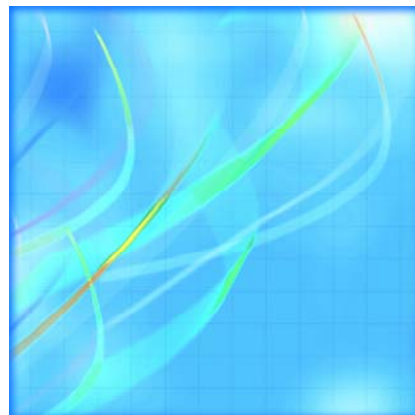


Catalogue no. 23-222-X

Aquaculture Statistics

2015



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Statistics Canada
Agriculture Division
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Aquaculture Statistics

2015

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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.

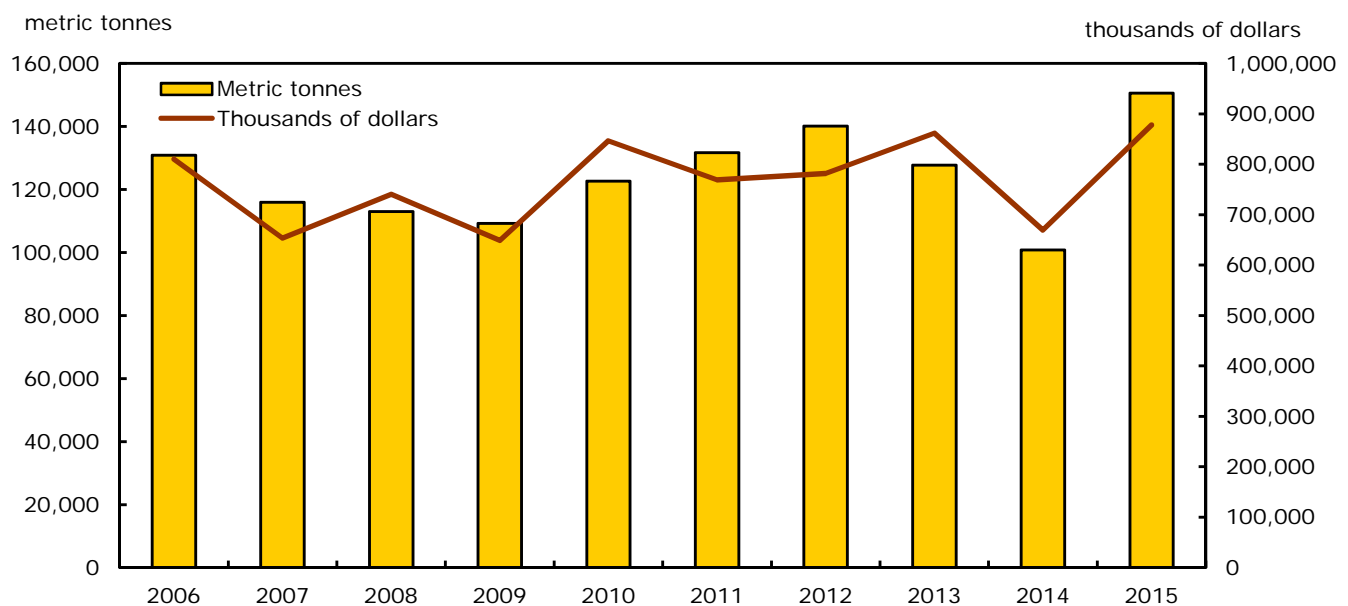
The annual publication, *Aquaculture Statistics 23-222-X*, presents an overview of this sector using data collected from the Survey of Aquaculture Industry. The survey is designed to provide economic variables that result in the aquaculture value added account, which measures the economic production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

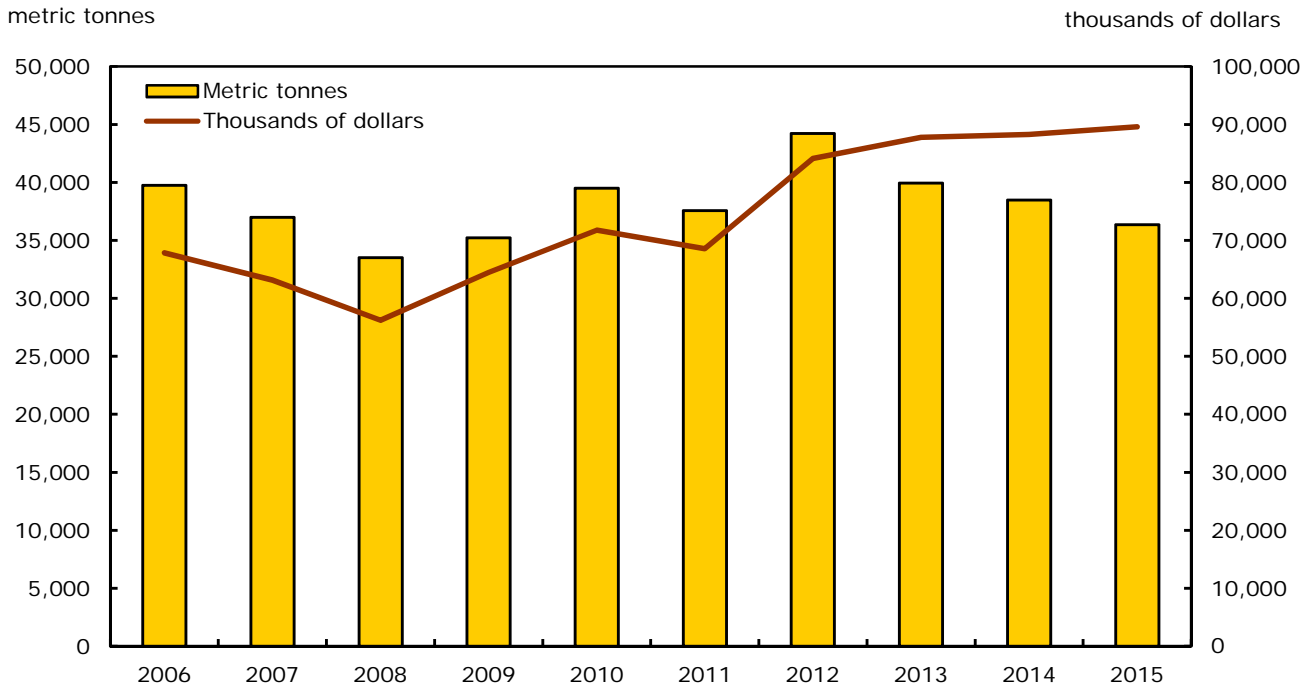
- Sales of aquaculture products and services amounted to \$907.4 million in 2015, an increase of 23.4% from 2014. The increase in sales was attributed to recovering salmon production following lower output in 2014.
- Finfish sales, which accounted for 91.1% of sales of aquaculture products and services in 2015, increased 27.9% to \$826.5 million.
- The gross value added to the economy by the aquaculture industry decreased to \$165.9 million, down 32.5% from 2014. The decrease was largely the result of rising operating expenses.
- The value of total exports of farmed salmon including fillets increased by 64.4% while the value of farmed mussel exports increased by 5.2% compared to 2014.

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

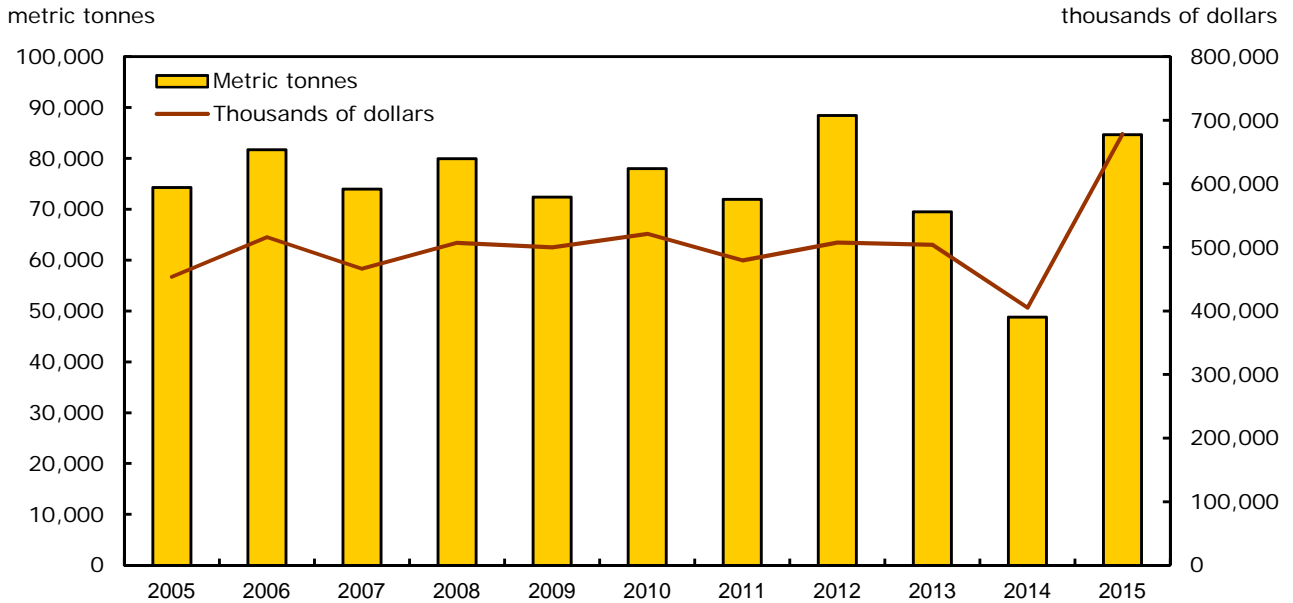
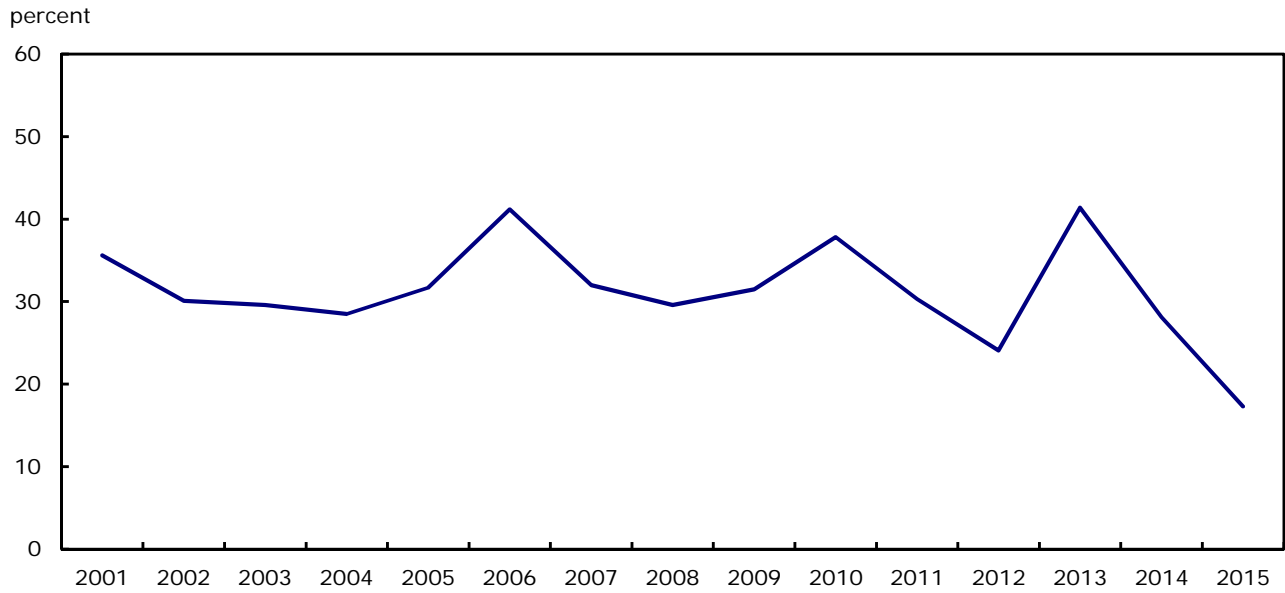


Chart 4
Gross value-added (at factor cost) compared to the value of production



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 — 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	..	..	85	0	64	23	x	x	x	389	788
Total finfish	14,264	472	5,833	21,640	421	3,408	x	x	x	84,291	132,146
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	21	0	50	0	x	x	x	0	71
Total shellfish	3,000	23,576	1,983	634	394	0	x	x	x	7,973	37,560
Total aquaculture	17,264	24,048	7,817	22,274	815	3,408	x	x	x	92,264	169,707
Re-stocking ²	.	.	.	.	824	.	.	.	.	.	824
Total aquaculture (including re-stocking) ²	17,264	24,048	7,817	22,274	1,639	3,408	x	x	x	92,264	170,531
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	..	..	4,592	0	81	500	x	x	x	4,364	11,184
Total finfish	111,829	3,700	37,622	140,641	2,347	17,700	x	x	x	445,708	769,052
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	1,582	0	74	0	x	x	x	0	1,656
Total shellfish	8,221	33,338	5,467	2,673	664	0	x	x	x	18,217	68,580
Total aquaculture	120,050	37,038	43,089	143,314	3,011	17,700	x	x	x	463,925	837,632
Re-stocking ²	.	.	.	.	8,469	.	.	.	.	.	8,469
Total aquaculture (including re-stocking) ²	120,050	37,038	43,089	143,314	11,480	17,700	x	x	x	463,925	846,101

1. Provinces with data not available are not included in the Canada or provincial 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. The data are collected from each of the provincial ministries responsible for aquaculture. In Newfoundland and Labrador the total aquaculture value includes processing revenue.

Table 1-2
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	420	3,700	x	x	x	88	6,077
Steelhead	..	..	0	0	0	0	x	x	x	505	505
Other finfish	..	..	264	0	1	21	x	x	x	139	645
Total finfish	16,831	542	6,280	30,359	421	3,721	x	x	x	80,713	140,702
Clams	0	1,261	406	0	0	0	x	x	x	2,710	4,377
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	40	0	46	0	x	x	x	0	86
Total shellfish	4,397	26,738	1,949	1,122	333	0	x	x	x	9,669	44,208
Total aquaculture	21,228	27,280	8,229	31,481	754	3,721	x	x	x	90,382	184,909
Re-stocking ²	.	.	.	.	806	.	.	.	.	.	806
Total aquaculture (including re-stocking) ²	21,228	27,280	8,229	31,481	1,560	3,721	x	x	x	90,382	185,715
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	..	..	4,687	0	78	500	x	x	x	1,197	8,058
Total finfish	99,286	3,200	46,223	186,386	2,029	18,800	x	x	x	416,001	781,476
Clams	0	2,556	1,258	0	0	0	x	x	x	6,291	10,105
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	1,525	0	70	0	x	x	x	0	1,595
Total shellfish	13,518	40,187	5,812	5,229	631	0	x	x	x	18,735	84,113
Total aquaculture	112,804	43,387	52,035	191,615	2,661	18,800	x	x	x	434,736	865,589
Re-stocking ²	.	.	.	.	8,584	.	.	.	.	.	8,584
Total aquaculture (including re-stocking) ²	112,804	43,387	52,035	191,615	11,245	18,800	x	x	x	434,736	874,173

1. Provinces with data not available are not included in the Canada or provincial 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. The data are collected from each of the provincial ministries responsible for aquaculture. In Newfoundland and Labrador the total aquaculture value includes processing revenue.

**Table 1-3
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	..	..	6,616	18,837	0	0	x	x	x	72,176	97,629
Trout	..	..	104	..	1,240	3,580	x	x	x	62	6,673
Steelhead	..	..	0	0	0	0	x	x	x	278	278
Other finfish	..	..	255	0	7	210	x	x	x	145	940
Total finfish	22,196	366	6,975	18,837	1,247	3,790	x	x	x	72,661	128,082
Clams	0	1,007	358	0	0	0	x	x	x	1,470	2,835
Oysters	0	3,278	356	739	10	0	x	x	x	6,452	10,835
Mussels	4,354	20,009	1,051	..	353	0	x	x	x	352	26,119
Scallops	0	0	12	5	10	0	x	x	x	89	116
Other shellfish	0	0	0	5	22	0	x	x	x	1	28
Total shellfish	4,354	24,294	1,777	749	395	0	x	x	x	8,364	39,933
Total aquaculture	26,550	24,660	8,752	19,586	1,642	3,790	x	x	x	81,025	168,015
thousands of dollars											
Value											
Salmon	..	..	41,956	117,334	0	0	x	x	x	458,710	618,000
Trout	..	..	1,042	..	10,522	18,000	x	x	x	501	38,342
Steelhead	..	..	0	0	0	0	x	x	x	4,634	4,634
Other finfish	..	..	6,867	0	180	1,200	x	x	x	5,558	16,145
Total finfish	181,833	3,000	49,865	117,334	10,702	19,200	x	x	x	469,403	861,954
Clams	0	2,042	1,090	0	0	0	x	x	x	7,116	10,248
Oysters	0	8,671	1,463	5,665	172	0	x	x	x	12,498	28,469
Mussels	15,139	28,673	1,601	..	733	0	x	x	x	1,825	47,971
Scallops	0	0	78	11	160	0	x	x	x	726	975
Other shellfish	0	0	0	2	98	0	x	x	x	0	100
Total shellfish	15,139	39,386	4,232	5,678	1,163	0	x	x	x	22,165	87,763
Total aquaculture	196,972	42,386	54,097	123,012	11,865	19,200	x	x	x	491,568	949,717

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

Note(s): The production and value of aquaculture includes the amount and value produced on sites. The data are collected from each of the provincial ministries responsible for aquaculture. In Newfoundland and Labrador the total aquaculture value includes processing revenue.

Table 1-4
Aquaculture, production and value, by province and Canada — 2014

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Canada ¹
tonnes											
Production											
Salmon	..	..	6,688	17,184	0	0	x	x	x	62,475	86,347
Trout	..	..	..	..	1,126	4,000	x	x	x	44	6,818
Steelhead	..	..	0	0	0	0	x	x	x	307	307
Other finfish	..	..	278	0	8	210	x	x	x	612	1,357
Total finfish	5,980	451	7,102	17,184	1,134	4,210	x	x	x	63,438	101,259
Clams	0	615	299	0	0	0	x	x	x	1,443	2,357
Oysters	0	3,309	314	847	8	0	x	x	x	6,184	10,662
Mussels	3,260	20,047	970	..	358	0	x	x	x	596	25,231
Scallops	0	0	..	5	9	0	x	x	x	90	104
Other shellfish	0	0	58	41	20	0	x	x	x	0	119
Total shellfish	3,260	23,971	1,641	893	395	0	x	x	x	8,313	38,473
Total aquaculture	9,240	24,422	8,743	18,077	1,529	4,210	x	x	x	71,751	139,732
thousands of dollars											
Value											
Salmon	..	..	47,677	117,744	0	0	x	x	x	398,748	564,169
Trout	..	..	..	..	9,168	20,500	x	x	x	344	39,437
Steelhead	..	..	0	0	0	0	x	x	x	6,262	6,262
Other finfish	..	..	6,399	0	172	1,300	x	x	x	4,259	13,934
Total finfish	42,446	3,200	56,063	117,744	9,340	21,800	x	x	x	409,613	669,449
Clams	0	1,673	368	0	0	0	x	x	x	6,041	8,082
Oysters	0	9,849	1,181	6,326	275	0	x	x	x	13,015	30,646
Mussels	11,640	30,937	1,212	..	739	0	x	x	x	2,585	47,113
Scallops	0	0	..	22	154	0	x	x	x	491	667
Other shellfish	0	0	1,534	135	95	0	x	x	x	0	1,764
Total shellfish	11,640	42,459	4,295	6,483	1,263	0	x	x	x	22,132	88,272
Total aquaculture	54,086	45,659	60,358	124,227	10,603	21,800	x	x	x	431,745	757,721

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

Note(s): The production and value of aquaculture includes the amount and value produced on sites. The data are collected from each of the provincial ministries responsible for aquaculture. In Newfoundland and Labrador the total aquaculture value includes processing revenue.

**Table 1-5
Aquaculture, production and value, by province and Canada — 2015**

	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskat- chewan	Alberta	British Columbia	Canada ¹
tonnes											
Production											
Salmon	..	..	5,609	23,391	0	0	x	x	x	92,926	121,926
Trout	..	..	114	..	953	4,510	x	x	x	0	7,062
Steelhead	..	..	0	0	0	0	x	x	x	718	718
Other finfish	..	..	335	0	11	380	x	x	x	206	1,177
Total finfish	19,684	464	6,058	23,391	964	4,890	x	x	x	93,850	151,031
Clams	0	810	332	0	0	0	x	x	x	1,260	2,402
Oysters	0	3,422	172	937	35	0	x	x	x	6,587	11,153
Mussels	3,130	17,944	605	0	378	0	x	x	x	668	22,725
Scallops	0	0	..	3	8	0	x	x	x	20	31
Other shellfish	0	0	0	0	32	0	x	x	x	0	32
Total shellfish	3,130	22,176	1,109	940	453	0	x	x	x	8,535	36,343
Total aquaculture	22,814	22,640	7,167	24,331	1,417	4,890	x	x	x	102,385	187,374
thousands of dollars											
Value											
Salmon	..	..	x	x	0	0	x	x	x	470,098	668,655
Trout	..	..	x	..	7,957	23,200	x	x	x	0	40,264
Steelhead	..	..	0	0	0	0	x	x	x	2,495	2,495
Other finfish	..	..	8,349	0	213	2,200	x	x	x	1,862	14,406
Total finfish	148,536	x	53,580	x	8,170	25,400	x	x	x	474,455	877,856
Clams	0	2,148	477	0	0	0	x	x	x	6,535	9,160
Oysters	0	12,828	1,186	7,423	685	0	x	x	x	14,425	36,547
Mussels	12,847	25,714	732	3	707	0	x	x	x	3,339	43,342
Scallops	0	0	..	x	74	0	x	x	x	x	314
Other shellfish	0	0	0	0	223	0	x	x	x	0	223
Total shellfish	12,847	40,690	2,395	x	1,689	0	x	x	x	x	89,586
Total aquaculture	161,383	x	55,975	162,580	9,859	25,400	x	x	x	x	967,441

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

Note(s): The production and value of aquaculture includes the amount and value produced on sites. The data are collected from each of the provincial ministries responsible for aquaculture. In Newfoundland and Labrador the total aquaculture value includes processing revenue.

Table 2-1
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	13,740	1,392	66,141	4,377	14,941	1,169	82,119	4,393
California	41	593	26,649	205	28	511	32,475	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	12,912	398
New York	942	149	10,597	308	516	94	15,109	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	2,433
France	0	0	9	5	0	6	0	0
Japan	0	445	187	501	0	98	406	509
Taiwan	0	69	8	122	0	3	340	81
Other	73	43	389	186	60	1	557	1
Total	13,813	1,949	66,734	5,192	15,001	1,277	83,422	4,985
thousands of dollars								
United States	35,575	13,159	414,412	55,822	39,149	10,390	457,099	38,838
California	181	5,619	158,025	2,199	107	5,052	180,319	27
Maine	5,872	0	22,359	2,262	6,617	0	10,410	6,163
Massachusetts	23,241	3,218	44,743	7,691	27,249	2,455	69,139	4,104
New York	2,406	1,331	71,933	3,500	1,245	139	86,538	2,153
Washington	167	1,898	61,359	3,505	28	2,124	51,327	682
Other	3,706	1,093	55,992	36,663	3,901	620	59,365	25,709
France	0	0	93	61	0	65	2	3
Japan	0	5,886	1,439	2,831	0	1,122	2,897	2,791
Taiwan	1	559	47	760	0	19	1,951	447
Other	321	388	2,693	1,233	290	8	3,293	13
Total	35,897	19,992	418,684	60,707	39,439	11,605	465,242	42,092

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 — 2013 and 2014

Destination	2013				2014			
	Mussels	Other Salmon ¹	Atlantic Salmon ²	Atlantic Salmon fillets	Mussels	Other Salmon ¹	Atlantic Salmon ²	Atlantic Salmon fillets
tonnes								
United States	14,560	2,037	61,504	5,704	13,488	1,580	44,549	3,201
California	15	904	21,598	65	46	733	16,827	39
Maine	2,644	0	390	2,415	2,577	0	1,459	831
Massachusetts	9,587	261	11,556	526	8,902	256	3,439	447
New York	395	197	12,538	338	317	127	9,624	392
Washington	19	537	5,593	51	27	307	4,826	22
Other	1,900	140	9,829	2,309	1,618	157	8,375	1,470
France	0	2	0	0	0	10	2	0
Japan	0	83	1,380	0	1	223	599	0
Taiwan	0	0	542	0	0	0	156	0
Other	60	1	375	4	50	1	269	1
Total	14,619	2,123	63,801	5,708	13,540	1,814	45,575	3,202
thousands of dollars								
United States	41,097	18,864	430,281	57,033	41,106	17,692	356,078	41,281
California	69	8,478	143,654	461	308	7,934	132,000	492
Maine	5,924	0	2,170	13,048	6,199	0	10,254	6,077
Massachusetts	29,263	3,003	70,965	6,918	29,031	3,551	25,796	5,681
New York	1,042	1,968	97,920	3,624	943	1,301	80,903	5,244
Washington	89	3,994	38,586	567	111	3,164	35,828	315
Other	4,711	1,421	76,985	32,415	4,514	1,742	71,298	23,472
France	0	21	4	0	1	100	8	4
Japan	0	926	10,801	0	9	2,413	4,754	0
Taiwan	2	0	3,652	0	0	0	1,129	0
Other	244	8	2,302	76	220	12	1,701	13
Total	41,343	19,819	447,040	57,109	41,336	20,217	363,671	41,298

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 — 2015

Destination	2015			
	Mussels	Other Salmon ¹	Atlantic Salmon ²	Atlantic Salmon fillets
	tonnes			
United States	11,942	1,476	75,219	6,028
California	160	672	26,382	60
Maine	2,449	0	3,935	2,152
Massachusetts	7,764	173	9,045	777
New York	249	62	13,061	532
Washington	2	301	8,669	130
Other	1,319	268	14,126	2,377
France	2	2	0	0
Japan	16	54	794	1
Taiwan	0	1	378	2
Other	9	2	2,201	35
Total	11,969	1,535	78,592	6,067
	thousands of dollars			
United States	43,318	19,935	579,807	73,127
California	1,411	9,331	206,405	688
Maine	6,976	0	31,341	18,575
Massachusetts	29,925	2,921	67,085	10,091
New York	862	911	102,690	6,415
Washington	23	3,771	59,339	1,046
Other	4,122	3,002	112,948	36,311
France	7	20	2	3
Japan	106	800	6,625	7
Taiwan	0	7	2,802	19
Other	41	14	15,476	284
Total	43,472	20,777	604,711	73,440

1. Includes Coho and Spring (Chinook).

2. Includes fresh, chilled and frozen.

Table 3-1
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	81,980	1,875	6,730	390,910	522,855
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	6,780	0	x	x	5,550	670	x	126,610
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 3-2
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	56,740	0	5,860	72,035	2,020	14,580	361,625	512,860
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	36,925	0	x	x	5,795	960	35	153,785
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	30,960	158,590	5,160	11,380	347,835	670,845
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	1,110	3,920	920	720	12,960	22,445
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	30,925	157,785	5,215	11,585	347,355	666,900
Gross value added (factor cost)	26,875	30,660	15,265	40,425	7,295	7,320	75,495	203,335
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 3-3
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	196,975	40,390	54,610	123,010	12,185	19,245	510,290	956,705
Whole fish dressed, fresh or chilled	x	x	3,970	x	2,665	15,170	459,970	633,905
Fish eggs and live fish for grow-out	0	x	1,960	x	1,095	2,195	x	21,405
Whole fish live except for grow-out	48,465	0	x	98,465	x	865	0	190,080
Whole fish, dressed and frozen	0	x	0	0	0	0	x	5,310
Fish fillets, fresh or frozen	0	x	x	0	x	965	x	16,300
Fish, dried, smoked or in brine	0	0	x	0	x	5	0	645
Total finfish	x	x	49,860	x	10,850	19,200	485,570	867,645
Total molluscs	x	37,345	x	5,675	895	0	x	85,210
Other goods and services, not elsewhere specified	x	x	x	x	440	45	x	3,850
Subsidies	x	x	x	235	775	175	1,245	2,625
Other operating revenue	x	x	x	x	805	465	5,600	52,760
Total operating revenue	x	41,075	57,885	x	13,765	19,885	517,135	1,012,090
Change in inventory value, goods	x	655	6,285	x	-240	955	13,935	165
Gross output	185,760	41,730	64,170	155,160	13,525	20,840	531,070	1,012,255
Product inputs								
Product expenses	97,185	15,810	x	x	6,760	12,650	322,250	623,650
Feed	x	480	14,635	x	1,745	6,570	141,850	264,030
Therapeutants	x	85	x	x	75	110	14,655	23,905
Purchases, eggs and fish for grow-out	x	4,980	7,355	x	225	1,780	x	56,385
Purchases, fish for processing and resale	x	x	x	x	x	x	x	27,165
Insurance premiums	x	540	1,490	x	290	205	7,030	16,830
Energy (electricity, fuel, et cetera)	1,715	1,105	1,150	x	x	530	12,415	20,860
Goods transportation and storage	x	430	675	x	140	275	25,005	31,485
Processing services	x	135	x	0	x	x	20,510	26,495
Rental and leasing expenses	290	600	310	x	150	x	5,930	8,125
Maintenance and repairs ²	x	1,950	1,850	x	675	540	21,735	32,565
Professional services	x	x	515	1,815	620	450	9,010	14,950
Other operating expenses, not elsewhere specified	6,870	x	x	23,300	1,790	1,890	56,700	100,855
Change in inventory value, raw materials	-355	155	x	x	120	-115	1,640	5,535
Total of product inputs	97,540	15,655	39,015	125,890	6,640	12,765	320,610	618,115
Gross value added (factor cost)	88,220	26,075	25,155	29,270	6,885	8,075	210,460	394,140
Selected primary inputs								
Salaries and wages	10,070	8,370	5,350	14,970	2,080	2,900	59,295	103,035
Employer portion of employee benefits	1,400	945	515	1,505	190	305	9,290	14,150
Depreciation	x	3,280	5,875	x	1,555	925	30,550	64,215
Interest paid	x	935	x	12,440	375	425	x	23,335

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.

Table 3-4
Value added account - Aquaculture industry, by province and Canada — 2014

	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	59,605	41,980	60,425	124,660	11,070	21,875	415,770	735,385
Whole fish dressed, fresh or chilled	x	x	x	x	1,230	14,355	369,950	441,930
Fish eggs and live fish for grow-out	0	x	x	x	1,130	2,920	13,500	22,105
Whole fish live except for grow-out	x	0	x	x	5,600	1,010	0	163,530
Whole fish, dressed and frozen	0	x	0	0	0	20	x	4,590
Fish fillets, fresh or frozen	0	x	x	0	x	x	x	11,900
Fish, dried, smoked or in brine	0	x	x	0	x	x	0	2,160
Total finfish	47,965	3,410	x	x	9,420	x	389,815	646,215
Total molluscs	11,640	38,385	x	x	1,025	0	22,130	83,965
Other goods and services, not elsewhere specified	0	185	x	x	625	x	3,825	5,205
Subsidies	x	x	x	300	735	95	800	2,915
Other operating revenue	x	x	x	5,945	330	530	9,475	32,480
Total operating revenue	x	48,205	x	130,905	12,135	22,500	426,045	770,780
Change in inventory value, goods	x	2,065	x	23,915	15	-745	72,350	144,875
Gross output	103,830	50,270	74,435	154,820	12,150	21,755	498,395	915,655
Product inputs								
Product expenses	98,370	21,005	40,125	132,745	6,650	19,085	352,005	669,985
Feed	52,270	165	x	x	1,810	7,660	183,620	317,765
Therapeutants	4,975	20	535	x	65	x	19,560	30,885
Purchases, eggs and fish for grow-out	17,625	5,595	7,215	x	420	4,760	x	61,145
Purchases, fish for processing and resale	x	880	x	x	85	5	x	24,420
Insurance premiums	3,080	450	x	x	265	300	7,770	18,665
Energy (electricity, fuel, et cetera)	1,445	935	850	1,395	810	865	14,895	21,195
Goods transportation and storage	x	985	x	815	220	435	24,555	30,665
Processing services	x	60	x	x	x	x	17,285	22,340
Rental and leasing expenses	505	395	640	745	145	490	7,665	10,585
Maintenance and repairs ²	x	1,710	x	x	740	735	24,780	40,855
Professional services	2,060	1,585	665	1,245	645	660	10,045	16,905
Other operating expenses, not elsewhere specified	6,425	8,225	4,090	x	x	2,265	38,010	74,560
Change in inventory value, raw materials	x	105	x	355	-40	-230	4,645	195
Total of product inputs	x	20,900	x	132,390	6,690	19,315	347,360	669,790
Gross value added (factor cost)	x	29,370	x	22,430	5,460	2,440	151,035	245,865
Selected primary inputs								
Salaries and wages	8,985	8,260	5,805	15,540	2,215	3,490	61,795	106,090
Employer portion of employee benefits	1,250	935	600	1,640	240	370	10,105	15,140
Depreciation	7,605	3,260	5,020	12,020	1,195	1,245	30,775	61,120
Interest paid	4,220	880	950	x	315	560	x	18,045

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.

Table 3-5
Value added account - Aquaculture industry, by province and Canada — 2015

	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	108,990	44,435	55,975	162,905	9,960	25,710	499,450	907,425
Whole fish dressed, fresh or chilled	x	x	x	x	1,775	13,225	458,225	561,880
Fish eggs and live fish for grow-out	0	x	x	x	715	4,140	x	24,670
Whole fish live except for grow-out	x	0	x	x	4,400	4,600	0	222,910
Whole fish, dressed and frozen	0	0	0	0	0	0	x	x
Fish fillets, fresh or frozen	0	x	x	0	x	x	0	11,040
Fish, dried, smoked or in brine	0	x	x	0	x	x	x	x
Total finfish	x	x	53,580	x	8,170	25,400	474,460	826,475
Total molluscs	x	40,690	2,395	x	1,465	0	x	79,275
Other goods and services, not elsewhere specified	0	x	0	x	325	310	x	1,675
Subsidies	x	60	x	x	695	x	x	3,300
Other operating revenue	x	460	x	9,285	630	1,600	x	47,330
Total operating revenue	x	x	78,480	x	11,285	x	513,945	958,055
Change in inventory value, goods	x	x	-9,440	x	280	x	21,485	51,000
Gross output	140,735	46,580	69,040	177,505	11,565	28,200	535,430	1,009,055
Product inputs								
Product expenses	120,830	21,235	42,190	152,890	8,110	21,805	470,695	837,755
Feed	66,040	x	x	x	1,810	7,470	231,400	384,665
Therapeutants	x	x	485	x	70	145	26,615	39,680
Purchases, eggs and fish for grow-out	18,475	7,455	9,850	22,650	760	5,990	6,130	71,310
Purchases, fish for processing and resale	x	815	x	x	120	0	x	25,475
Insurance premiums	5,685	480	x	x	295	270	8,840	26,405
Energy (electricity, fuel, et cetera)	1,210	790	790	1,635	920	1,165	16,355	22,865
Goods transportation and storage	x	1,865	410	1,250	335	795	x	46,695
Processing services	x	780	x	x	395	x	21,345	27,365
Rental and leasing expenses	415	350	845	740	270	515	13,595	16,730
Maintenance and repairs ²	3,720	1,625	2,395	x	795	x	31,110	50,400
Professional services	1,255	1,340	630	1,820	655	785	11,280	17,765
Other operating expenses, not elsewhere specified	8,390	5,535	5,490	18,740	1,685	3,535	65,025	108,400
Change in inventory value, raw materials	-6,600	x	x	x	410	x	x	-5,450
Total of product inputs	127,430	x	x	x	7,700	x	x	843,205
Gross value added (factor cost)	13,305	x	x	x	3,865	x	x	165,850
Selected primary inputs								
Salaries and wages	10,985	8,405	5,590	16,030	2,265	3,845	65,080	112,200
Employer portion of employee benefits	2,025	985	500	1,765	225	280	12,620	18,400
Depreciation	8,550	3,160	5,525	14,945	1,395	1,705	34,990	70,270
Interest paid	x	840	555	11,605	235	420	x	23,650

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 based on a farm-gate value.

Exports of selected aquaculture products

Canadian import and export statistics are derived by the International Accounts and 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.

The IBSP incorporates business surveys into a single framework, using questionnaires with a consistent look, structure and content.

The questionnaire satisfies the statistical requirements for financial information as expressed by the Canadian System of National Accounts and businesses and associations operating within the aquaculture industry.

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 helps 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 where businesses are located, how businesses are organized, the industries they operate in and their size in terms of revenues earned and number of employees. 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 is all establishments classified to aquaculture under the North American Industrial Classification System (NAICS 2012) code 112510 that operated for at least one day during the reference year.

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 and the wild fishery.

Sampling

This is a sample survey with a cross-sectional 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 varies 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.

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 2015, the frame included 882 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 a derived threshold. A "must-take" threshold is derived for each province and for each of the commodities (finfish or molluscs). All establishments with a revenue above one of the thresholds are sent a questionnaire.

The "take-none" stratum contains the establishments with gross business revenue less than a cut-off. Take-none strata serve to reduce respondent burden by excluding the smaller businesses from the surveyed population. These businesses should represent at most ten percent of total sales. Instead of sending questionnaires to these businesses, the estimates will be produced through the use of administrative data.

For the establishments not selected in the "must-take" (greater than the "must-take" threshold) 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 2015 was 129 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 reporting 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.

When some enterprises have reported data combining many units located in more than one province or territory, or in more than one industrial classification, data allocation is required. Factors based on information from sources such as tax files and Business Register profiles are used to allocate the data reported on the combined report among the various estimation units where this enterprise is in operation.

The sample used for estimation comes from a two phase sampling process. An initial sampling weight (the design weight) is calculated for each unit of the survey and is simply the multiplication of the inverse of the probability of selection from each phase. It is then adjusted to take into account units that might have been misclassified (large units found in a stratum of small units for example). In addition, the sampling weights derived are modified and adjusted using updated information from taxation data. Using a statistical technique called calibration, the final set of weights is adjusted in such a way that the sample represents as closely as possible the taxation data of the population of this industry.

The weight calculated for each sampling unit indicates how many other units it represents. The final weights are usually either one or greater than one. Sampling units which are "Take-all" have sampling weights of one and only represent themselves; units with larger than expected size are seen as misclassified and their weight is usually adjusted so that they only represent themselves.

The sampling unit being the enterprise, it can represent numerous locations which might contribute to different parts of the population (different sub-industries, province/territory, etc.). Each location is considered an estimation unit. The characteristics of the estimation units are used to derive the domains of estimation, including the industrial classification and the geography. Estimation for the survey portion is done by simple aggregation of the weighted values of all sampled locations that are found in the domain of estimation. Estimates are computed for several domains of estimation such as industrial groups and provinces/territories, based on the most recent classification information available for the location and the survey reference period. It should be noted that this classification information may differ from the original sampling classification because records may have changed in size, industry, or location. Changes in classification are reflected immediately in the estimates.

In the case of the ineligible for sampling portion (also called take-none portion) of the target population defined in Statistics Canada's Business Activity, Expenditure and Output Survey, taxation data is simply aggregated to come up with an estimate. If an estimate is required and taxation data is not available, modeling using auxiliary taxation data is done in order to create data for all requested variables for each unit in the take-none portion. These are also simply aggregated to produce the estimate. The overall estimate includes the estimates from both the surveyed portion and the take-none portion.

Quality evaluation

Prior to the data release, combined survey results are analyzed for comparability; in general, this includes a detailed review of: individual responses (especially for the largest companies), general economic conditions, coherence with results from related economic indicators, historical trends, and information from other external sources (e.g. associations, trade publications, newspaper articles).

The survey estimates are also analyzed with trends observed in related Statistics Canada data series.

Data accuracy

All surveys are subject to sampling and non-sampling errors. Sampling error occurs because population estimates are derived from a sample of the population rather than the entire population. Non-sampling error is not related to sampling and may occur for various reasons during the collection and processing of data. For example, non-response is an important source of non-sampling error. Under or over-coverage of the population, differences in the interpretations of questions and mistakes in recording, coding and processing data are other examples of non-sampling errors. To the maximum extent possible, these errors are minimized through careful design of the survey questionnaire, verification of the survey data, and follow-up with respondents when needed to maximize response rates.

Measures of sampling error are calculated for each estimate. Also, when non-response occurs, it is taken into account and the quality is reduced based on its importance to the estimate. Other indicators of quality are also provided such as the response rate. Both the sampling error and the non-response rate are combined into one quality rating code. This code uses letters that ranges from A to F where A means the data is of excellent quality and F means it is unreliable. Estimates with a quality of F are not published. These quality rating codes can be requested and should always be taken into consideration.

Of the sampled units contributing to the estimate, the weighted response rate for 2015 was 96.9%.

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.