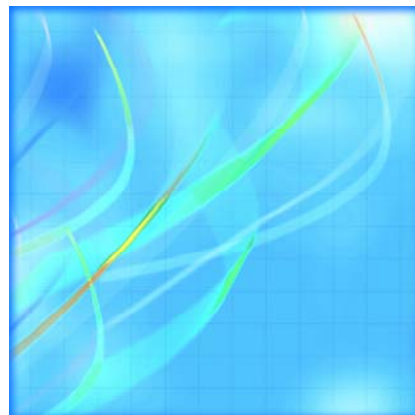


Catalogue no. 23-222-X

Aquaculture Statistics

2013



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Statistics Canada
Agriculture Division
Livestock Section

Aquaculture Statistics

2013

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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.

User information

Symbols

The following standard symbols are used in Statistics Canada publications:

- . not available for any reference period
- .. not available for a specific reference period
- ... not applicable
- 0 true zero or a value rounded to zero
- 0^s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
- 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
- * significantly different from reference category ($p < 0.05$)

Acknowledgements

Special thanks are extended to Fisheries and Oceans Canada for its contribution to the realization of this publication.

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Note to users

Aquaculture is defined as 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.

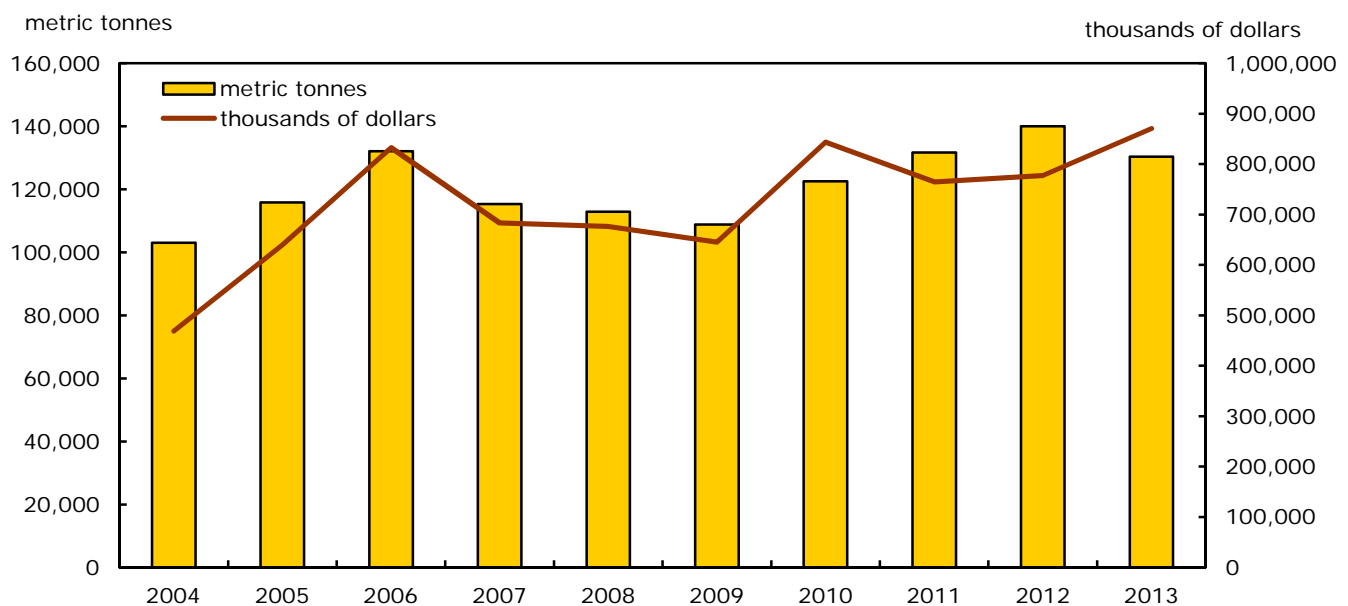
The annual publication, *Aquaculture Statistics 23-222-X*, presents an overview of this sector using data collected from the Survey of Aquaculture Industry. The survey is designed to provide economic variables that result in the aquaculture value added account, which measures the economic production (value added) of goods and services from aquaculture establishments.

The data presented are used by aquaculture industry analysts and producers as they make production and marketing decisions and by government analysts or special interest groups to monitor the industry or develop policies related to aquaculture in Canada. The data are also used in the Canadian System of National Accounts to develop provincial and national level accounts.

Highlights

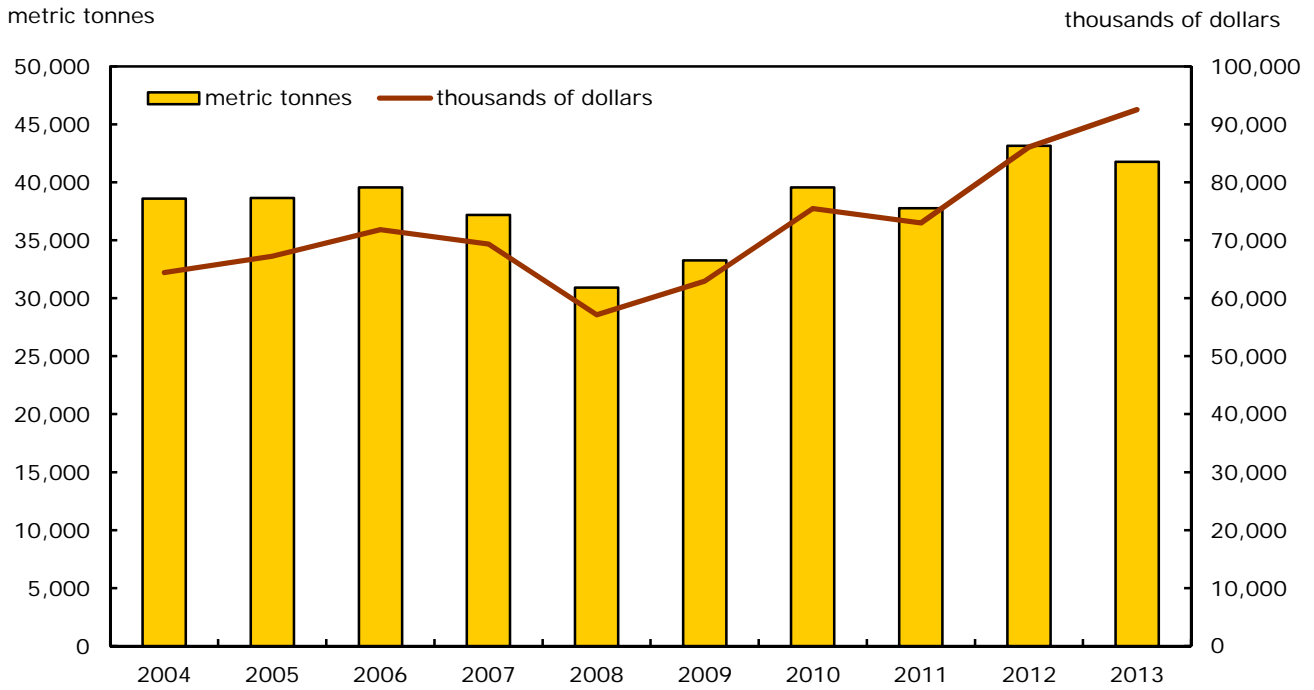
- Sales of aquaculture products and services amounted to \$927.9 million in 2013, an increase of 9.5% from 2012.
- Finfish sales, which accounted for 90.9% of sales of aquaculture products and services in 2013, increased 10.8% to \$843.1 million.
- The gross value added to the economy by the aquaculture industry climbed to \$326.3 million, up from \$203.3 in 2012. Newfoundland and Labrador and British Columbia led all provinces in terms of growth in 2013.
- The value of total exports of farmed salmon including fillets remained relatively unchanged (0.6%) in 2013, while the value of farmed mussel exports increased 4.8% compared to 2012.

Chart 1
Canadian finfish production



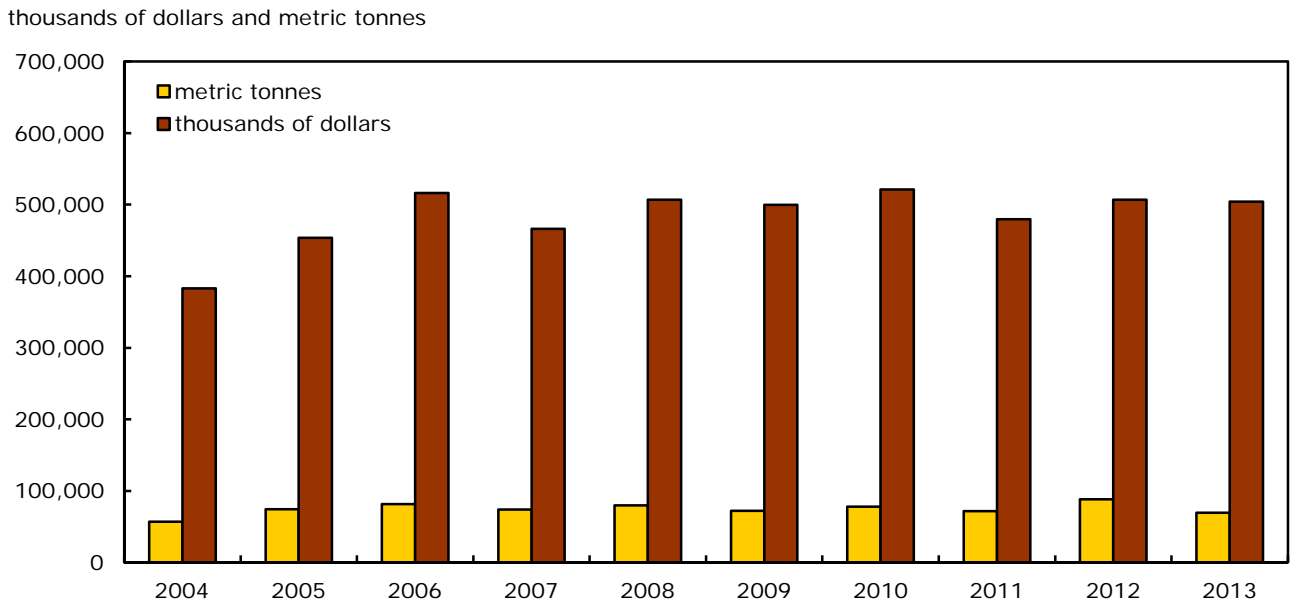
Source(s): Statistics Canada, CANSIM table 003-0001.

Chart 2
Canadian shellfish production



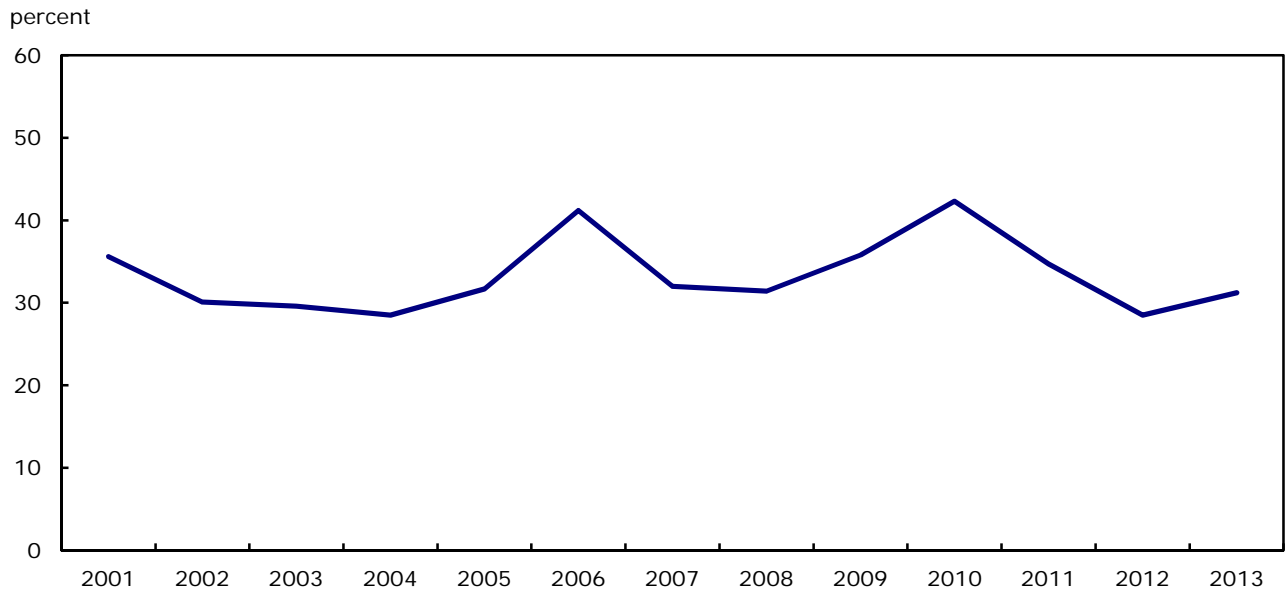
Source(s): Statistics Canada, CANSIM table 003-0001.

Chart 3
Canadian exports of atlantic salmon and atlantic salmon fillets



Source(s): Statistics Canada, International Accounts and Trade Division.

Chart 4
Gross value-added (at factor cost) compared to the value of production



Source(s): Statistics Canada, CANSIM table 003-0003.

Related products

Selected publications from Statistics Canada

21-207-X	Statistics on income of farm families
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Selected CANSIM tables from Statistics Canada

003-0001	Aquaculture, production and value
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003-0003	Aquaculture economic statistics, value added account
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Selected surveys from Statistics Canada

3479	Aquaculture, production and value, Annual
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4701	Survey of the Aquaculture Industry
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Selected summary tables from Statistics Canada

- *Canadian Statistics - Aquaculture industry, by selected provinces*

Statistical tables

**Table 1-1
Aquaculture, production and value, by province and Canada — 2009**

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Canada ¹
tonnes											
Production											
Salmon	7,550	24,000	0	0	x	x	x	68,662	100,212
Trout	133	150	380	4,375	x	x	x	523	7,198
Steelhead	0	0	0	0	x	x	x	0	0
Other finfish	93	0	104	0	x	x	x	839	1,429
Total finfish	7,776	24,150	484	4,375	x	x	x	70,024	108,839
Clams	..	0	539	0	0	0	x	x	x	1,359	1,898
Oysters	..	2,281	159	638	0	0	x	x	x	5,735	8,813
Mussels	..	18,639	1,893	95	522	0	x	x	x	312	21,461
Scallops	..	0	3	0	0	0	x	x	x	385	388
Other shellfish	..	0	147	0	27	0	x	x	x	530	704
Total shellfish	..	20,920	2,741	733	549	0	x	x	x	8,321	33,264
Total aquaculture	13,625	20,920	10,517	24,883	1,033	4,375	x	x	x	78,345	155,727
Re-stocking ²	805	.	.	.	.	.	805
Total aquaculture (including re-stocking) ²	13,625	20,920	10,517	24,883	1,838	4,375	x	x	x	78,345	156,532
thousands of dollars											
Value											
Salmon	45,774	159,000	0	0	x	x	x	394,151	598,925
Trout	1,330	670	2,094	17,820	x	x	x	2,944	32,899
Steelhead	0	0	0	0	x	x	x	0	0
Other finfish	543	0	798	0	x	x	x	7,576	11,687
Total finfish	..	1,828	47,647	159,670	2,892	17,820	x	x	x	404,671	645,338
Clams	..	0	2,057	0	0	0	x	x	x	7,407	9,464
Oysters	..	5,075	676	4,000	0	0	x	x	x	7,043	16,794
Mussels	..	24,655	2,629	120	679	0	x	x	x	1,389	29,472
Scallops	..	0	23	0	0	0	x	x	x	1,649	1,672
Other shellfish	..	0	4,847	0	93	0	x	x	x	593	5,533
Total shellfish	..	29,730	10,231	4,120	772	0	x	x	x	18,081	62,935
Total aquaculture	92,100	31,558	57,878	163,790	3,665	17,820	x	x	x	422,752	800,373
Re-stocking ²	8,623	.	.	.	.	.	8,623
Total aquaculture (including re-stocking) ²	92,100	31,558	57,878	163,790	12,287	17,820	x	x	x	422,752	808,996

1. Provinces with data not available are not included in the Canada totals.

2. Sales to outfitters: operations offering lodging and services for hunting, fishing and trapping.

Note(s): The production and value of aquaculture includes the amount and value produced on sites and excludes hatcheries or processing. Shellfish also includes some wild production. The data are collected from each of the provincial departments responsible for aquaculture.

Table 1-2
Aquaculture, production and value, by province and Canada — 2010

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Canada ¹
tonnes											
Production											
Salmon	..	..	5,088	25,625	0	0	x	x	x	70,831	101,544
Trout	..	..	91	150	337	4,060	x	x	x	600	6,844
Steelhead	..	..	0	0	0	0	x	x	x	0	0
Other finfish	..	..	62	0	71	0	x	x	x	884	1,291
Total finfish	12,899	..	5,241	25,775	408	4,060	x	x	x	72,315	122,577
Clams	0	0	438	0	0	0	x	x	x	1,485	1,923
Oysters	0	2,478	205	881	0	0	x	x	x	7,550	11,113
Mussels	2,461	20,112	2,121	95	523	0	x	x	x	364	25,675
Scallops	0	0	2	0	0	0	x	x	x	695	697
Other shellfish	0	0	110	0	23	0	x	x	x	26	159
Total shellfish	2,461	22,589	2,876	976	546	0	x	x	x	10,120	39,569
Total aquaculture	15,360	22,589	8,117	26,751	954	4,060	x	x	x	82,435	162,146
Re-stocking ²	.	.	.	.	874	.	.	.	.	.	874
Total aquaculture (including re-stocking) ²	15,360	22,589	8,117	26,751	1,828	4,060	x	x	x	82,435	163,020
thousands of dollars											
Value											
Salmon	..	..	32,040	162,000	0	0	x	x	x	499,608	693,648
Trout	..	..	891	700	1,813	17,100	x	x	x	4,852	33,269
Steelhead	..	..	0	0	0	0	x	x	x	0	0
Other finfish	..	..	375	0	482	0	x	x	x	10,800	13,637
Total finfish	100,301	2,200	33,307	162,700	2,295	17,100	x	x	x	515,260	843,055
Clams	0	0	1,736	0	0	0	x	x	x	8,159	9,895
Oysters	0	5,844	720	3,355	0	0	x	x	x	8,957	18,876
Mussels	6,009	26,603	2,548	100	680	0	x	x	x	1,809	37,748
Scallops	0	0	15	0	0	0	x	x	x	2,904	2,919
Other shellfish	0	0	4,521	0	90	0	x	x	x	1,401	6,012
Total shellfish	6,009	32,447	9,540	3,455	769	0	x	x	x	23,230	75,451
Total aquaculture	106,310	34,647	42,847	166,155	3,065	17,100	x	x	x	538,490	918,506
Re-stocking ²	.	.	.	.	8,852	.	.	.	.	.	8,852
Total aquaculture (including re-stocking) ²	106,310	34,647	42,847	166,155	11,917	17,100	x	x	x	538,490	927,358

1. Provinces with data not available are not included in the Canada totals.

2. Sales to outfitters: operations offering lodging and services for hunting, fishing and trapping.

Note(s): The production and value of aquaculture includes the amount and value produced on sites and excludes hatcheries or processing. Shellfish also includes some wild production. The data are collected from each of the provincial departments responsible for aquaculture.

**Table 1-3
Aquaculture, production and value, by province and Canada — 2011**

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Canada ¹
tonnes											
Production											
Salmon	..	..	5,624	21,560	0	0	x	x	x	83,144	110,328
Trout	..	..	124	80	357	3,385	x	x	x	64	5,600
Steelhead	..	..	0	0	0	0	x	x	x	694	694
Other finfish	..	..	69	0	64	23	x	x	x	389	772
Total finfish	14,264	..	5,817	21,640	421	3,408	x	x	x	84,291	131,658
Clams	0	0	341	0	0	0	x	x	x	1,172	1,513
Oysters	0	2,682	246	609	0	0	x	x	x	6,242	9,779
Mussels	3,000	20,894	1,374	25	317	0	x	x	x	288	25,897
Scallops	0	0	1	0	28	0	x	x	x	271	300
Other shellfish	0	0	237	0	50	0	x	x	x	0	287
Total shellfish	3,000	23,576	2,199	634	394	0	x	x	x	7,973	37,776
Total aquaculture	17,264	23,576	8,017	22,274	815	3,408	x	x	x	92,264	169,435
Re-stocking ²	.	.	.	.	824	.	.	.	.	.	824
Total aquaculture (including re-stocking) ²	17,264	23,576	8,017	22,274	1,639	3,408	x	x	x	92,264	170,259
thousands of dollars											
Value											
Salmon	..	..	31,234	140,241	0	0	x	x	x	435,667	607,142
Trout	..	..	1,796	400	2,266	17,200	x	x	x	408	29,927
Steelhead	..	..	0	0	0	0	x	x	x	5,269	5,269
Other finfish	..	..	367	0	81	500	x	x	x	4,364	6,959
Total finfish	111,829	3,700	33,397	140,641	2,347	17,700	x	x	x	445,708	764,827
Clams	0	0	1,396	0	0	0	x	x	x	6,652	8,048
Oysters	0	6,622	894	2,645	0	0	x	x	x	8,380	18,541
Mussels	8,221	26,716	1,584	28	411	0	x	x	x	1,471	38,431
Scallops	0	0	11	0	179	0	x	x	x	1,714	1,904
Other shellfish	0	0	6,005	0	74	0	x	x	x	0	6,079
Total shellfish	8,221	33,338	9,890	2,673	664	0	x	x	x	18,217	73,003
Total aquaculture	120,050	37,038	43,287	143,314	3,011	17,700	x	x	x	463,925	837,830
Re-stocking ²	.	.	.	.	8,469	.	.	.	.	.	8,469
Total aquaculture (including re-stocking) ²	120,050	37,038	43,287	143,314	11,480	17,700	x	x	x	463,925	846,299

1. Provinces with data not available are not included in the Canada totals.

2. Sales to outfitters: operations offering lodging and services for hunting, fishing and trapping.

Note(s): The production and value of aquaculture includes the amount and value produced on sites and excludes hatcheries or processing. Shellfish also includes some wild production. The data are collected from each of the provincial departments responsible for aquaculture.

Table 1-4
Aquaculture, production and value, by province and Canada — 2012

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Canada ¹
tonnes											
Production											
Salmon	..	..	5,903	30,217	0	0	x	x	x	79,981	116,101
Trout	..	..	113	142	367	3,700	x	x	x	88	6,024
Steelhead	..	..	0	0	0	0	x	x	x	505	505
Other finfish	..	..	71	0	53	21	x	x	x	139	504
Total finfish	16,831	..	6,087	30,359	420	3,721	x	x	x	80,713	139,965
Clams	0	0	406	0	0	0	x	x	x	2,710	3,116
Oysters	0	2,787	105	1,118	0	0	x	x	x	6,487	10,497
Mussels	4,397	22,690	1,396	4	271	0	x	x	x	274	29,033
Scallops	0	0	2	0	15	0	x	x	x	198	215
Other shellfish	0	0	242	0	46	0	x	x	x	0	288
Total shellfish	4,397	25,477	2,151	1,122	333	0	x	x	x	9,669	43,149
Total aquaculture	21,228	25,477	8,238	31,481	753	3,721	x	x	x	90,382	183,114
Re-stocking ²	.	.	.	.	806	.	.	.	.	.	806
Total aquaculture (including re-stocking) ²	21,228	25,477	8,238	31,481	1,559	3,721	x	x	x	90,382	183,920
thousands of dollars											
Value											
Salmon	..	..	40,124	184,966	0	0	x	x	x	409,143	634,233
Trout	..	..	1,412	1,420	1,951	18,300	x	x	x	478	31,516
Steelhead	..	..	0	0	0	0	x	x	x	5,183	5,183
Other finfish	..	..	369	0	78	500	x	x	x	1,197	3,740
Total finfish	99,286	3,200	41,905	186,386	2,029	18,800	x	x	x	416,001	777,158
Clams	0	0	1,258	0	0	0	x	x	x	6,291	7,549
Oysters	0	7,617	1,140	5,220	0	0	x	x	x	10,251	24,228
Mussels	13,518	30,014	1,876	9	353	0	x	x	x	855	46,625
Scallops	0	0	13	0	209	0	x	x	x	1,338	1,560
Other shellfish	0	0	6,042	0	70	0	x	x	x	0	6,112
Total shellfish	13,518	37,631	10,329	5,229	631	0	x	x	x	18,735	86,074
Total aquaculture	112,804	40,831	52,234	191,615	2,661	18,800	x	x	x	434,736	863,232
Re-stocking ²	.	.	.	.	8,584	.	.	.	.	.	8,584
Total aquaculture (including re-stocking) ²	112,804	40,831	52,234	191,615	11,245	18,800	x	x	x	434,736	871,816

1. Provinces with data not available are not included in the Canada totals.

2. Sales to outfitters: operations offering lodging and services for hunting, fishing and trapping.

Note(s): The production and value of aquaculture includes the amount and value produced on sites and excludes hatcheries or processing. Shellfish also includes some wild production. The data are collected from each of the provincial departments responsible for aquaculture.

**Table 1-5
Aquaculture, production and value, by province and Canada — 2013**

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Canada ¹
tonnes											
Production											
Salmon	..	..	6,517	18,837	0	0	x	x	x	74,673	100,027
Trout	..	..	203	0	1,262	3,580	x	x	x	62	6,736
Steelhead	..	..	0	0	0	0	x	x	x	682	682
Other finfish	..	..	60	0	1	22	x	x	x	391	696
Total finfish	22,196	..	6,780	18,837	1,263	3,602	x	x	x	75,808	130,337
Clams	0	0	358	0	0	0	x	x	x	2,476	2,834
Oysters	0	2,812	356	739	10	0	x	x	x	5,592	9,509
Mussels	4,354	22,894	1,051	41	448	0	x	x	x	291	29,080
Scallops	0	0	0	5	11	0	x	x	x	91	107
Other shellfish	0	0	203	5	22	0	x	x	x	0	230
Total shellfish	4,354	25,706	1,968	790	491	0	x	x	x	8,450	41,760
Total aquaculture	26,550	25,706	8,748	19,627	1,754	3,602	x	x	x	84,258	172,097
thousands of dollars											
Value											
Salmon	..	..	41,151	117,334	0	0	x	x	x	475,769	634,254
Trout	..	..	1,827	0	10,735	18,000	x	x	x	501	39,089
Steelhead	..	..	0	0	0	0	x	x	x	4,635	4,635
Other finfish	..	..	408	0	119	505	x	x	x	4,664	7,306
Total finfish	181,833	3,229	43,386	117,334	10,854	18,505	x	x	x	485,569	870,346
Clams	0	0	1,128	0	0	0	x	x	x	7,014	8,142
Oysters	0	7,686	1,463	5,665	170	0	x	x	x	12,357	27,341
Mussels	15,139	30,284	1,601	46	584	0	x	x	x	1,824	49,478
Scallops	0	0	0	11	141	0	x	x	x	726	878
Other shellfish	0	0	6,679	2	29	0	x	x	x	0	6,710
Total shellfish	15,139	37,970	10,871	5,724	925	0	x	x	x	21,921	92,549
Total aquaculture	196,972	41,198	54,257	123,058	11,779	18,505	x	x	x	507,490	962,895

1. Provinces with data not available are not included in the Canada totals.

Note(s): The production and value of aquaculture includes the amount and value produced on sites and excludes hatcheries or processing. Shellfish also includes some wild production. The data are collected from each of the provincial departments responsible for aquaculture.

Table 2-1
Exports of selected Canadian aquaculture products, by country of destination — 2009 and 2010

Destination	2009				2010			
	Mussels	Other Salmon ¹	Atlantic Salmon ²	Atlantic Salmon fillets	Mussels	Other Salmon ¹	Atlantic Salmon ²	Atlantic Salmon fillets
	tonnes							
United States	10,571	1,513	66,615	4,563	12,689	1,697	70,036	6,357
California	23	646	25,781	191	52	846	24,694	122
Maine	2,331	0	2,944	225	2,661	0	4,837	199
Massachusetts	6,332	105	8,244	885	7,863	169	8,662	1,180
New York	1,046	224	9,103	683	947	147	11,808	823
Washington	85	425	10,927	272	50	433	10,506	668
Other	754	112	9,615	2,308	1,116	102	9,529	3,365
France	0	20	8	0	0	0	1	1
Japan	0	290	578	44	0	213	437	397
Taiwan	0	0	253	67	0	1	166	70
Other	38	2	237	1	30	4	513	2
Total	10,608	1,826	67,691	4,675	12,719	1,915	71,153	6,827
	thousands of dollars							
United States	29,883	12,495	430,723	60,541	33,142	12,055	432,283	78,407
California	60	5,206	168,235	1,953	274	5,696	152,917	1,345
Maine	5,727	0	17,892	3,206	5,979	0	26,549	2,508
Massachusetts	18,957	1,259	52,951	11,663	21,562	2,512	51,283	14,580
New York	2,866	1,782	58,651	9,187	2,392	1,080	69,758	10,304
Washington	282	3,336	69,028	2,810	158	2,008	71,557	6,384
Other	1,991	912	63,967	31,723	2,777	759	60,219	43,286
France	0	150	71	5	0	1	10	17
Japan	0	4,465	4,159	729	0	3,115	2,708	2,263
Taiwan	0	2	1,722	423	0	6	1,222	410
Other	217	23	1,383	6	152	32	3,825	16
Total	30,100	17,135	438,059	61,704	33,294	15,209	440,048	81,113

1. Includes Coho and Spring (Chinook).

2. Includes fresh, chilled and frozen.

Table 2-2
Exports of selected Canadian aquaculture products, by country of destination — 2011 and 2012

Destination	2011				2012			
	Mussels	Other Salmon ¹	Atlantic Salmon ²	Atlantic Salmon fillets	Mussels	Other Salmon ¹	Atlantic Salmon ²	Atlantic Salmon fillets
tonnes								
United States	13,741	1,392	66,141	4,379	14,941	1,169	82,122	4,394
California	41	593	26,649	205	28	511	32,476	3
Maine	2,741	0	3,695	171	3,053	0	1,924	1,209
Massachusetts	8,503	301	7,349	578	9,755	222	12,913	398
New York	943	149	10,597	308	516	94	15,110	286
Washington	39	225	9,562	401	5	281	9,586	64
Other	1,474	124	8,289	2,716	1,584	61	10,113	2,434
France	0	0	9	5	0	6	0	0
Japan	0	445	187	501	0	99	406	509
Taiwan	0	69	8	122	0	3	340	81
Other	73	43	388	186	60	1	557	1
Total	13,814	1,949	66,733	5,193	15,001	1,278	83,425	4,985
thousands of dollars								
United States	35,575	13,159	414,411	55,820	39,147	11,249	456,856	38,754
California	181	5,619	158,025	2,199	108	5,045	180,215	27
Maine	5,872	0	22,359	2,262	6,620	0	10,440	6,121
Massachusetts	23,241	3,218	44,743	7,691	27,244	2,460	69,092	4,102
New York	2,406	1,331	71,933	3,500	1,248	1,003	86,513	2,150
Washington	167	1,898	61,359	3,505	29	2,118	51,255	680
Other	3,706	1,093	55,992	36,663	3,898	622	59,341	25,674
France	0	0	93	61	0	67	2	3
Japan	0	5,886	1,439	2,831	0	1,126	2,881	2,808
Taiwan	1	559	47	760	0	19	1,934	448
Other	321	388	2,693	1,233	289	8	3,280	13
Total	35,897	19,992	418,683	60,705	39,436	12,469	464,953	42,026

1. Includes Coho and Spring (Chinook).

2. Includes fresh, chilled and frozen.

Table 2-3
Exports of selected Canadian aquaculture products, by country of destination — 2013

Destination	2013			
	Mussels	Other Salmon ¹	Atlantic Salmon ²	Atlantic Salmon fillets
	tonnes			
United States	14,559	2,039	61,505	5,704
California	15	904	21,598	65
Maine	2,644	0	390	2,415
Massachusetts	9,587	261	11,556	526
New York	395	197	12,538	338
Washington	19	537	5,593	51
Other	1,899	140	9,830	2,309
France	0	2	0	0
Japan	0	83	1,380	0
Taiwan	0	0	542	0
Other	60	1	374	4
Total	14,619	2,125	63,801	5,708
	thousands of dollars			
United States	41,097	18,864	430,280	57,033
California	69	8,478	143,654	461
Maine	5,924	0	2,170	13,048
Massachusetts	29,263	3,003	70,965	6,918
New York	1,042	1,968	97,920	3,624
Washington	89	3,994	38,586	567
Other	4,711	1,421	76,985	32,415
France	0	21	4	0
Japan	0	926	10,801	0
Taiwan	2	0	3,652	0
Other	244	8	2,302	76
Total	41,343	19,819	447,039	57,109

1. Includes Coho and Spring (Chinook).

2. Includes fresh, chilled and frozen.

Table 3-1
Value added account - Aquaculture industry, by province and Canada — 2009

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	British Columbia	Canada ¹
thousands of dollars								
Sources of output								
Sales of aqua products and services	69,800	28,540	49,810	198,910	10,829	18,150	492,600	868,639
Whole fish dressed, fresh or chilled	65,400	0	x	157,720	2,174	x	412,000	675,294
Fish eggs and live fish for grow-out	x	0	7,900	x	3,853	3,370	7,000	43,723
Whole fish live except for grow-out	0	0	700	315	2,839	10,850	0	14,704
Whole fish, dressed and frozen	0	0	0	0	x	0	x	x
Fish fillets, fresh or frozen	x	0	x	x	x	x	x	x
Fish, dried, smoked or in brine	0	0	10	0	x	0	x	220
Total finfish	66,200	x	43,405	192,650	9,779	x	466,600	798,034
Total molluscs	x	26,300	6,330	x	800	0	12,200	53,480
Other goods and services, not elsewhere specified	x	x	75	x	250	x	13,800	17,125
Subsidies	x	50	x	x	170	x	x	x
Other operating revenue	x	100	x	x	570	x	x	x
Total operating revenue	72,275	28,690	52,545	207,290	11,569	19,570	495,255	887,194
Change in inventory value, goods	9,000	1,100	2,010	15,100	500	1,800	-32,015	-2,505
Gross output	81,275	29,790	54,555	222,390	12,069	21,370	463,240	884,689
Product inputs								
Product expenses	67,470	8,500	31,495	159,700	6,255	9,490	343,650	626,560
Feed	38,500	x	14,300	74,600	x	5,500	159,600	294,840
Therapeutants	x	0	1,200	6,100	x	150	9,600	17,640
Purchases, eggs and fish for grow-out	11,650	3,400	6,700	36,800	290	1,500	5,500	65,840
Purchases, fish for processing and resale	0	x	110	250	x	60	500	1,000
Insurance premiums	x	200	810	x	220	100	6,800	14,010
Energy (electricity, fuel, et cetera)	1,550	1,000	1,100	4,600	1,250	820	9,800	20,120
Goods transportation and storage	1,700	600	440	2,900	220	300	35,000	41,160
Processing services	x	120	440	x	75	5	31,700	35,100
Rental and leasing expenses	x	x	580	1,000	x	200	4,600	7,930
Maintenance and repairs, buildings	450	320	170	300	230	100	1,800	3,370
Maintenance and repairs, machinery	x	1,000	1,920	x	365	100	25,600	43,685
Professional services	570	245	130	2,160	145	145	7,400	10,795
Other operating expenses, not elsewhere specified	3,080	1,365	3,595	15,810	960	510	45,750	71,070
Change in inventory value, raw materials	-1,000	250	0	200	-500	200	10,000	9,150
Total of product inputs	68,470	8,250	31,495	159,500	6,755	9,290	333,650	617,410
Gross value added (factor cost)	12,805	21,540	23,060	62,890	5,314	12,080	129,590	267,279
Selected primary inputs								
Salaries and wages	8,400	7,800	5,500	21,000	2,300	2,850	66,500	114,350
Employer portion of employee benefits	1,100	675	700	2,200	330	285	11,500	16,790
Depreciation	x	1,500	x	11,700	1,300	700	33,000	54,500
Interest paid	x	500	x	6,900	380	200	6,200	18,930

1. Canada total excludes Manitoba, Saskatchewan and Alberta.

Note(s): Data and account structure are subject to revision.

Table 3-2
Value added account - Aquaculture industry, by province and Canada — 2010

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	British Columbia	Canada ¹
thousands of dollars								
Sources of output								
Sales of aqua products and services	x	33,835	36,195	233,165	x	18,295	534,300	977,375
Whole fish dressed, fresh or chilled	x	0	20,345	198,800	x	15,240	446,925	786,760
Fish eggs and live fish for grow-out	0	x	x	x	2,360	1,185	x	39,195
Whole fish live except for grow-out	0	x	15	0	5,155	1,700	x	x
Whole fish, dressed and frozen	0	0	0	0	5	0	x	x
Fish fillets, fresh or frozen	0	0	x	x	x	x	x	67,970
Fish, dried, smoked or in brine	0	0	0	0	x	55	x	335
Total finfish	x	x	31,175	227,290	10,270	x	514,925	907,555
Total molluscs	x	31,160	5,020	x	x	0	15,785	61,345
Other goods and services, not elsewhere specified	x	x	0	x	x	x	3,590	8,475
Subsidies	x	0	x	x	x	x	x	1,770
Other operating revenue	x	905	x	x	x	x	x	13,540
Total operating revenue	x	34,740	38,280	242,000	x	18,925	536,250	992,685
Change in inventory value, goods	4,650	355	1,260	21,040	-460	-1,200	15,035	40,680
Gross output	x	35,095	39,540	263,040	x	17,725	551,285	1,033,365
Product inputs								
Product expenses	x	8,935	23,045	154,340	x	10,795	364,645	643,845
Feed	42,595	x	9,800	82,140	x	6,900	164,500	308,020
Therapeutants	1,135	x	670	12,520	x	220	11,100	25,790
Purchases, eggs and fish for grow-out	12,870	2,120	x	18,140	x	800	5,115	45,435
Purchases, fish for processing and resale	x	0	x	x	x	x	x	900
Insurance premiums	x	580	750	6,200	x	135	7,270	17,665
Energy (electricity, fuel, et cetera)	x	795	930	4,880	x	620	10,050	20,780
Goods transportation and storage	1,780	x	x	3,155	x	x	34,270	40,315
Processing services	2,765	165	x	x	x	x	37,730	41,565
Rental and leasing expenses	x	120	480	950	x	320	5,140	8,415
Maintenance and repairs, buildings	530	370	340	515	x	30	x	3,100
Maintenance and repairs, machinery	x	1,100	325	4,300	x	110	26,530	35,095
Professional services	940	145	210	935	125	160	7,415	9,930
Other operating expenses, not elsewhere specified	x	3,005	2,290	20,180	x	1,190	53,775	86,835
Change in inventory value, raw materials	-110	315	5	-95	-810	-580	-1,480	-2,755
Total of product inputs	x	8,620	23,040	154,435	x	11,375	366,125	646,600
Gross value added (factor cost)	37,780	26,475	16,500	108,605	5,895	6,350	185,160	386,765
Selected primary inputs								
Salaries and wages	10,790	6,745	4,975	22,595	2,125	2,100	60,010	109,340
Employer portion of employee benefits	1,545	675	700	2,725	280	330	10,685	16,940
Depreciation	x	2,090	2,185	27,025	x	650	30,645	74,300
Interest paid	x	430	665	7,185	x	375	3,560	16,870

1. Canada total excludes Manitoba, Saskatchewan and Alberta.

Note(s): Data and account structure are subject to revision.

Table 3-3
Value added account - Aquaculture industry, by province and Canada — 2011

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	British Columbia	Canada ¹
thousands of dollars								
Sources of output								
Sales of aqua products and services	x	x	41,485	195,495	12,390	17,250	472,190	831,995
Whole fish dressed, fresh or chilled	x	0	x	172,030	1,875	6,730	390,910	640,810
Fish eggs and live fish for grow-out	x	x	3,460	2,330	2,140	9,340	x	43,695
Whole fish live except for grow-out	0	0	x	x	5,550	670	x	8,655
Whole fish, dressed and frozen	0	0	0	0	0	0	0	0
Fish fillets, fresh or frozen	0	0	x	x	x	x	x	65,090
Fish, dried, smoked or in brine	0	0	0	0	x	x	0	270
Total finfish	x	x	37,560	189,240	10,465	x	451,135	758,520
Total molluscs	6,970	31,905	x	x	595	0	15,510	61,455
Other goods and services, not elsewhere specified	x	x	205	x	x	x	5,545	12,020
Subsidies	x	5	x	65	170	x	815	1,845
Other operating revenue	x	x	x	6,455	495	x	2,610	12,635
Total operating revenue	x	x	43,905	202,015	13,055	17,885	475,615	846,475
Change in inventory value, goods	x	x	-3,205	2,055	-490	790	-2,190	60,680
Gross output	121,200	36,520	40,700	204,070	12,565	18,675	473,425	907,155
Product inputs								
Product expenses	x	10,855	x	159,640	5,190	10,615	344,800	643,775
Feed	43,330	x	12,070	67,220	x	6,195	166,555	297,225
Therapeutants	1,550	75	900	5,735	80	130	9,280	17,750
Purchases, eggs and fish for grow-out	19,065	2,315	x	x	250	1,140	3,635	45,065
Purchases, fish for processing and resale	x	0	x	x	70	x	x	34,515
Insurance premiums	x	365	745	x	235	125	7,430	15,220
Energy (electricity, fuel, et cetera)	1,985	960	1,070	3,895	870	545	9,515	18,840
Goods transportation and storage	1,770	520	110	2,690	75	205	28,175	33,545
Processing services	3,030	x	120	5	x	x	32,245	35,725
Rental and leasing expenses	x	195	455	x	80	245	5,060	8,905
Maintenance and repairs, buildings	x	255	540	x	200	40	x	4,385
Maintenance and repairs, machinery	300	1,505	805	7,165	365	150	21,500	31,790
Professional services	1,135	710	385	2,500	155	315	8,075	13,275
Other operating expenses, not elsewhere specified	5,330	3,490	4,630	20,205	1,100	1,460	51,320	87,535
Change in inventory value, raw materials	x	105	x	-125	170	25	1,295	3,795
Total of product inputs	80,920	10,750	29,430	159,765	5,020	10,590	343,505	639,980
Gross value added (factor cost)	40,280	25,770	11,270	44,305	7,545	8,085	129,920	267,175
Selected primary inputs								
Salaries and wages	8,470	6,955	5,645	18,510	2,205	2,170	62,855	106,810
Employer portion of employee benefits	1,210	735	705	2,135	195	235	10,500	15,715
Depreciation	x	2,315	6,210	23,735	x	x	26,860	68,295
Interest paid	x	635	465	4,525	x	x	3,930	12,575

1. Canada total excludes Manitoba, Saskatchewan and Alberta.

Note(s): Data and account structure are subject to revision.

Table 3-4
Value added account - Aquaculture industry, by province and Canada — 2012

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	British Columbia	Canada ¹
thousands of dollars								
Sources of output								
Sales of aqua products and services	106,210	39,945	44,035	190,700	11,825	18,580	436,235	847,530
Whole fish dressed, fresh or chilled	93,665	0	26,645	160,645	2,020	14,580	361,625	659,180
Fish eggs and live fish for grow-out	15	x	4,575	7,220	x	1,980	14,465	33,180
Whole fish live except for grow-out	0	0	x	x	5,795	960	35	7,465
Whole fish, dressed and frozen	0	0	0	0	0	0	4,195	4,195
Fish fillets, fresh or frozen	0	0	x	x	x	x	32,715	56,500
Fish, dried, smoked or in brine	0	0	0	0	x	x	0	330
Total finfish	93,680	x	39,070	182,810	10,665	x	413,035	760,850
Total molluscs	11,170	36,090	x	x	535	0	18,295	75,780
Other goods and services, not elsewhere specified	1,360	x	x	x	625	15	4,905	10,900
Subsidies	x	5	80	235	185	x	3,240	4,135
Other operating revenue	x	200	2,375	4,950	75	x	3,455	11,840
Total operating revenue	106,500	40,150	46,490	195,885	12,085	19,465	442,930	863,505
Change in inventory value, goods	23,410	1,510	-300	2,325	425	-560	-20,080	6,730
Gross output	129,910	41,660	46,190	198,210	12,510	18,905	422,850	870,235
Product inputs								
Product expenses	105,960	10,960	31,310	158,310	5,160	11,380	347,835	670,915
Feed	59,660	245	12,435	60,895	x	x	159,950	301,590
Therapeutants	x	125	990	x	95	165	9,500	21,190
Purchases, eggs and fish for grow-out	16,090	3,655	x	12,480	155	x	5,975	42,510
Purchases, fish for processing and resale	x	0	x	x	x	x	825	43,610
Insurance premiums	x	320	1,025	x	185	155	8,500	18,555
Energy (electricity, fuel, et cetera)	1,775	1,040	1,460	3,640	920	720	12,960	22,515
Goods transportation and storage	2,875	585	x	x	70	145	23,505	30,565
Processing services	x	225	x	15	x	x	28,150	32,745
Rental and leasing expenses	720	415	450	765	95	475	5,995	8,915
Maintenance and repairs, buildings	x	250	515	x	185	50	5,410	8,685
Maintenance and repairs, machinery	200	1,325	1,240	7,980	220	315	18,380	29,660
Professional services	825	555	360	2,060	165	215	7,160	11,340
Other operating expenses, not elsewhere specified	9,250	2,220	4,360	19,305	1,165	1,210	61,525	99,035
Change in inventory value, raw materials	2,925	-40	35	805	-55	-205	480	3,945
Total of product inputs	103,035	11,000	31,275	157,505	5,215	11,585	347,355	666,970
Gross value added (factor cost)	26,875	30,660	14,915	40,705	7,295	7,320	75,495	203,265
Selected primary inputs								
Salaries and wages	10,190	7,595	5,430	16,735	2,160	2,755	60,515	105,380
Employer portion of employee benefits	1,745	905	525	1,910	215	290	9,890	15,480
Depreciation	x	2,680	x	18,170	945	895	30,820	64,975
Interest paid	x	705	x	9,655	155	295	3,770	27,090

1. Canada total excludes Manitoba, Saskatchewan and Alberta.

Note(s): Data and account structure are subject to revision.

Table 3-5
Value added account - Aquaculture industry, by province and Canada — 2013

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	British Columbia	Canada ¹
thousands of dollars								
Sources of output								
Sales of aqua products and services	183,550	39,210	48,048	122,095	11,960	19,825	503,225	927,913
Whole fish dressed, fresh or chilled	x	x	32,143	x	2,045	15,565	453,955	789,793
Fish eggs and live fish for grow-out	0	x	2,810	x	2,175	2,325	x	24,175
Whole fish live except for grow-out	0	0	x	0	x	900	0	7,835
Whole fish, dressed and frozen	0	x	0	0	0	0	x	5,315
Fish fillets, fresh or frozen	0	x	x	0	x	990	x	15,430
Fish, dried, smoked or in brine	0	0	x	0	x	5	0	560
Total finfish	x	x	43,468	x	10,840	19,785	479,220	843,108
Total molluscs	x	35,445	x	5,610	755	0	x	81,050
Other goods and services, not elsewhere specified	x	x	x	x	365	40	x	3,755
Subsidies	x	x	x	70	435	120	885	1,705
Other operating revenue	x	x	x	x	590	480	5,265	50,730
Total operating revenue	x	39,735	50,868	x	12,985	20,425	509,375	980,348
Change in inventory value, goods	x	950	6,140	x	-195	1,060	8,180	2,965
Gross output	177,365	40,685	57,008	156,425	12,790	21,485	517,555	983,313
Product inputs								
Product expenses	110,540	13,730	x	x	5,980	13,030	357,920	661,785
Feed	x	465	15,135	x	1,775	7,480	160,550	294,780
Therapeutants	x	80	x	x	75	135	14,655	24,130
Purchases, eggs and fish for grow-out	x	4,855	6,895	x	235	1,655	x	54,425
Purchases, fish for processing and resale	x	x	x	x	x	x	x	25,835
Insurance premiums	x	420	1,415	x	265	190	6,700	15,945
Energy (electricity, fuel, et cetera)	1,910	1,020	1,730	x	x	745	12,305	21,025
Goods transportation and storage	x	685	675	x	125	285	25,005	32,665
Processing services	5,640	125	x	5	x	x	26,105	32,025
Rental and leasing expenses	560	500	260	x	115	x	5,325	7,495
Maintenance and repairs	x	1,875	1,750	x	595	530	21,140	31,415
Professional services	x	x	600	1,725	360	405	9,355	14,255
Other operating expenses, not elsewhere specified	8,425	x	x	18,585	1,315	1,310	69,795	107,790
Change in inventory value, raw materials	-595	210	x	x	145	-105	1,310	4,805
Total of product inputs	111,135	13,520	39,015	117,730	5,835	13,135	356,610	656,980
Gross value added (factor cost)	66,230	27,165	17,993	38,695	6,955	8,350	160,945	326,333
Selected primary inputs								
Salaries and wages	10,835	8,110	5,720	14,705	2,210	2,775	55,190	99,545
Employer portion of employee benefits	1,930	925	525	1,660	245	310	9,170	14,765
Depreciation	x	3,080	4,845	x	1,485	590	27,970	57,485
Interest paid	x	885	x	10,210	270	435	x	21,690

1. Canada total excludes Manitoba, Saskatchewan and Alberta.

2. Starting in 2013, maintenance and repair expenses for buildings and machinery are combined.

Note(s): Data and account structure are subject to revision.

Concepts and methods

Aquaculture is the managed production of fish. The North American Industrial Classification System (NAICS) defines the Canadian aquaculture industry as establishments which are primarily engaged in farm-raising aquatic animals and plants. Establishments primarily engaged in raising both aquatic animals and plants in integrated growing operations, aquaponics, are also included. These activities can occur both in natural waters and in artificial aquatic impoundments and include the use of some form of intervention in the rearing or growing process to enhance production.

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

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

Production and value of aquaculture

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 aquaculture production and value 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.

Generally, finfish production is reported as gutted head-on and the value is based on a farm-gate value. 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 the Canada Border Services Agency. The one exception to this process is Canada-United States trade. As of January 1, 1990, Canada and the United States have been using one another's import data as its own export data. Export data are available by province of origin.

Exports for four categories of aquaculture products have been selected. All of these categories define the products as fresh, chilled or frozen and are based on the Harmonized Commodity Description and Coding System, a multipurpose international nomenclature developed by the World Customs Organization.

Small quantities of fish fillets may be included in other categories that include products from the commercial fishery. However, as exports of these categories are relatively low, the number of individual aquaculture categories is limited.

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.

The value added account displays the inputs and outputs (revenues and expenses excluding the change in inventory values) on a calendar year basis. These data are displayed by province, with the exception of 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.

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.

Methods

Starting in reference year 2013, these data are produced as part of Statistics Canada's Integrated Business Statistics Program (IBSP) replacing the Unified Enterprise Survey.

Questionnaires are based on harmonized concepts and content. In addition, surveys share common sampling, collection and processing methodologies that are driven by metadata. Common tools are in place to edit, correct, and analyse data.

Using common tools will ensure data quality, while avoiding overlap between surveys and minimizing response burden to the greatest extent possible.

Frame

The IBSP provides a standardized framework for economic surveys conducted at Statistics Canada. Statistics Canada's Business Register (BR) is the common frame for all surveys using the IBSP model. The BR identifies all businesses operating in Canada and foreign businesses that have links to Canadian companies. It includes information about how businesses are organized, the industries they operate in, their size in terms of revenues earned and number of employees, and their location. The BR is a data service centre updated through a number of sources including administrative data files, feedback received from conducting Statistics Canada business surveys, and profiling activities including direct contact with companies to obtain information about their operations and Internet research findings.

Target population

The target population for this survey is comprised of establishments primarily engaged in farm –raising aquatic animals and plants classified to aquaculture under NAICS 112510 – Aquaculture that operated for at least one day during the reference year.

Sampling

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 \$105,000.
- Tax data are used to estimate for businesses with gross business revenue less than the cut-off and for imputation of non-response records.

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

The “must-take” stratum contains the establishments (including their 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 tax data.

For those establishments not selected in either the “must-take” (greater than \$25,000,000) or the “take none” (less than the cut-off) strata, three additional 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).

For 2013, the frame included 563 establishments classified to aquaculture.

The overall sample size for 2013 was 122 establishments.

Data collection

The survey is collected primarily through an electronic questionnaire while providing respondents with an option to receive a paper questionnaire, reply by telephone interview or use other electronic reported methods. Once collected, data are examined for inconsistencies and errors using automated edits followed by an analytical review. Data for non-response and no-contact are imputed using tax and historically reported data.

Estimation

The general estimation system is used to provide estimates for the entire observed population.

In addition, the sampling weights derived from the sample survey are modified and improved using updated information. This was possible because, during the passage of time since the sample was selected, the Business Register was updated further with more complete information. The final set of weights reflects as closely as possible the changing characteristics of the population of this 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.

Analysis

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 indicators, the provincial administrative data are valuable in the analysis since they help confirm 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 coefficient of variation (CV), a measure of sampling error, is computed. The quality of the estimates is classified as Excellent (CV of 0.01 to 4.99%); Very good (CV of 5.00% to 9.99%); Good (CV of 10.00% to 14.99%); Acceptable (CV of 15.00% to 24.99%); Use with caution (CV of 25.00% to 34.99%); and Unreliable (CV > 35.00%).

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.

Of the sampled units contributing to the estimate, the weighted response rate for 2013 was 99.1%.

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.