	250	0	2,130	0	0	0	0	0	0	0	2,380 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	266 (1)
Total Finfish (3)	**540**	**309**	**6,095**	**81,700**	**9,640**	**10,900**	**x**	**240**	**187**	**111,451**	**221,328**
Clams	0	734	0	0	0	0	0	0	0	556	1,290
Oysters	0	1,930	107	450	0	0	0	0	0	3,465	5,952
Mussels	560	4,000	195	120	x	0	0	0	0	0	4,875 (2)
Scallops	8	0	0	0	x	0	0	0	0	0	8 (2)
Other	0	0	0	0	0	0	0	0	0	0	0
Total Shellfish	**568**	**6,664**	**302**	**570**	**106**	**0**	**0**	**0**	**0**	**4,021**	**12,231**
Total	**1,108**	**6,973**	**6,397**	**82,270**	**9,746**	**10,900**	**x**	**240**	**187**	**115,472**	**233,559**

(1) Includes Char, Other Finfish and Total Manitoba Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 1992

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production					tonnes						
Salmon	75	x	416	10,000	x	20	0	0	0	19,814	30,325 (2)
Trout	3	x	0	375	x	2,800	x	160	96	77	3,511 (2)
Steelhead	88	0	328	0	0	0	0	0	0	0	416 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	89 (1)
Total Finfish (3)	**166**	**42**	**744**	**10,375**	**1,425**	**2,820**	**x**	**160**	**96**	**19,891**	**35,808**
Clams	0	0	0	0	0	0	0	0	0	308	308
Oysters	0	1,178	67	114	0	0	0	0	0	4,484	5,843
Mussels	160	4,186	406	125	x	0	0	0	0	0	4,877 (2)
Scallops	2	0	0	0	x	0	0	0	0	6	8 (2)
Other	0	0	0	0	0	0	0	0	0	0	0
Total Shellfish	**162**	**5,364**	**473**	**239**	**87**	**0**	**0**	**0**	**0**	**4,798**	**11,123**
Total	**328**	**5,406**	**1,217**	**10,614**	**1,512**	**2,820**	**x**	**160**	**96**	**24,689**	**46,931**
Value					'000 of dollars						
Salmon	630	x	3,987	82,500	x	100	0	0	0	115,518	202,735 (2)
Trout	20	x	0	2,300	x	14,000	x	540	420	324	17,604 (2)
Steelhead	569	0	2,061	0	0	0	0	0	0	0	2,630 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	631 (1)
Total Finfish (3)	**1,219**	**244**	**6,048**	**84,800**	**7,224**	**14,100**	**x**	**540**	**420**	**115,842**	**231,068**
Clams	0	0	0	0	0	0	0	0	0	1,003	1,003
Oysters	0	2,062	115	300	0	0	0	0	0	3,572	6,049
Mussels	137	4,959	470	130	x	0	0	0	0	0	5,696 (2)
Scallops	10	0	0	0	x	0	0	0	0	24	34 (2)
Other	0	0	0	0	0	0	0	0	0	0	0
Total Shellfish	**147**	**7,021**	**585**	**430**	**164**	**0**	**0**	**0**	**0**	**4,599**	**12,946**
Total	**1,366**	**7,265**	**6,633**	**85,230**	**7,388**	**14,100**	**x**	**540**	**420**	**120,441**	**244,014**

(1) Includes Char, Other Finfish and Total Manitoba Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 1993

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production	tonnes										
Salmon	100	x	850	10,145	x	20	0	0	0	25,555	36,670 (2)
Trout	0	x	0	380	x	3,000	x	160	127	51	3,718 (2)
Steelhead	118	0	285	0	0	0	0	0	0	0	403 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	99 (1)
Total Finfish (3)	**218**	**35**	**1,135**	**10,525**	**1,424**	**3,020**	**x**	**160**	**127**	**25,606**	**42,349**
Clams	0	0	0	0	0	0	0	0	0	347	347
Oysters	0	1,078	80	120	0	0	0	0	0	4,758	6,036
Mussels	224	4,567	200	150	x	0	0	0	0	0	5,141 (2)
Scallops	3	0	0	0	x	0	0	0	0	17	20 (2)
Other	0	0	0	0	0	0	0	0	0	0	0
Total Shellfish	**227**	**5,645**	**280**	**270**	**34**	**0**	**0**	**0**	**0**	**5,122**	**11,578**
Total	**445**	**5,680**	**1,415**	**10,795**	**1,458**	**3,020**	**x**	**160**	**127**	**30,728**	**53,927**
Value	'000 of dollars										
Salmon	713	x	5,800	89,280	x	100	0	0	0	138,143	234,036 (2)
Trout	0	x	0	2,400	x	15,180	x	540	560	257	18,937 (2)
Steelhead	1,200	0	1,600	0	0	0	0	0	0	0	2,800 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	698 (1)
Total Finfish (3)	**1,913**	**247**	**7,400**	**91,680**	**7,224**	**15,280**	**x**	**540**	**560**	**138,400**	**263,942**
Clams	0	0	0	0	0	0	0	0	0	1,162	1,162
Oysters	0	1,973	200	400	0	0	0	0	0	4,000	6,573
Mussels	173	5,024	330	200	x	0	0	0	0	0	5,727 (2)
Scallops	28	0	0	0	x	0	0	0	0	97	125 (2)
Other	0	0	0	0	0	0	0	0	0	0	0
Total Shellfish	**201**	**6,997**	**530**	**600**	**75**	**0**	**0**	**0**	**0**	**5,259**	**13,662**
Total	**2,114**	**7,244**	**7,930**	**92,280**	**7,299**	**15,280**	**x**	**540**	**560**	**143,659**	**277,604**

(1) Includes Char, Other Finfish and Total Manitoba Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 1994

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production	tonnes										
Salmon	46	x	544	11,836	x	0	0	0	0	23,657	36,083 (2)
Trout	0	x	94	330	x	3,200	x	260	45	75	4,004 (2)
Steelhead	334	0	96	0	0	0	0	0	0	0	430 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	71 (1)
Total Finfish (3)	**380**	**31**	**734**	**12,166**	**1,500**	**3,200**	**x**	**260**	**45**	**23,732**	**42,119**
Clams	0	0	7	0	0	0	0	0	0	542	549
Oysters	0	2,035	96	413	0	0	0	0	0	4,990	7,534
Mussels	400	5,950	439	78	x	0	0	0	0	0	6,867 (2)
Scallops	12	0	6	0	x	0	0	0	0	27	45 (2)
Other	0	0	0	0	0	0	0	0	0	0	0
Total Shellfish	**412**	**7,985**	**548**	**491**	**33**	**0**	**0**	**0**	**0**	**5,559**	**15,028**
Total	**792**	**8,016**	**1,282**	**12,657**	**1,533**	**3,200**	**x**	**260**	**45**	**29,291**	**57,147**
Value	'000 of dollars										
Salmon	502	x	3,835	91,000	x	0	0	0	0	153,815	249,152 (2)
Trout	0	x	519	3,638	x	16,192	x	1,160	275	376	22,160 (2)
Steelhead	1,635	0	374	0	0	0	0	0	0	0	2,009 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	548 (1)
Total Finfish (3)	**2,137**	**213**	**4,728**	**94,638**	**9,000**	**16,192**	**x**	**1,160**	**275**	**154,191**	**283,082**
Clams	0	0	13	0	0	0	0	0	0	1,894	1,907
Oysters	0	3,265	268	982	0	0	0	0	0	4,566	9,081
Mussels	312	6,530	633	100	x	0	0	0	0	0	7,575 (2)
Scallops	61	0	48	0	x	0	0	0	0	155	264 (2)
Other	0	0	0	0	0	0	0	0	0	0	0
Total Shellfish	**373**	**9,795**	**962**	**1,082**	**83**	**0**	**0**	**0**	**0**	**6,615**	**18,910**
Total	**2,510**	**10,008**	**5,690**	**95,720**	**9,083**	**16,192**	**x**	**1,160**	**275**	**160,806**	**301,992**

(1) Includes Char, Other Finfish and Total Manitoba Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 1995

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production					tonnes						
Salmon	115	x	630	14,490	x	0	0	5	0	27,275	42,515 (2)
Trout	18	x	50	550	x	3,300	x	317	109	85	4,429 (2)
Steelhead	447	0	440	0	0	0	0	0	0	0	887 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	81 (1)
Total Finfish (3)	**580**	**59**	**1,120**	**15,040**	**883**	**3,300**	**x**	**322**	**109**	**27,360**	**48,854**
Clams	0	0	0	0	0	0	0	0	0	885	885
Oysters	0	1,792	156	511	0	0	0	0	0	5,260	7,719
Mussels	411	7,469	502	240	x	0	0	0	0	4	8,626 (2)
Scallops	12	0	1	0	x	0	0	0	0	24	37 (2)
Other	3	0	29	0	0	0	0	0	0	0	32
Total Shellfish	**426**	**9,261**	**688**	**751**	**116**	**0**	**0**	**0**	**0**	**6,173**	**17,415**
Total	**1,006**	**9,320**	**1,808**	**15,791**	**999**	**3,300**	**x**	**322**	**109**	**33,533**	**66,269**
Value					'000 of dollars						
Salmon	759	x	4,135	111,573	x	0	0	20	0	170,365	286,852 (2)
Trout	134	x	279	6,000	x	13,250	x	1,400	660	435	22,158 (2)
Steelhead	2,190	0	1,868	0	0	0	0	0	0	0	4,058 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	501 (1)
Total Finfish (3)	**3,083**	**532**	**6,282**	**117,573**	**3,652**	**13,250**	**x**	**1,420**	**660**	**170,800**	**317,753**
Clams	0	0	0	0	0	0	0	0	0	3,885	3,885
Oysters	0	3,070	217	1,060	0	0	0	0	0	5,355	9,702
Mussels	295	8,596	712	278	x	0	0	0	0	10	9,891 (2)
Scallops	67	0	15	0	x	0	0	0	0	156	238 (2)
Other	3	0	392	0	0	0	0	0	0	0	395
Total Shellfish	**365**	**11,666**	**1,336**	**1,338**	**93**	**0**	**0**	**0**	**0**	**9,406**	**24,204**
Total	**3,448**	**12,198**	**7,618**	**118,911**	**3,745**	**13,250**	**x**	**1,420**	**660**	**180,206**	**341,957**

(1) Includes Char, Other Finfish and Total Manitoba Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 1996

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production	tonnes										
Salmon	295	x	1,125	16,380	0	0	0	68	0	27,756	45,624 (2)
Trout	24	x	23	550	864	4,240	x	707	110	74	6,592 (2)
Steelhead	734	0	363	0	0	0	0	0	0	0	1,097 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	50 (1)
Total Finfish (3)	**1,053**	**64**	**1,511**	**16,930**	**864**	**4,240**	**x**	**775**	**110**	**27,830**	**53,427**
Clams	0	0	0	0	0	0	0	0	0	979	979
Oysters	0	1,676	247	586	0	0	0	0	0	5,480	7,989
Mussels	377	8,817	491	147	66	0	0	0	0	0	9,898 (2)
Scallops	19	0	16	0	8	0	0	0	0	142	185 (2)
Other	1	0	19	0	0	0	0	0	0	0	20
Total Shellfish	**397**	**10,493**	**773**	**733**	**74**	**0**	**0**	**0**	**0**	**6,601**	**19,071**
Total	**1,450**	**10,557**	**2,284**	**17,663**	**938**	**4,240**	**x**	**775**	**110**	**34,431**	**72,498**
Value	'000 of dollars										
Salmon	1,665	x	6,736	122,522	0	0	0	300	0	155,931	287,154 (2)
Trout	154	x	147	6,000	3,992	19,600	x	3,120	660	391	34,064 (2)
Steelhead	3,210	0	1,454	0	0	0	0	0	0	0	4,664 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	245 (1)
Total Finfish (3)	**5,029**	**806**	**8,337**	**128,522**	**3,992**	**19,600**	**x**	**3,420**	**660**	**156,322**	**326,933**
Clams	0	0	0	0	0	0	0	0	0	4,427	4,427
Oysters	0	2,945	913	1,193	0	0	0	0	0	5,659	10,710
Mussels	333	10,693	807	103	66	0	0	0	0	0	12,002 (2)
Scallops	104	0	53	0	32	0	0	0	0	858	1,047 (2)
Other	19	0	311	0	0	0	0	0	0	0	330
Total Shellfish	**456**	**13,638**	**2,084**	**1,296**	**98**	**0**	**0**	**0**	**0**	**10,944**	**28,516**
Total	**5,485**	**14,444**	**10,421**	**129,818**	**4,090**	**19,600**	**x**	**3,420**	**660**	**167,266**	**355,449**

(1) Includes Char, Other Finfish and Total Manitoba Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 1997

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production	tonnes										
Salmon	613	x	1,112	18,585	0	0	0	0	0	36,465	56,775 (2)
Trout	14	x	33	550	647	3,725	5	721	3	212	5,910 (2)
Steelhead	355	0	591	0	0	0	0	0	0	0	946 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	117 (1)
Total Finfish (3)	**982**	**94**	**1,736**	**19,135**	**647**	**3,725**	**5**	**721**	**3**	**36,677**	**63,842**
Clams	0	0	0	0	0	0	0	0	0	649	649
Oysters	0	1,428	288	265	0	0	0	0	0	3,650	5,631
Mussels	752	9,974	577	137	121	0	0	0	0	9	11,570 (2)
Scallops	12	0	16	0	0	0	0	0	0	23	51 (2)
Other	4	0	14	0	2	0	0	0	0	0	20
Total Shellfish	**768**	**11,402**	**895**	**402**	**123**	**0**	**0**	**0**	**0**	**4,331**	**17,921**
Total	**1,750**	**11,496**	**2,631**	**19,537**	**770**	**3,725**	**5**	**721**	**3**	**41,008**	**81,763**
Value	'000 of dollars										
Salmon	2,714	x	6,356	139,016	0	0	0	0	0	175,944	324,030 (2)
Trout	93	x	164	6,000	2,763	15,900	23	3,175	12	822	28,952 (2)
Steelhead	1,475	0	2,683	0	0	0	0	0	0	0	4,158 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	673 (1)
Total Finfish (3)	**4,282**	**851**	**9,203**	**145,016**	**2,763**	**15,900**	**23**	**3,175**	**12**	**176,766**	**358,664**
Clams	0	0	0	0	0	0	0	0	0	2,902	2,902
Oysters	0	3,181	1,030	567	0	0	0	0	0	3,917	8,695
Mussels	635	12,096	819	108	121	0	0	0	0	19	13,798 (2)
Scallops	54	0	55	0	0	0	0	0	0	173	282 (2)
Other	40	0	20	0	4	0	0	0	0	0	64
Total Shellfish	**729**	**15,277**	**1,924**	**675**	**125**	**0**	**0**	**0**	**0**	**7,011**	**25,741**
Total	**5,011**	**16,128**	**11,127**	**145,691**	**2,888**	**15,900**	**23**	**3,175**	**12**	**183,777**	**384,405**

(1) Includes Char, Other Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 1998

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production	tonnes										
Salmon	401	x	1,785	14,232	0	0	0	0	0	42,200	58,618 (2)
Trout	48	x	0	550	835	3,580	14	875	x	60	5,962 (2)
Steelhead	1,316	0	1,038	0	0	0	0	0	0	0	2,354 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	402 (1)
Total Finfish (3)	**1,765**	**99**	**2,823**	**14,782**	**835**	**3,580**	**14**	**875**	**x**	**42,260**	**67,435**
Clams	0	0	0	0	0	0	0	0	0	704	704
Oysters	0	1,974	377	286	0	0	0	0	0	5,500	8,137
Mussels	946	12,459	835	680	98	0	0	0	0	0	15,018 (2)
Scallops	9	0	21	0	30	0	0	0	0	40	100 (2)
Other	7	0	10	0	0	0	0	0	0	0	17
Total Shellfish	**962**	**14,433**	**1,243**	**966**	**128**	**0**	**0**	**0**	**0**	**6,244**	**23,976**
Total	**2,727**	**14,532**	**4,066**	**15,748**	**963**	**3,580**	**14**	**875**	**x**	**48,504**	**91,411**
Value	'000 of dollars										
Salmon	2,925	x	10,540	106,678	0	0	0	0	0	228,900	349,043 (2)
Trout	197	x	0	6,100	3,340	14,200	62	3,859	x	300	28,058 (2)
Steelhead	6,919	0	6,095	0	0	0	0	0	0	0	13,014 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	3,862 (1)
Total Finfish (3)	**10,041**	**882**	**16,635**	**112,778**	**3,340**	**14,200**	**62**	**3,859**	**x**	**229,200**	**394,859**
Clams	0	0	0	0	0	0	0	0	0	3,619	3,619
Oysters	0	4,447	1,186	788	0	0	0	0	0	4,900	11,321
Mussels	815	15,110	1,458	1,455	147	0	0	0	0	0	18,985 (2)
Scallops	53	0	135	0	180	0	0	0	0	300	668 (2)
Other	32	0	23	0	0	0	0	0	0	0	55
Total Shellfish	**900**	**19,557**	**2,802**	**2,243**	**327**	**0**	**0**	**0**	**0**	**8,819**	**34,648**
Total	**10,941**	**20,439**	**19,437**	**115,021**	**3,667**	**14,200**	**62**	**3,859**	**x**	**238,019**	**429,507**

(1) Includes Char, Other Finfish and Total Alberta Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 1999

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production	tonnes										
Salmon	399	x	791	22,000	0	0	0	0	0	49,700	72,890 (2)
Trout	10	x	0	550	1,192	3,850	4	875	x	100	6,581 (2)
Steelhead	2,078	0	3,924	0	0	0	0	0	0	0	6,002 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	595 (1)
Total Finfish (3)	**2,487**	**82**	**4,715**	**22,550**	**1,192**	**3,850**	**4**	**875**	**x**	**49,800**	**86,150**
Clams	0	0	0	0	0	0	0	0	0	800	800
Oysters	0	2,423	776	286	0	0	0	0	0	5,300	8,785
Mussels	1,700	13,890	945	665	197	0	0	0	0	0	17,397 (2)
Scallops	0	0	25	0	0	0	0	0	0	30	55 (2)
Other	0	0	16	0	25	0	0	0	0	0	41
Total Shellfish	**1,700**	**16,313**	**1,762**	**951**	**222**	**0**	**0**	**0**	**0**	**6,130**	**27,078**
Total	**4,187**	**16,395**	**6,477**	**23,501**	**1,414**	**3,850**	**4**	**875**	**x**	**55,930**	**113,228**
Value	'000 of dollars										
Salmon	2,462	x	7,022	150,000	0	0	0	0	0	290,600	450,084 (2)
Trout	80	x	0	6,100	6,092	15,500	16	3,859	x	400	32,047 (2)
Steelhead	11,402	0	17,352	0	0	0	0	0	0	0	28,754 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	5,176 (1)
Total Finfish (3)	**13,944**	**786**	**24,374**	**156,100**	**6,092**	**15,500**	**16**	**3,859**	**x**	**291,000**	**516,847**
Clams	0	0	0	0	0	0	0	0	0	4,200	4,200
Oysters	0	5,075	1,815	788	0	0	0	0	0	5,600	13,278
Mussels	3,800	16,845	1,485	798	316	0	0	0	0	0	23,244 (2)
Scallops	0	0	166	0	0	0	0	0	0	100	266 (2)
Other	0	0	43	0	26	0	0	0	0	0	69
Total Shellfish	**3,800**	**21,920**	**3,509**	**1,586**	**342**	**0**	**0**	**0**	**0**	**9,900**	**41,057**
Total	**17,744**	**22,706**	**27,883**	**157,686**	**6,434**	**15,500**	**16**	**3,859**	**x**	**300,900**	**557,904**

(1) Includes Char, Other Finfish and Total Alberta Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 2000

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production	tonnes										
Salmon	670	x	3,425	29,100	0	0	0	0	0	49,000	82,195 (2)
Trout	0	x	0	550	875	4,000	7	875	x	100	6,407 (2)
Steelhead	842	0	4,681	0	0	0	0	0	0	0	5,523 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	694 (1)
Total Finfish (3)	**1,512**	**76**	**8,106**	**29,650**	**875**	**4,000**	**7**	**875**	**x**	**49,100**	**94,895**
Clams	0	0	0	0	0	0	0	0	0	1,000	1,000
Oysters	0	2,731	773	620	0	0	0	0	0	5,500	9,624
Mussels	1,051	17,895	1,252	750	339	0	0	0	0	0	21,287 (2)
Scallops	0	0	19	0	0	0	0	0	0	50	69 (2)
Other	0	0	306	0	53	0	0	0	0	0	359
Total Shellfish	**1,051**	**20,626**	**2,350**	**1,370**	**392**	**0**	**0**	**0**	**0**	**6,550**	**32,339**
Total	**2,563**	**20,702**	**10,456**	**31,020**	**1,267**	**4,000**	**7**	**875**	**x**	**55,650**	**127,234**
Value	'000 of dollars										
Salmon	4,962	x	18,893	181,500	0	0	0	0	0	278,400	483,755 (2)
Trout	0	x	0	6,100	4,674	16,500	27	3,859	x	500	31,660 (2)
Steelhead	5,494	0	19,395	0	0	0	0	0	0	0	24,889 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	6,770 (1)
Total Finfish (3)	**10,456**	**733**	**38,288**	**187,600**	**4,674**	**16,500**	**27**	**3,859**	**x**	**278,900**	**547,807**
Clams	0	0	0	0	0	0	0	0	0	6,600	6,600
Oysters	0	6,324	1,891	1,700	0	0	0	0	0	6,600	16,515
Mussels	2,700	21,703	1,442	825	543	0	0	0	0	0	27,213 (2)
Scallops	0	0	162	0	0	0	0	0	0	300	462 (2)
Other	0	0	1,693	0	82	0	0	0	0	0	1,775
Total Shellfish	**2,700**	**28,027**	**5,188**	**2,525**	**625**	**0**	**0**	**0**	**0**	**13,500**	**52,565**
Total	**13,156**	**28,760**	**43,476**	**190,125**	**5,299**	**16,500**	**27**	**3,859**	**x**	**292,400**	**600,372**

(1) Includes Char, Other Finfish and Total Alberta Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that September.

Table 1. Aquaculture: Production and Value, by Province and Canada, 2001

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alb.	B.C.	Canada (2)
Production	tonnes										
Salmon	1,092	x	2,614	33,900	0	0	0	0	0	67,700	105,306 (2)
Trout	0	x	0	550	875	4,100	16	875	x	100	6,516 (2)
Steelhead	1,719	0	2,986	0	0	0	0	0	0	0	4,705 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	1,558 (1)
Total Finfish (3)	**2,811**	**76**	**5,600**	**34,450**	**875**	**4,100**	**16**	**875**	**x**	**67,800**	**118,161**
Clams	0	0	0	0	0	0	0	0	0	1,400	1,400
Oysters	0	2,731	438	744	0	0	0	0	0	6,800	10,713
Mussels	1,452	17,506	1,619	750	339	0	0	0	0	0	21,666 (2)
Scallops	0	0	8	0	0	0	0	0	0	120	128 (2)
Other	0	0	402	0	53	0	0	0	0	0	455
Total Shellfish	**1,452**	**20,237**	**2,467**	**1,494**	**392**	**0**	**0**	**0**	**0**	**8,320**	**34,362**
Total	**4,263**	**20,313**	**8,067**	**35,944**	**1,267**	**4,100**	**16**	**875**	**x**	**76,120**	**152,523**
Value	'000 of dollars										
Salmon	5,200	x	14,361	180,010	0	0	0	0	0	269,400	468,971 (2)
Trout	0	x	0	6,100	4,674	16,900	62	3,859	x	500	32,095 (2)
Steelhead	9,752	0	9,777	0	0	0	0	0	0	0	19,529 (2)
Other (1)	x	x	x	x	x	x	x	x	x	x	17,659 (1)
Total Finfish (3)	**14,952**	**733**	**24,138**	**186,110**	**4,674**	**16,900**	**62**	**3,859**	**x**	**269,900**	**538,987**
Clams	0	0	0	0	0	0	0	0	0	7,700	7,700
Oysters	0	6,324	1,327	2,040	0	0	0	0	0	7,300	16,991
Mussels	3,929	23,200	2,002	825	543	0	0	0	0	0	30,499 (2)
Scallops	0	0	88	0	0	0	0	0	0	700	788 (2)
Other	0	0	2,096	0	82	0	0	0	0	0	2,178
Total Shellfish	**3,929**	**29,524**	**5,513**	**2,865**	**625**	**0**	**0**	**0**	**0**	**15,700**	**58,156**
Total	**18,881**	**30,257**	**29,651**	**188,975**	**5,299**	**16,900**	**62**	**3,859**	**x**	**285,600**	**597,143**

(1) Includes Char, Other Finfish and Total Alberta Finfish.
(2) Excludes Confidential Data.
(3) Excludes "Other" for provinces.

The production and value of Aquaculture include the amount and value produced on sites and exclude hatcheries or value added products. The data, collected from each of the provincial departments responsible for aquaculture, are considered accurate and reliable. The data will continue to be collected in the year following the reference year and released that October.

Table 2. Aquaculture: Exports of Selected Canadian Aquaculture Products, by Country of Destination, 1992 and 1993

Destination:	1992 Mussels	1992 Other Salmon(1)	1992 Atlantic Salmon	1993 Mussels	1993 Other Salmon(1)	1993 Atlantic Salmon
	tonnes			tonnes		
United States	727	7,744	10,375	1,187	5,242	14,028
California	237	728	652	245	255	459
Maine	307	0	504	516	0	900
Massachusetts	38	374	3,431	98	11	3,133
New York	12	67	470	96	85	580
Washington	47	5,693	4,423	110	4,640	8,506
Other	86	882	895	122	251	450
France	8	0	0	(2)	0	0
Japan	0	280	1	0	224	10
Taiwan	0	1	0	0	0	0
Other	236	8	1	43	19	3
Total	**971**	**8,033**	**10,377**	**1,230**	**5,485**	**14,041**
	'000 of dollars			'000 of dollars		
United States	1,741	49,545	84,767	2,788	38,011	113,472
California	476	4,986	5,190	519	1,903	3,786
Maine	724	0	4,034	1,106	0	7,584
Massachusetts	161	2,308	27,303	289	93	25,725
New York	32	401	3,626	271	450	4,598
Washington	109	36,229	37,299	277	33,825	68,162
Other	239	5,621	7,315	326	1,740	3,617
France	24	0	0	1	0	0
Japan	0	2,505	10	0	2,082	94
Taiwan	0	3	0	0	0	0
Other	758	42	10	148	120	17
Total	**2,523**	**52,095**	**84,787**	**2,937**	**40,213**	**113,583**

(1) Includes Coho and Spring (Chinook).
(2) Less than 1 tonne.

Source: International Trade Division, Statistics Canada

Table 2. Aquaculture: Exports of Selected Canadian Aquaculture Products, by Country of Destination, 1994 and 1995

Destination:	1994 Mussels	1994 Other Salmon(1)	1994 Atlantic Salmon	1995 Mussels	1995 Other Salmon(1)	1995 Atlantic Salmon
	tonnes			tonnes		
United States	1,640	4,225	18,566	2,619	6,363	21,898
California	132	117	1,590	150	110	1,435
Maine	791	0	905	1,155	0	734
Massachusetts	180	62	3,937	286	29	4,876
New York	192	174	1,387	133	5	2,081
Washington	4	3,650	10,163	8	6,155	12,118
Other	341	222	584	887	64	654
France	0	0	0	0	0	0
Japan	1	96	248	0	173	276
Taiwan	0	1	33	0	15	233
Other	36	19	9	3	9	248
Total	**1,677**	**4,341**	**18,856**	**2,622**	**6,560**	**22,655**
	'000 of dollars			'000 of dollars		
United States	4,271	33,509	157,406	7,063	53,396	182,883
California	425	896	12,831	485	799	11,326
Maine	1,714	0	7,571	2,836	0	6,491
Massachusetts	519	392	32,980	772	214	43,685
New York	580	1,037	11,198	372	16	16,974
Washington	10	29,559	88,120	30	51,903	98,434
Other	1,023	1,625	4,706	2,568	464	5,973
France	0	0	0	0	0	0
Japan	5	1,038	2,531	0	1,839	3,190
Taiwan	0	9	264	0	131	2,222
Other	130	58	48	5	85	2,255
Total	**4,406**	**34,614**	**160,249**	**7,068**	**55,451**	**190,550**

(1) Includes Coho and Spring (Chinook).

Source: International Trade Division, Statistics Canada

Table 2. Aquaculture: Exports of Selected Canadian Aquaculture Products, by Country of Destination, 1996 and 1997

Destination:	1996 Mussels	1996 Other Salmon(1)	1996 Atlantic Salmon	1997 Mussels	1997 Other Salmon(1)	1997 Atlantic Salmon
	tonnes			tonnes		
United States	3,440	6,922	23,261	4,897	4,703	33,365
California	119	374	844	232	546	3,300
Maine	1,458	0	1,360	1,905	9	1,752
Massachusetts	877	26	6,868	1,741	40	7,277
New York	179	22	2,407	316	44	2,629
Washington	17	6,413	10,561	28	3,927	15,944
Other	790	87	1,221	675	137	2,463
France	0	0	0	0	2	0
Japan	0	28	134	0	81	448
Taiwan	0	0	267	0	13	596
Other	0	2	262	(2)	0	96
Total	**3,440**	**6,952**	**23,924**	**4,897**	**4,799**	**34,505**
	'000 of dollars			'000 of dollars		
United States	8,757	54,262	186,914	12,450	38,323	271,158
California	321	2,521	5,929	624	3,418	21,510
Maine	3,297	0	10,998	4,046	69	14,428
Massachusetts	2,244	158	56,886	4,573	232	62,823
New York	508	135	19,791	891	278	20,497
Washington	46	50,827	83,298	82	33,395	133,365
Other	2,341	621	10,012	2,234	931	18,535
France	0	0	0	0	16	0
Japan	0	277	1,747	0	848	3,524
Taiwan	0	0	2,348	0	100	4,852
Other	0	16	2,804	2	0	1,166
Total	**8,757**	**54,555**	**193,813**	**12,452**	**39,287**	**280,700**

(1) Includes Coho and Spring (Chinook).
(2) Less than 1 tonne.

Source: International Trade Division, Statistics Canada

Table 2. Aquaculture: Exports of Selected Canadian Aquaculture Products, by Country of Destination, 1998 and 1999

Destination:	1998 Mussels	1998 Other Salmon(1)	1998 Atlantic Salmon	1999 Mussels	1999 Other Salmon(1)	1999 Atlantic Salmon
	tonnes			tonnes		
United States	5,566	5,122	37,100	6,018	3,647	38,948
California	361	1,536	2,499	313	1,678	7,940
Maine	2,082	1	1,109	2,669	0	1,237
Massachusetts	2,088	75	7,808	1,959	9	8,475
New York	394	119	2,566	519	15	2,659
Washington	28	3,114	20,311	26	1,610	15,708
Other	613	277	2,807	532	335	2,929
France	143	0	8	166	0	0
Japan	0	63	755	0	360	474
Taiwan	0	19	978	0	0	603
Other	0	3	114	8	0	10
Total	**5,709**	**5,207**	**38,955**	**6,192**	**4,007**	**40,035**
	'000 of dollars			'000 of dollars		
United States	14,305	39,318	296,326	14,889	27,213	329,930
California	986	10,630	19,300	912	12,272	74,315
Maine	4,464	6	8,584	5,415	0	9,310
Massachusetts	5,806	466	64,032	5,462	55	66,106
New York	1,100	776	19,957	1,390	143	19,410
Washington	83	25,578	163,340	83	12,264	138,860
Other	1,866	1,862	21,113	1,627	2,479	21,929
France	186	0	75	573	0	0
Japan	0	610	6,516	0	3,749	4,088
Taiwan	0	148	7,822	0	0	4,899
Other	0	22	1,044	35	0	112
Total	**14,491**	**40,098**	**311,783**	**15,497**	**30,962**	**339,029**

(1) Includes Coho and Spring (Chinook).

Source: International Trade Division, Statistics Canada

Table 2. Aquaculture: Exports of Selected Canadian Aquaculture Products, by Country of Destination, 2000 and 2001

Destination:	2000 Mussels	2000 Other Salmon(1)	2000 Atlantic Salmon	2001 Mussels	2001 Other Salmon(1)	2001 Atlantic Salmon
	tonnes			tonnes		
United States	7,760	2,978	40,515	8,445	3,242	48,682
California	310	1,164	8,642	250	1,320	12,123
Maine	3,068	0	796	3,387	0	803
Massachusetts	2,821	4	8,787	3,308	87	6,884
New York	586	14	3,309	652	79	4,529
Washington	9	1,283	14,509	10	1,311	14,367
Other	966	513	4,472	838	445	9,976
France	24	0	0	0	0	0
Japan	45	193	191	63	44	466
Taiwan	0	2	767	0	64	1,295
Other	0	0	127	8	0	132
Total	**7,829**	**3,173**	**41,600**	**8,516**	**3,350**	**50,575**
	'000 of dollars			'000 of dollars		
United States	19,341	23,249	327,294	22,017	19,571	387,020
California	899	9,135	81,751	802	8,077	109,443
Maine	6,429	0	6,033	7,640	0	6,778
Massachusetts	7,524	28	68,276	9,146	356	48,262
New York	1,628	128	26,472	1,823	504	34,469
Washington	35	9,808	110,541	36	7,568	108,367
Other	2,826	4,150	34,221	2,570	3,066	79,701
France	97	0	0	0	0	0
Japan	201	1,890	1,557	264	314	3,585
Taiwan	0	14	6,208	0	494	9,972
Other	0	0	1,040	20	0	1,032
Total	**19,639**	**25,153**	**336,099**	**22,301**	**20,379**	**401,609**

(1) Includes Coho and Spring (Chinook).

Source: International Trade Division, Statistics Canada

Table 3. Aquaculture: Value Added Account - Aquaculture Industry, by Province and Canada, 1997

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	B.C.	Canada (1)
	'000 of dollars							
A. Sources of output								
Sales of aqua products/services	**6,300**	**16,400**	**11,200**	**162,000**	**8,700**	**17,900**	**224,800**	**447,300**
Whole fish dressed, fresh or chilled	..	..	7,800	110,000	2,900	..	170,000	291,100
Fish eggs & live fish for grow-out	..	..	1,000	17,000	..	..	16,000	36,100
Whole fish live (ex for grow-out)	..	..	..	..	3,100	..	..	10,800
Whole fish dressed & frozen	..	..	..	..	..	..	..	12,500
Fish fillets, fresh or frozen	..	..	..	..	..	..	17,500	35,800
Fish, dried, smoked or in brine	..	..	..	..	..	..	..	500
Total finfish	5,600	800	9,000	157,700	8,500	17,500	206,000	405,100
Total molluscs	700	15,400	2,000	3,000	..	..	10,000	31,250
Other goods & services NES (2)	..	200	200	1,300	..	..	8,800	10,950
Subsidies	500	..	500	100	..	..	1,200	2,700
Other operating revenue	200	100	100	1,900	..	..	4,000	11,400
Total operating revenue	**7,000**	**16,500**	**11,800**	**164,000**	**9,100**	**23,000**	**230,000**	**461,400**
Change in inventory value - goods	1,000	..	2,900	2,000	-1,000	..	45,000	49,900
Gross output	**8,000**	**16,500**	**14,700**	**166,000**	**8,100**	**23,000**	**275,000**	**511,300**
B. Product inputs								
Product expenses	**4,650**	**5,000**	**9,110**	**109,700**	**5,090**	**14,880**	**178,500**	**326,930**
Feed	2,200	200	3,800	37,000	2,300	6,500	69,000	121,000
Therapeutants	300	..	200	1,500	50	80	3,000	5,130
Purchases, eggs/fish - grow-out	300	..	3,000	7,400	..	4,000	28,000	44,600
Purchases, fish - processing/resale	..	..	..	39,000	..	..	4,000	43,200
Insurance premiums	50	150	140	2,050	100	300	5,000	7,790
Energy (electricity, fuel, etc.)	200	250	300	1,900	400	700	3,000	6,750
Goods transportation & storage	300	..	150	4,000	100	200	12,000	16,750
Processing services	600	1,200	200	4,000	..	..	28,000	34,350
Rental & leasing expenses	50	200	70	120	50	200	2,300	2,990
Maintenance/repairs, buildings	150	650	100	200	100	400	2,000	3,600
Maintenance/repairs, machinery	150	300	300	2,000	200	350	4,000	7,300
Professional services	110	300	290	1,910	170	..	6,600	9,380
Other operating expenses NES (2)	240	850	560	8,620	370	1,850	11,600	24,090
Change in inventory value -raw materials	..	..	100	500	..	..	1,000	1,600
Total of product inputs	**4,650**	**5,000**	**9,010**	**109,200**	**5,090**	**14,880**	**177,500**	**325,330**
C. Gross value added (factor cost)	**3,350**	**11,500**	**5,690**	**56,800**	**3,010**	**8,120**	**97,500**	**185,970**
D. Selected primary inputs								
Salaries & wages	2,300	6,500	4,000	23,200	1,700	4,000	30,000	71,700
Employer portion of employee benefits	200	650	300	1,800	200	300	3,000	6,450
Depreciation	600	1,500	800	5,500	600	1,000	9,500	19,500
Interest paid	500	350	500	4,200	350	1,000	5,000	11,900

(1) Sum of estimated provinces excludes Manitoba, Saskatchewan & Alberta.

(2) NES = not elsewhere specified.

Table 3. Aquaculture: Value Added Account - Aquaculture Industry, by Province and Canada, 1998

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	B.C.	Canada (1)
	'000 of dollars							
A. Sources of output								
Sales of aqua products/services	**9,400**	**21,100**	**19,100**	**181,150**	**9,250**	**16,400**	**263,700**	**520,100**
Whole fish dressed, fresh or chilled	..	..	6,000	122,000	3,000	..	178,000	309,000
Fish eggs & live fish for grow-out	..	..	6,500	16,000	..	..	24,000	47,900
Whole fish live (ex for grow-out)	..	..	..	8,000	3,200	..	..	28,300
Whole fish dressed & frozen	..	..	..	..	..	..	..	8,000
Fish fillets, fresh or frozen	..	..	..	..	..	..	26,000	53,800
Fish, dried, smoked or in brine	..	..	..	..	..	..	..	500
Total finfish	8,500	900	16,000	174,000	9,000	16,000	248,500	472,900
Total molluscs	900	20,000	3,000	3,000	..	..	10,000	37,050
Other goods & services NES (2)	..	200	100	4,150	..	..	5,200	10,150
Subsidies	1,800	..	300	3,700	..	..	..	6,800
Other operating revenue	80	100	100	1,950	..	..	..	13,030
Total operating revenue	**11,280**	**21,200**	**19,500**	**186,800**	**9,500**	**21,550**	**270,100**	**539,930**
Change in inventory value - goods	750	600	4,500	3,000	200	400	15,000	24,750
Gross output	**12,030**	**21,800**	**24,000**	**189,800**	**9,700**	**22,250**	**285,100**	**564,680**
B. Product inputs								
Product expenses	**8,650**	**6,000**	**14,620**	**118,250**	**5,630**	**14,150**	**174,140**	**341,440**
Feed	4,600	250	6,000	39,000	2,400	6,000	83,000	141,250
Therapeutants	400	..	400	1,300	50	100	3,700	5,950
Purchases, eggs/fish - grow-out	500	..	5,000	16,000	..	3,500	14,000	41,000
Purchases, fish - processing/resale	..	..	200	36,000	..	..	4,000	40,400
Insurance premiums	50	200	400	2,050	100	300	4,300	7,400
Energy (electricity, fuel, etc.)	300	300	500	1,500	500	800	3,200	7,100
Goods transportation & storage	400	..	250	4,100	100	200	12,000	17,050
Processing services	850	1,200	300	3,600	..	..	23,000	29,300
Rental & leasing expenses	300	250	200	500	50	200	2,200	3,700
Maintenance/repairs, buildings	200	700	100	1,000	150	400	1,600	4,150
Maintenance/repairs, machinery	100	350	350	2,200	250	400	4,500	8,150
Professional services	450	350	130	1,550	150	..	2,410	5,040
Other operating expenses NES (2)	500	1,400	790	9,450	630	1,950	16,230	30,950
Change in inventory value -raw materials	-100	..	100	1,500	100	200	1,000	2,800
Total of product inputs	**8,750**	**6,000**	**14,520**	**116,750**	**5,530**	**13,950**	**173,140**	**338,640**
C. Gross value added (factor cost)	**3,280**	**15,800**	**9,480**	**73,050**	**4,170**	**8,300**	**111,960**	**226,040**
D. Selected primary inputs								
Salaries & wages	3,000	8,000	6,000	20,000	1,800	4,000	30,500	73,300
Employer portion of employee benefits	300	800	500	1,700	200	300	3,000	6,800
Depreciation	700	1,900	1,500	5,800	600	1,050	14,000	25,550
Interest paid	700	450	700	5,000	350	1,200	6,000	14,400

(1) Sum of estimated provinces excludes Manitoba, Saskatchewan & Alberta.

(2) NES = not elsewhere specified.

Table 3. Aquaculture: Value Added Account - Aquaculture Industry, by Province and Canada, 1999

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	B.C.	Canada (1)
	'000 of dollars							
A. Sources of output								
Sales of aqua products/services	**12,800**	**23,300**	**29,400**	**228,360**	**11,170**	**17,000**	**299,400**	**621,430**
Whole fish dressed, fresh or chilled	..	..	8,000	150,000	800	..	219,700	378,500
Fish eggs & live fish for grow-out	..	..	200	22,000	3,000	..	20,000	45,200
Whole fish live (ex for grow-out)	..	..	..	..	4,100	..	..	14,100
Whole fish dressed & frozen	..	..	9,000	..	..	..	..	14,700
Fish fillets, fresh or frozen	..	..	8,200	37,000	2,200	..	42,000	89,400
Fish, dried, smoked or in brine	..	..	..	..	470	..	..	770
Total finfish	9,800	800	25,400	220,700	10,570	16,900	286,000	570,170
Total molluscs	3,000	22,300	3,500	4,000	200	..	11,750	44,750
Other goods & services NES (2)	..	200	500	3,660	400	100	1,650	6,510
Subsidies	600	..	300	200	70	..	..	2,020
Other operating revenue	115	100	100	7,420	130	..	..	27,865
Total operating revenue	**13,515**	**23,400**	**29,800**	**235,980**	**11,370**	**22,350**	**314,900**	**651,315**
Change in inventory value - goods	1,400	600	5,800	30,000	..	320	18,000	56,120
Gross output	**14,915**	**24,000**	**35,600**	**265,980**	**11,370**	**22,670**	**332,900**	**707,435**
B. Product inputs								
Product expenses	**8,935**	**7,050**	**18,675**	**177,815**	**5,945**	**15,050**	**199,505**	**432,975**
Feed	5,000	300	8,200	60,000	2,500	6,000	95,000	177,000
Therapeutants	..	..	..	2,100	150	100	4,000	6,850
Purchases, eggs/fish - grow-out	550	1,050	4,500	22,000	710	4,500	16,000	49,310
Purchases, fish - processing/resale	..	..	200	59,000	150	..	9,200	68,550
Insurance premiums	150	200	725	2,500	150	300	4,100	8,125
Energy (electricity, fuel, etc.)	300	300	500	1,900	900	700	3,200	7,800
Goods transportation & storage	500	..	425	4,900	35	200	9,500	15,560
Processing services	800	1,400	..	5,000	..	300	22,150	29,760
Rental & leasing expenses	350	250	150	1,200	30	200	2,000	4,180
Maintenance/repairs, buildings	..	900	100	1,100	..	400	1,200	4,105
Maintenance/repairs, machinery	100	400	350	3,400	360	350	5,000	9,960
Professional services	360	350	1,000	2,080	275	..	3,480	7,545
Other operating expenses NES (2)	375	1,900	2,175	12,635	470	2,000	24,675	44,230
Change in inventory value -raw materials	..	..	700	800	-600	-30	600	1,470
Total of product inputs	**8,935**	**7,050**	**17,975**	**177,015**	**6,545**	**15,080**	**198,905**	**431,505**
C. Gross value added (factor cost)	**5,980**	**16,950**	**17,625**	**88,965**	**4,825**	**7,590**	**133,995**	**275,930**
D. Selected primary inputs								
Salaries & wages	3,200	9,000	7,500	25,000	2,200	3,900	35,000	85,800
Employer portion of employee benefits	350	900	700	2,500	200	300	4,000	8,950
Depreciation	800	2,100	1,700	7,000	800	1,100	16,000	29,500
Interest paid	400	500	1,600	6,000	400	800	6,200	15,900

(1) Sum of estimated provinces excludes Manitoba, Saskatchewan & Alberta.

(2) NES = not elsewhere specified.

Table 3. Aquaculture: Value Added Account - Aquaculture Industry, by Province and Canada, 2000

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	B.C.	Canada (1)
	'000 of dollars							
A. Sources of output								
Sales of aqua products/services	**12,200**	**29,000**	**43,500**	**281,900**	**12,000**	**17,600**	**296,300**	**692,500**
Whole fish dressed, fresh or chilled	..	..	15,000	187,000	900	..	217,000	419,900
Fish eggs & live fish for grow-out	..	..	1,000	25,000	3,300	..	19,500	48,800
Whole fish live (ex for grow-out)	..	..	..	11,500	4,100	..	..	15,600
Whole fish dressed & frozen	..	..	12,000	2,000	..	..	4,000	18,000
Fish fillets, fresh or frozen	..	..	9,000	46,700	2,300	..	41,000	99,000
Fish, dried, smoked or in brine	..	..	..	200	600	..	100	900
Total finfish	9,200	1,000	37,000	272,400	11,200	17,500	281,600	629,900
Total molluscs	3,000	27,800	5,500	5,500	400	..	13,000	55,200
Other goods & services NES (2)	..	200	1,000	4,000	400	100	1,700	7,400
Subsidies	600	..	400	400	..	..	500	2,170
Other operating revenue	200	100	100	7,600	..	..	15,000	28,200
Total operating revenue	**13,000**	**29,100**	**44,000**	**289,900**	**12,270**	**22,800**	**311,800**	**722,870**
Change in inventory value - goods	..	300	3,000	25,000	100	200	25,000	53,600
Gross output	**13,000**	**29,400**	**47,000**	**314,900**	**12,370**	**23,000**	**336,800**	**776,470**
B. Product inputs								
Product expenses	**8,450**	**8,100**	**25,900**	**209,500**	**6,800**	**15,000**	**200,700**	**474,450**
Feed	4,400	350	12,000	72,000	2,700	5,900	92,000	189,350
Therapeutants	300	..	500	2,500	200	100	4,300	7,900
Purchases, eggs/fish - grow-out	500	1,300	6,000	28,000	800	4,500	17,000	58,100
Purchases, fish - processing/resale	..	..	..	65,000	..	..	9,500	75,000
Insurance premiums	150	250	1,000	2,500	200	300	4,300	8,700
Energy (electricity, fuel, etc.)	300	350	1,000	3,000	1,100	700	3,500	9,950
Goods transportation & storage	500	..	600	6,000	50	200	9,700	17,050
Processing services	..	1,650	..	6,000	..	300	23,000	31,950
Rental & leasing expenses	350	300	200	2,000	50	200	2,200	5,300
Maintenance/repairs, buildings	250	1,000	200	2,000	200	400	1,400	5,450
Maintenance/repairs, machinery	100	450	500	4,000	400	400	5,500	11,350
Professional services	400	400	1,000	2,500	300	..	3,500	8,100
Other operating expenses NES (2)	400	2,050	2,500	14,000	500	2,000	24,800	46,250
Change in inventory value -raw materials	..	..	500	1,000	200	100	..	1,800
Total of product inputs	**8,450**	**8,100**	**25,400**	**208,500**	**6,600**	**14,900**	**200,700**	**472,650**
C. Gross value added (factor cost)	**4,550**	**21,300**	**21,600**	**106,400**	**5,770**	**8,100**	**136,100**	**303,820**
D. Selected primary inputs								
Salaries & wages	2,800	10,000	8,000	26,000	2,200	4,000	37,000	90,000
Employer portion of employee benefits	250	1,100	900	2,800	200	300	4,000	9,550
Depreciation	850	2,400	2,000	7,500	800	1,100	16,500	31,150
Interest paid	400	550	2,000	6,500	400	800	6,300	16,950

(1) Sum of estimated provinces excludes Manitoba, Saskatchewan & Alberta.

(2) NES = not elsewhere specified.

Table 3. Aquaculture: Value Added Account - Aquaculture Industry, by Province and Canada, 2001

	Nfld.Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	B.C.	Canada (1)
	'000 of dollars							
A. Sources of output								
Sales of aqua products/services	**14,200**	**29,400**	**29,100**	**279,100**	**12,230**	**17,800**	**293,400**	**675,230**
Whole fish dressed, fresh or chilled	..	..	6,200	184,000	1,200	..	190,000	381,400
Fish eggs & live fish for grow-out	..	..	1,500	24,000	3,300	..	16,300	45,100
Whole fish live (ex for grow-out)	..	..	400	11,500	4,130	..	..	16,030
Whole fish dressed & frozen	..	..	4,000	2,000	..	..	5,800	11,800
Fish fillets, fresh or frozen	..	..	6,200	48,000	2,200	..	61,500	117,900
Fish, dried, smoked or in brine	..	..	..	..	600	..	100	700
Total finfish	10,400	1,000	18,300	269,500	11,430	17,700	273,700	602,030
Total molluscs	3,800	28,200	9,200	5,500	500	..	18,000	65,200
Other goods & services NES (2)	..	200	1,600	4,100	300	100	1,700	8,000
Subsidies	500	..	300	400	..	..	500	1,970
Other operating revenue	300	100	200	7,500	..	..	14,000	27,300
Total operating revenue	**15,000**	**29,500**	**29,600**	**287,000**	**12,500**	**23,000**	**307,900**	**704,500**
Change in inventory value - goods	..	100	-1,000	15,000	..	300	20,000	34,400
Gross output	**15,000**	**29,600**	**28,600**	**302,000**	**12,500**	**23,300**	**327,900**	**738,900**
B. Product inputs								
Product expenses	**9,750**	**8,250**	**18,350**	**207,000**	**6,900**	**15,000**	**201,100**	**466,350**
Feed	5,100	325	8,200	73,500	2,800	5,900	96,000	191,825
Therapeutants	350	..	300	2,000	200	100	4,300	7,250
Purchases, eggs/fish - grow-out	550	1,375	4,000	27,500	750	4,500	13,000	51,675
Purchases, fish - processing/resale	..	..	..	62,500	..	..	9,600	72,550
Insurance premiums	150	250	600	2,500	250	300	4,400	8,450
Energy (electricity, fuel, etc.)	400	400	600	3,300	1,100	700	3,800	10,300
Goods transportation & storage	550	..	500	6,100	50	200	9,300	16,700
Processing services	850	1,700	100	6,000	100	300	24,000	33,050
Rental & leasing expenses	400	300	..	2,000	..	200	2,400	5,550
Maintenance/repairs, buildings	300	1,025	150	2,000	200	400	1,200	5,275
Maintenance/repairs, machinery	200	425	550	4,100	400	400	5,700	11,775
Professional services	400	400	1,000	2,500	300	..	3,700	8,300
Other operating expenses NES (2)	500	2,050	1,900	13,000	500	2,000	23,700	43,650
Change in inventory value -raw materials	..	..	-100	..	100	100	2,000	2,100
Total of product inputs	**9,750**	**8,250**	**18,450**	**207,000**	**6,800**	**14,900**	**199,100**	**464,250**
C. Gross value added (factor cost)	**5,250**	**21,350**	**10,150**	**95,000**	**5,700**	**8,400**	**128,800**	**274,650**
D. Selected primary inputs								
Salaries & wages	3,000	10,500	7,600	27,000	2,300	4,100	38,000	92,500
Employer portion of employee benefits	300	1,200	700	3,000	200	350	4,100	9,850
Depreciation	600	2,500	1,800	8,000	800	1,000	17,000	31,700
Interest paid	350	500	1,500	6,300	400	750	6,000	15,800

(1) Sum of estimated provinces excludes Manitoba, Saskatchewan & Alberta.

(2) NES = not elsewhere specified.