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Statistical Overview of the Canadian Honey and Bee Industry and the Economic Contribution of Honey Bee Pollination **2016**

Prepared by:
Horticulture and Cross Sectoral Division
Agriculture and Agri-Food Canada
November 2017



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Overview

The numbers of beekeepers and colonies have been steadily increasing over the last five years, reaching all-time peaks in 2016. In 2016, over 9,800 beekeepers across Canada kept one or more honey bee colonies, totaling over 750,000 colonies. While honey production varies year-to-year with weather and other local production factors Canada produced 92.2 million pounds in 2016, up slightly from 2015. After four years of consecutive growth, the total value of the honey produced in Canada fell from \$210 million in 2015 to \$159 million in 2016, a decrease of 25%. The decline in value was attributable to the lower prices received at farmgate.

The majority of bee colonies are in the Prairies, where long summer days and a favourable crop mix are ideal for foraging; Alberta, Saskatchewan and Manitoba collectively accounted for 69% of the country's total bee colonies and for 83% of the total honey production. Alberta contributed the most to Canada's overall honey production with 45%, followed by Saskatchewan (20%) and Manitoba (17%).

Ontario currently has the largest number of beekeepers, with 2,896 of the 9,859 national total or 29%. British Columbia and Alberta have the second and third largest number of beekeepers, with 2,640 and 1,400 beekeepers respectively.

After two consecutive years of decreases in 2013 and 2014, Canada's total honey exports by value rose 36% from 2014 to \$65 million in 2015, and grew 35% from 2015 to \$72 million in 2016. The United States is the largest export destination for Canadian honey and accounted for 71% of all honey exports in 2016. The second and third largest honey export destinations are Japan (24%) and China (3%), respectively.

After four years of consecutive growth, Canada's total honey imports fell from \$41 million in 2015 to \$38 million in 2016. For many years Argentina was the largest exporter of honey (by value) to Canada; however, its total value of honey exports to Canada declined significantly, from \$8.7 million in 2013 to just \$444 thousand in 2016, dropping from the top ten countries exporting to Canada. Brazil became the largest exporter of honey by value to Canada in 2016, with an import value of \$10.5 million. New Zealand and the United States were the second and third largest sources of Canadian imports, valued at \$7.1 million and \$4.2 million, respectively. Most of the imports from New Zealand and Brazil are types of honey that are not produced here, such as that from Manuka flowers, which generate premium prices.

In 2016, Canada's honey industry recorded a positive trade balance of \$34.3 million, up 35% from the previous year's balance. However, this increase in trade balance in 2016 still remains lower than the highest trade balance of \$58.3 million achieved in 2012

Managed pollination services, including those delivered by beekeepers, are a critical input for many agricultural activities, including the production of orchard fruits, many berries and vegetables and the creation of hybrid canola seed. Using established methodology, it is possible to estimate the economic contribution in additional harvest value that can be linked to honey bees as managed pollinators. Based on 2016 harvest data, the most recent estimate of the economic contribution of Canadian honey bee pollination shows that between 4 and 5.5 billion dollars in additional crop value is made possible through the pollination services provided by beekeepers and their honey bees.



Section A: Statistical overview of Canadian honey and bee industry

1. Production

1.1. Number of beekeepers¹ by province

	2012	2013	2014	2015	2016
Prince Edward Island	46	47	45	45	40
Nova Scotia	230	287	320	395	461
New Brunswick	244	244	277	291	270
Quebec	305	296	309	333	340
Ontario	3,200	3,155	3,262	2,562	2,896
Manitoba	517	532	546	607	662
Saskatchewan	748	715	719	955	1,150
Alberta	883	890	1,015	1,064	1,400
British Columbia	2,139	2,323	2,405	2,363	2,640
Canada²	8,312	8,489	8,898	8,615	9,859

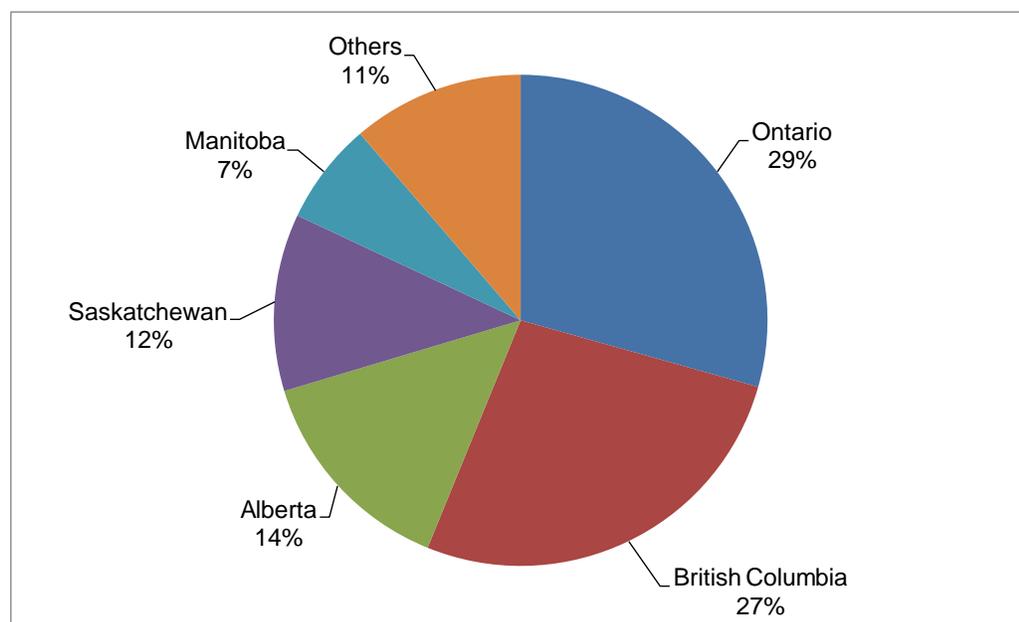
Notes:

1. Beekeeper numbers may include providers of pollination services.

2. Newfoundland and Labrador is excluded since the province has no honey production to report.

Source: Statistics Canada (CANSIM Table 001-0007)

1.2. Number of beekeepers by province – percent share, 2016



Source: Statistics Canada (CANSIM Table 001-0007)



1.3. Number of colonies¹ by province

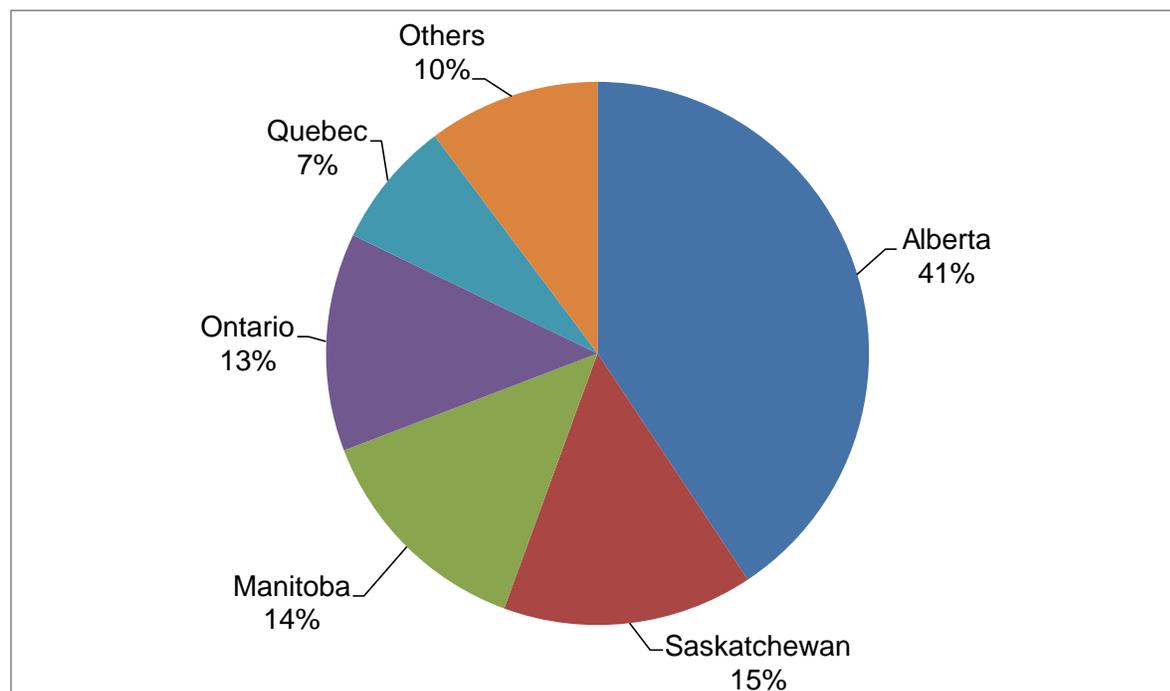
	2012	2013	2014	2015	2016
Prince Edward Island	3,719	4,432	3,777	4,005	4,920
Nova Scotia	19,000	19,500	23,000	25,504	24,978
New Brunswick	5,650	4,318	5,441	6,710	7,000
Quebec	49,708	47,203	49,635	54,294	57,000
Ontario	101,000	97,500	112,800	101,135	97,342
Manitoba	80,000	73,800	78,700	90,909	102,030
Saskatchewan	110,000	100,000	95,000	101,000	112,000
Alberta	278,400	278,100	282,900	296,880	305,000
British Columbia	42,560	42,544	44,999	45,571	39,885
Canada²	690,037	667,397	696,252	726,008	750,155

Notes:

1. Colony numbers may include providers of pollination services.
2. Newfoundland and Labrador is excluded since the province has no honey production to report.

Source: Statistics Canada (CANSIM Table 001-0007)

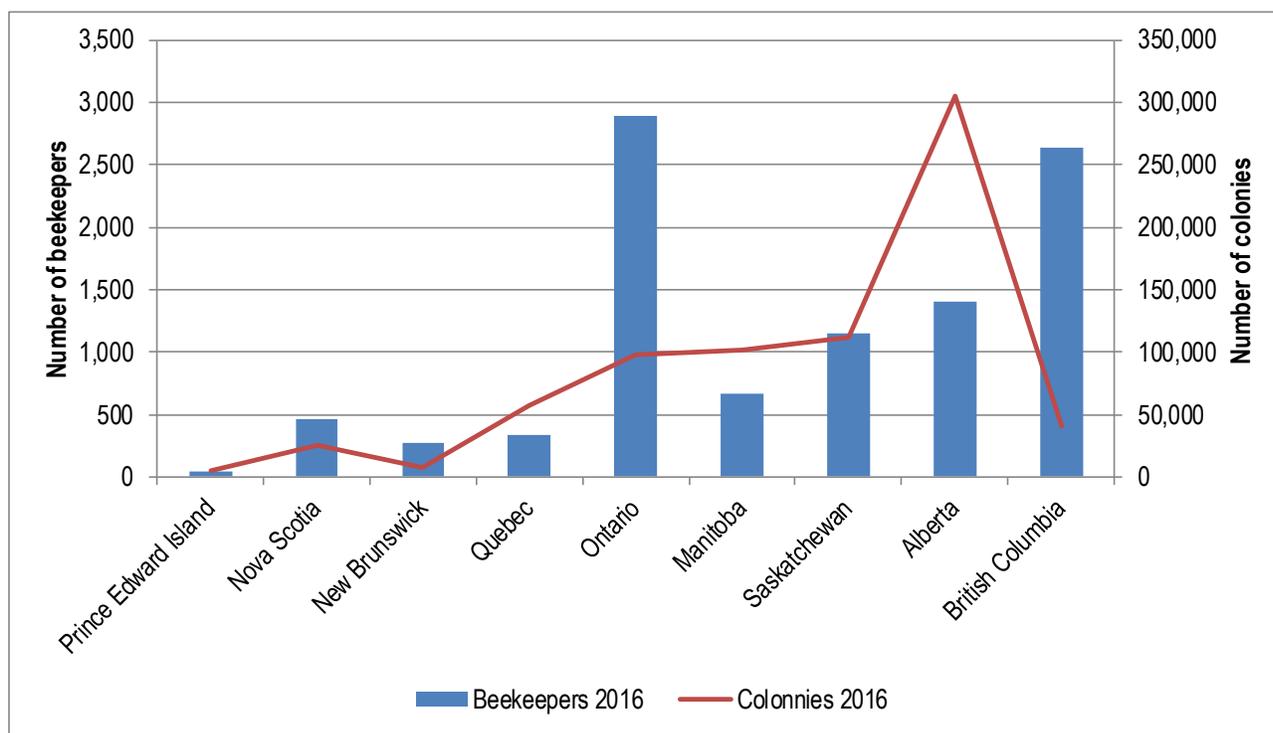
1.4. Number of colonies by province – percent share, 2016



Source: Statistics Canada (CANSIM Table 001-0007)



1.5. Number of beekeepers and number of colonies by province



Source: Statistics Canada (CANSIM Table 001-0007)



1.6. Total honey production¹ by province – thousands of pounds

	2012	2013	2014	2015	2016
Prince Edward Island	184	176	155	168	162
Nova Scotia	400	495	430	411	424
New Brunswick	199	207	236	276	287
Quebec	4,395	3,286	4,290	4,194	4,408
Ontario	9,439	6,363	10,577	8,972	8,880
Manitoba	13,200	12,472	14,087	16,000	15,202
Saskatchewan	23,125	18,200	16,530	18,837	22,848
Alberta	38,000	33,200	35,500	39,461	38,125
British Columbia	1,817	2,069	3,840	3,692	1,848
Canada²	90,759	76,468	85,644	92,011	92,184

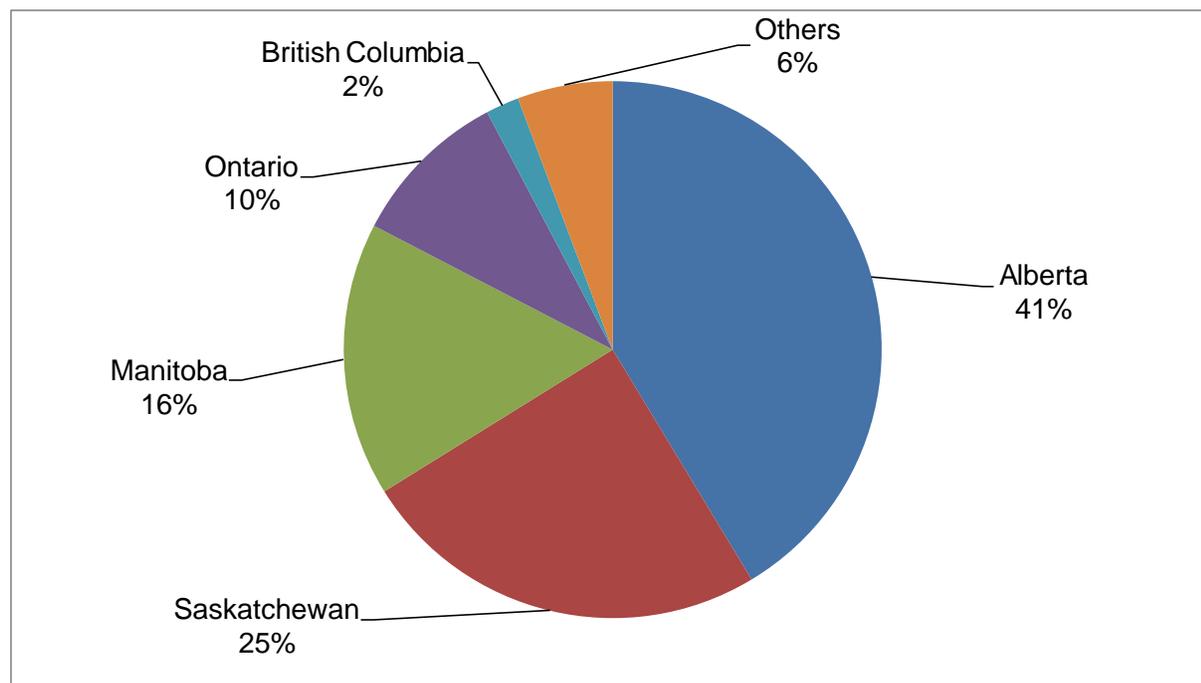
Notes:

1. Production excludes inventory.

2. Newfoundland and Labrador is excluded since the province has limited beekeeping.

Source: Statistics Canada (CANSIM Table 001-0007)

1.7. Total honey production by province – percent share, 2016



Source: Statistics Canada (CANSIM Table 001-0007)



1.8. Production value¹ of honey by province – thousands of Canadian dollars

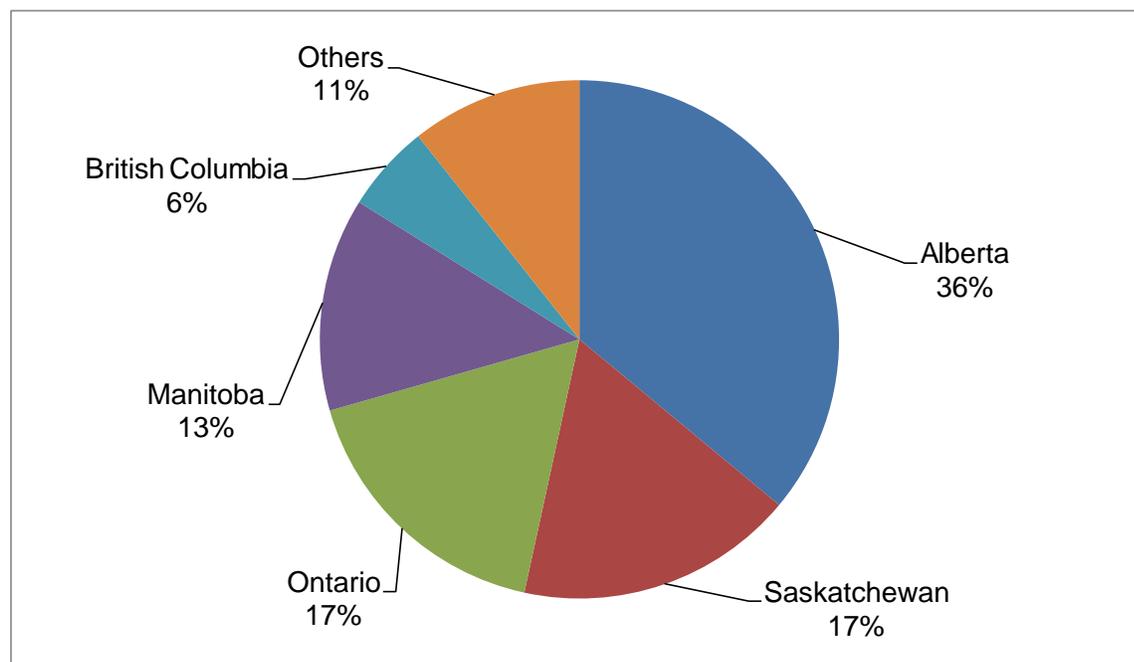
	2012	2013	2014	2015	2016
Prince Edward Island	551	453	415	579	445
Nova Scotia	1,260	1,559	1,257	1,343	1,216
New Brunswick	503	517	630	740	661
Quebec	12,291	12,279	13,386	13,905	14,500
Ontario	23,815	20,362	36,147	31,119	27,084
Manitoba	23,100	25,318	30,288	32,400	21,000
Saskatchewan	38,156	37,310	34,713	26,372	27,418
Alberta	68,340	72,905	79,788	84,555	56,859
British Columbia	8,190	10,580	12,617	19,471	8,622
Canada²	176,206	181,283	209,241	210,483	157,805

Notes:

1. Value excludes inventory sales except for in Quebec.
2. Newfoundland and Labrador is excluded since the province has limited beekeeping.

Source: Statistics Canada (CANSIM Table 001-0007)

1.9. Production value of honey by province – percent share, 2016



Source: Statistics Canada (CANSIM Table 001-0007)



2. Trade

2.1. Trade balance

2.1.1. Canada's honey trade balance – thousands of Canadian dollars

	2012	2013	2014	2015	2016
Export	73,794	60,856	50,859	66,603	72,315
Import	14,923	26,015	32,215	41,214	38,062
Trade Balance (Exports - Imports)	58,871	34,840	18,644	25,389	34,253

Source: Statistics Canada. (CATSNET, June 2017)



2.2. Exports

2.2.1. Canada's honey exports by province¹ – value (thousands of Canadian dollars)

	2012	2013	2014	2015	2016
Prince Edward Island	58	19	0	34	78
Nova Scotia	2	2	3	2	61
Quebec	19,265	11,650	4,369	6,480	6,158
Ontario	2,140	2,273	2,330	2,735	2,212
Manitoba	23,097	15,571	11,274	17,745	17,060
Saskatchewan	17,294	16,056	13,764	15,640	11,346
Alberta	10,995	12,832	14,929	20,499	33,433
British Columbia	386	733	1,759	1,748	1,490
Canada	73,237	59,135	48,429	64,883	71,838

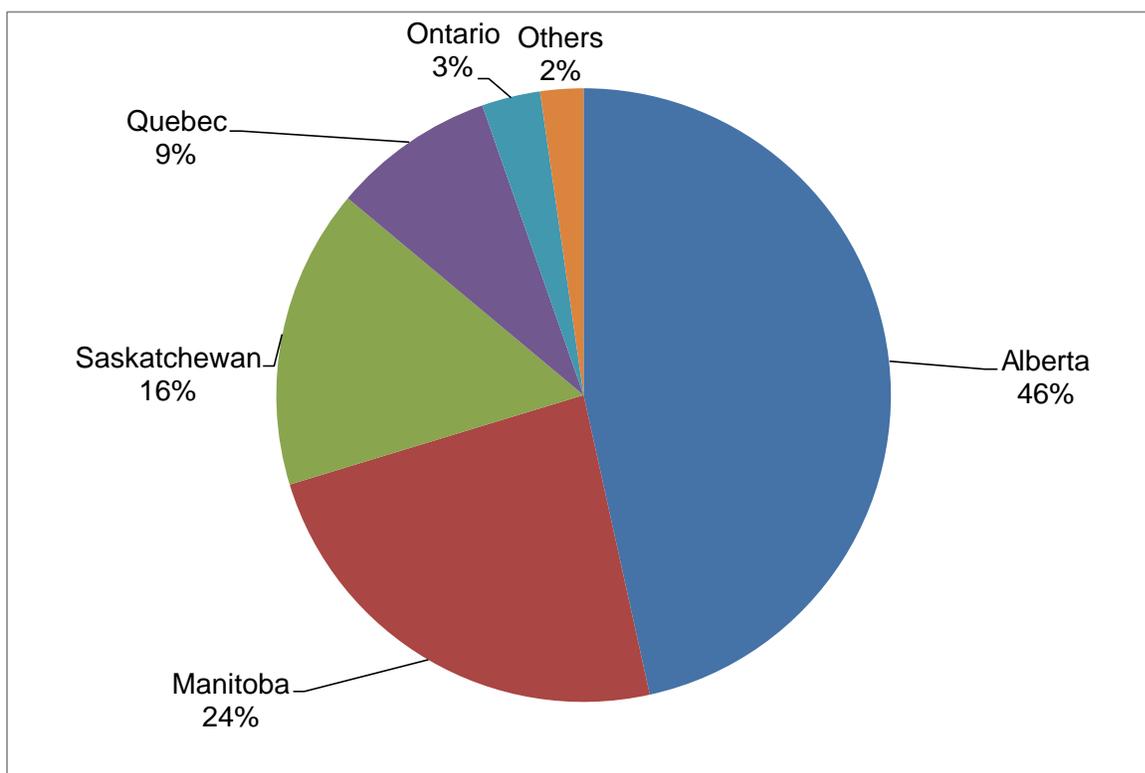
Note:

1. Exports may include honey not produced in that province.

Source: Statistics Canada. (CATSNET, June 2017)



2.2.2. Canada's honey exports by province – percent share, 2016



Source: Statistics Canada. (CATSnet, June 2017)

2.2.3. Canada's honey exports by province - volume (metric tonnes)

	2012	2013	2014	2015	2016
Prince Edward Island	3	2	0	6	14
Nova Scotia	0	0	0	0	7
Québec	4,963	2,392	787	1,116	1,021
Ontario	383	332	314	360	378
Manitoba	5,779	3,334	2,187	3,316	4,580
Saskatchewan	4,455	3,335	2,645	2,999	3,551
Alberta	2,566	2,507	2,840	3,640	8,113
British Columbia	75	146	316	264	215
Total	18,224	12,050	9,090	11,701	17,879

Source: Statistics Canada. (CATSNET, June 2017)

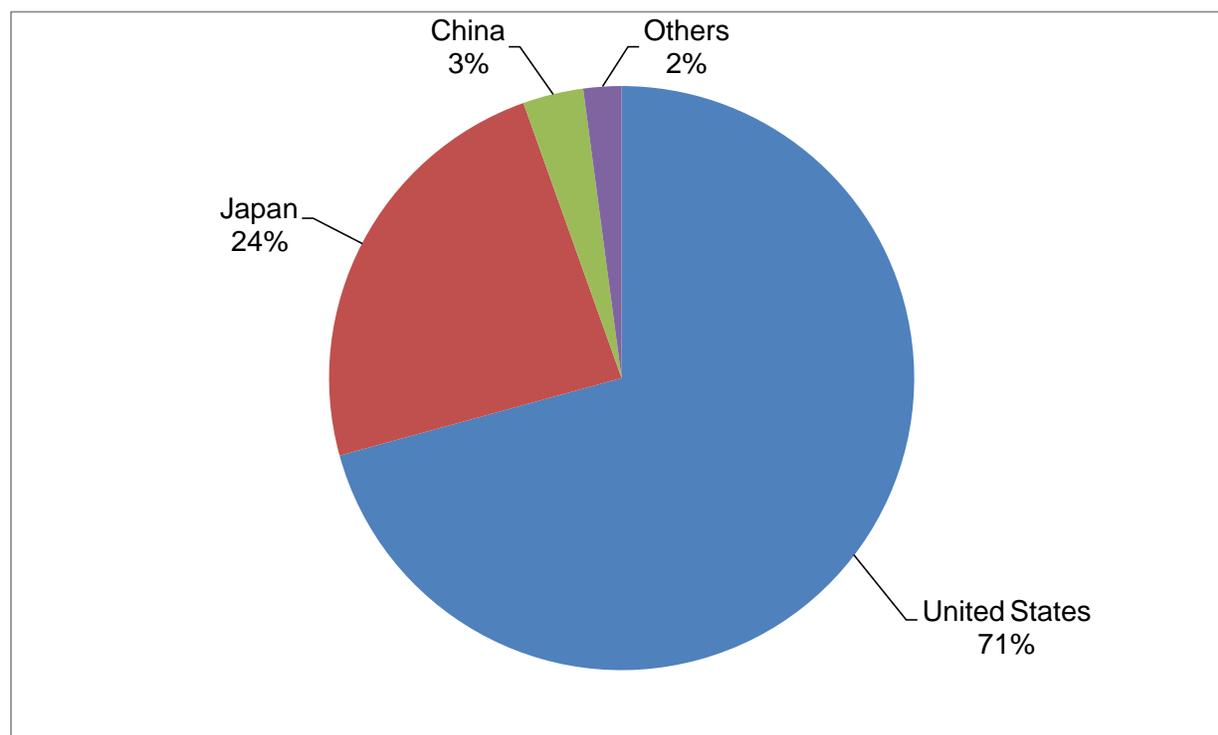


2.2.4. Canada's top 10 honey export destinations – value (thousands of Canadian dollars)

	2012	2013	2014	2015	2016
United States	61,870	45,454	29,708	44,541	50,894
Japan	8,771	11,873	16,308	16,176	17,045
China	1,067	1,174	1,665	2,522	2,396
South Korea	207	5	0	751	559
Hong Kong	332	141	504	287	271
India	0	0	0	0	95
Kuwait	0	0	0	118	84
Switzerland	0	0	1	0	74
Jordan	7	0	0	0	64
Barbados	70	24	39	55	56
Others	914	464	204	432	301
Total	73,237	59,135	48,429	64,883	71,838

Source: Statistics Canada. (CATSNET, June 2017)

2.2.5. Canada's top honey export destinations by country – percent share, 2016



Source: Statistics Canada. (CATSnet, June 2017)



2.2.6. Canada's top 10 honey export destinations – volume (metric tonnes)

	2012	2013	2014	2015	2016
United States	15,832	9,385	5,578	8,234	13,553
Japan	1,897	2,363	3,143	2,810	3,719
China	203	196	250	402	323
South Korea	37	1	0	116	105
Hong Kong	47	22	85	43	40
India	0	0	0	0	29
Switzerland	0	0	0	21	15
Kuwait	0	0	0	0	21
Jordan	1	0	0	0	12
Barbados	12	4	6	9	10
Others	195	78	29	64	52
Total	18,224	12,050	9,090	11,701	17,879

Source: Statistics Canada. (CATSNET, June 2017)



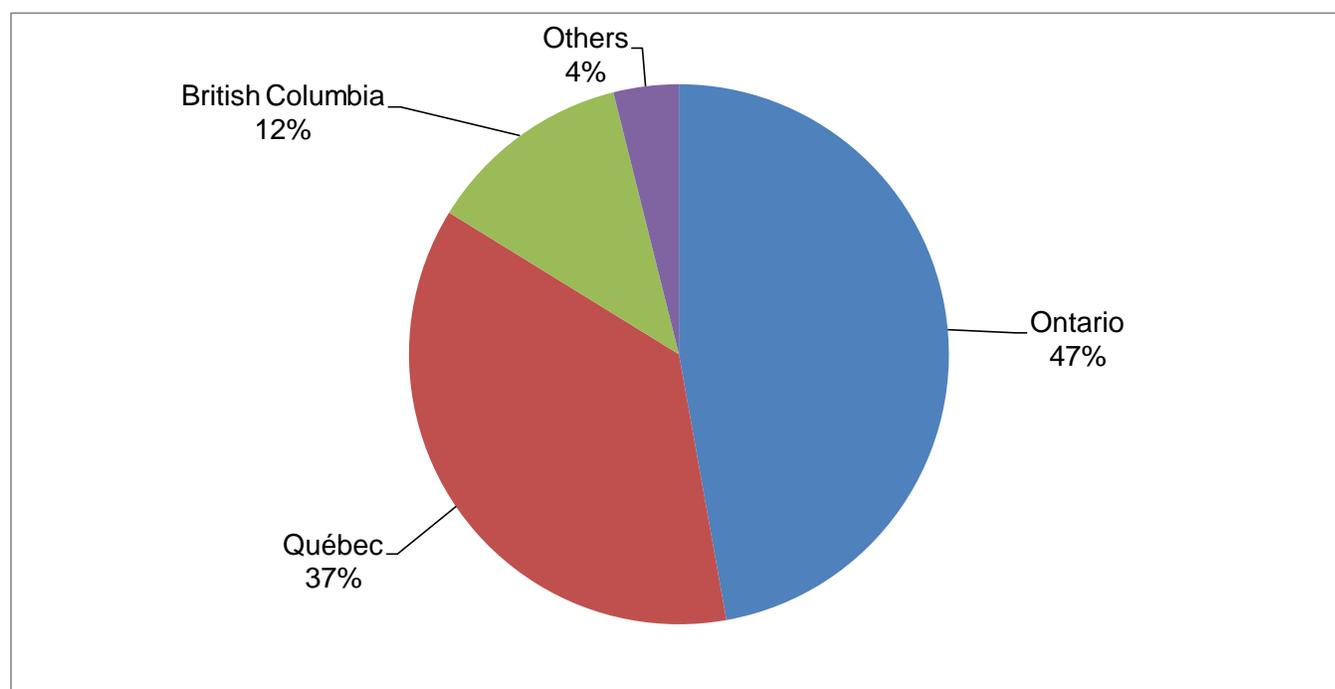
2.3. Imports

2.3.1. Canada's honey imports by province – value (Canadian dollars)

	2012	2013	2014	2015	2016
Nova Scotia	760	3,087	2,819	408	2,062
New Brunswick	417	0	0	113	216
Quebec	4,750,239	6,722,969	11,426,777	14,004,883	13,932,609
Ontario	8,145,010	16,897,806	16,835,830	21,683,754	17,958,821
Manitoba	38,072	292,122	603,335	453,018	305,147
Saskatchewan	13,177	13,083	48	53,687	13,854
Alberta	79,620	9,986	123,767	813,019	1,165,645
British Columbia	1,895,226	2,076,442	3,222,272	4,205,137	4,683,749
Total	14,922,521	26,015,495	32,214,848	41,214,019	38,062,103

Source: Statistics Canada. (CATSNET, June 2017)

2.3.2. Canada's honey imports by province – percent share, 2016



Source: Statistics Canada. (CATSnet, June 2017)



2.3.3. Canada's honey imports by province – volume (kilograms)

	2012	2013	2014	2015	2016
Nova Scotia	56	649	614	60	317
New Brunswick	73	0	0	9	51
Quebec	1,397,198	1,760,803	2,848,540	3,219,694	3,417,798
Ontario	1,801,179	3,400,794	3,105,020	3,552,532	2,476,506
Manitoba	8,784	69,323	57,412	53,698	39,740
Saskatchewan	2,231	3,074	4	5,583	936
Alberta	5,155	927	10,558	99,573	223,966
British Columbia	220,302	258,886	316,357	384,940	400,912
Canada	3,434,978	5,494,456	6,338,505	7,316,089	6,560,226

Source: Statistics Canada. (CATSNET, June 2017)

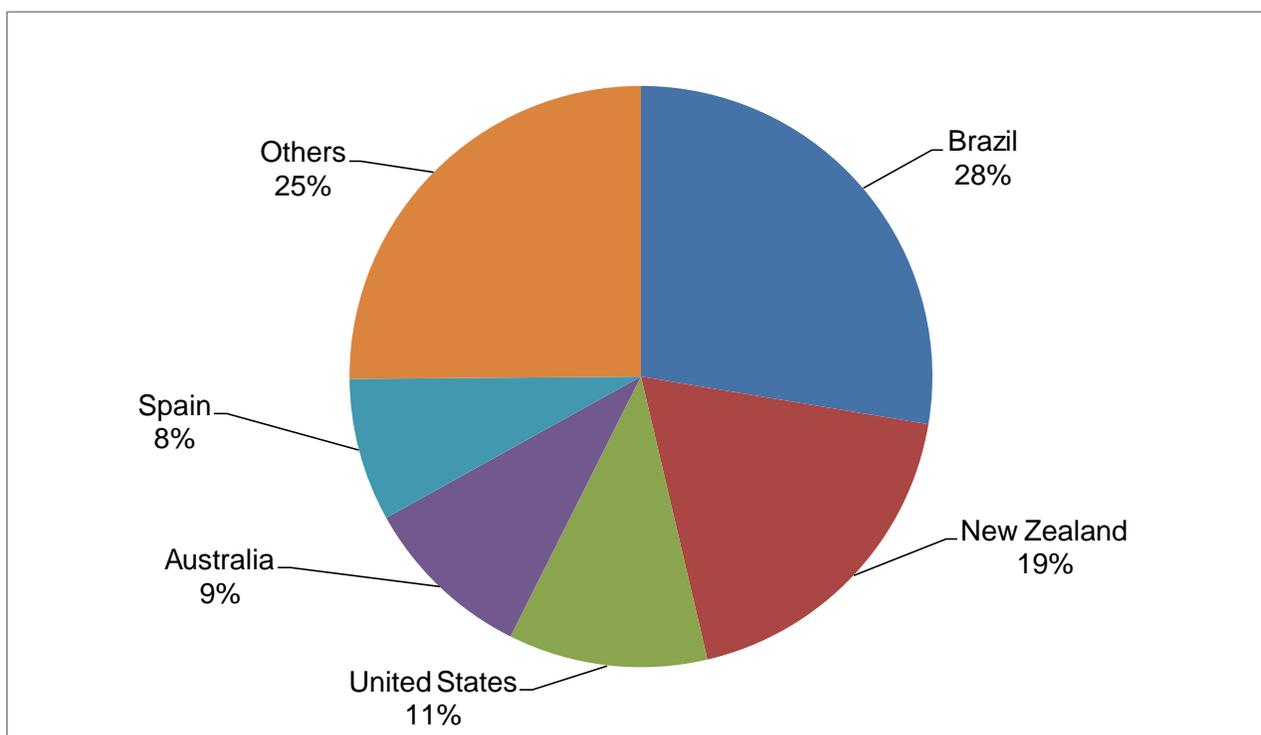
2.3.4. Canada's top 10 sources of honey imports – value (Canadian dollars)

	2012	2013	2014	2015	2016
Brazil	1,671,963	3,810,667	6,059,420	7,307,083	10,515,234
New Zealand	2,799,001	3,749,492	4,651,685	7,483,814	7,120,281
United States	1,447,090	3,065,478	3,759,112	6,161,862	4,207,803
Australia	2,600,480	2,788,815	2,609,958	4,249,661	3,629,420
Spain	21,321	42,410	331,913	3,270,807	3,024,203
India	386,851	582,183	1,071,590	1,036,187	1,550,297
Greece	787,559	1,387,871	877,670	1,399,416	1,171,278
Myanmar	0	0	138,369	541,456	960,289
Ukraine	0	15	1,441,591	607,767	858,053
Thailand	0	15	520,833	2,585,800	808,688
Others	5,208,256	10,588,549	10,752,707	6,570,166	4,216,557
Total	14,922,521	26,015,495	32,214,848	41,214,019	38,062,103

Source: Statistics Canada. (CATSNET, June 2017)



2.3.5. Canada's top sources of honey imports by country – percent share, 2016



Source: Statistics Canada. (CATSnet, June 2017)

2.3.6. Canada's top 10 sources of honey imports – volume (kilograms)

	2012	2013	2014	2015	2016
Brazil	494,605	1,039,335	1,429,623	1,528,830	2,134,017
United States	337,716	706,722	614,813	938,742	652,498
Spain	3,542	6,707	75,514	766,116	646,681
India	92,508	126,707	285,975	222,511	429,116
Myanmar	0	0	58,200	201,002	402,010
Australia	366,269	410,171	307,996	506,390	393,654
Ukraine	0	5	445,421	155,262	325,126
New Zealand	375,345	197,320	245,302	292,186	298,498
Thailand	0	6	166,640	764,835	230,849
China	91,079	26,627	468,250	552,864	214,854
Others	1,673,914	2,980,856	2,240,771	1,387,351	832,923
Total	3,434,978	5,494,456	6,338,505	7,316,089	6,560,226

Source: Statistics Canada. (CATSNET, June 2017)



2.3.7. Canada's sources of honey bee imports – value (Canadian dollars)

	2012	2013	2014	2015	2016
New Zealand	2,110,082	3,397,507	3,794,388	3,601,795	2,752,912
Australia	414,177	1,494,051	1,578,619	1,275,366	559,584
United States	0	0	14,008	223,942	249,614
Denmark	0	0	0	0	9,428
Total	2,524,259	4,891,558	5,387,015	5,101,103	3,571,538

Notes:

Package bees are sold in a variety of sizes typically one pound, two pound and three pound packages. No detail on the individual numbers of different package sizes is available.

Does not include queen bees.

Source: Statistics Canada. (CATSNET, June 2017)

2.3.8. Canada's sources of queen bee imports – value (thousands of Canadian dollars)

	2012	2013	2014	2015	2016
United States	3,399,366	4,264,789	5,364,363	6,416,761	6,316,094
Australia	264,162	258,578	109,357	56,248	145,681
Chile	50,002	168,287	149,095	128,051	91,396
New Zealand	149,167	90,793	103,906	108,924	81,787
Denmark	4,481	0	13,748	0	0
Total	3,867,178	4,782,447	5,740,469	6,709,984	6,634,958

Source: Statistics Canada. (CATSNET, June 2017)



3. Consumption

3.1. Honey available for consumption¹ in Canada – kilograms per person

	2012	2013	2014	2015	2016
Honey	0.81	0.84	1.06	1.09	0.90

Note:

1. Does not adjust for losses, such as waste and/or spoilage in stores, households, private institutions or restaurants or or losses during preparation.

Source: Statistics Canada (CANSIM Table 002-0011)



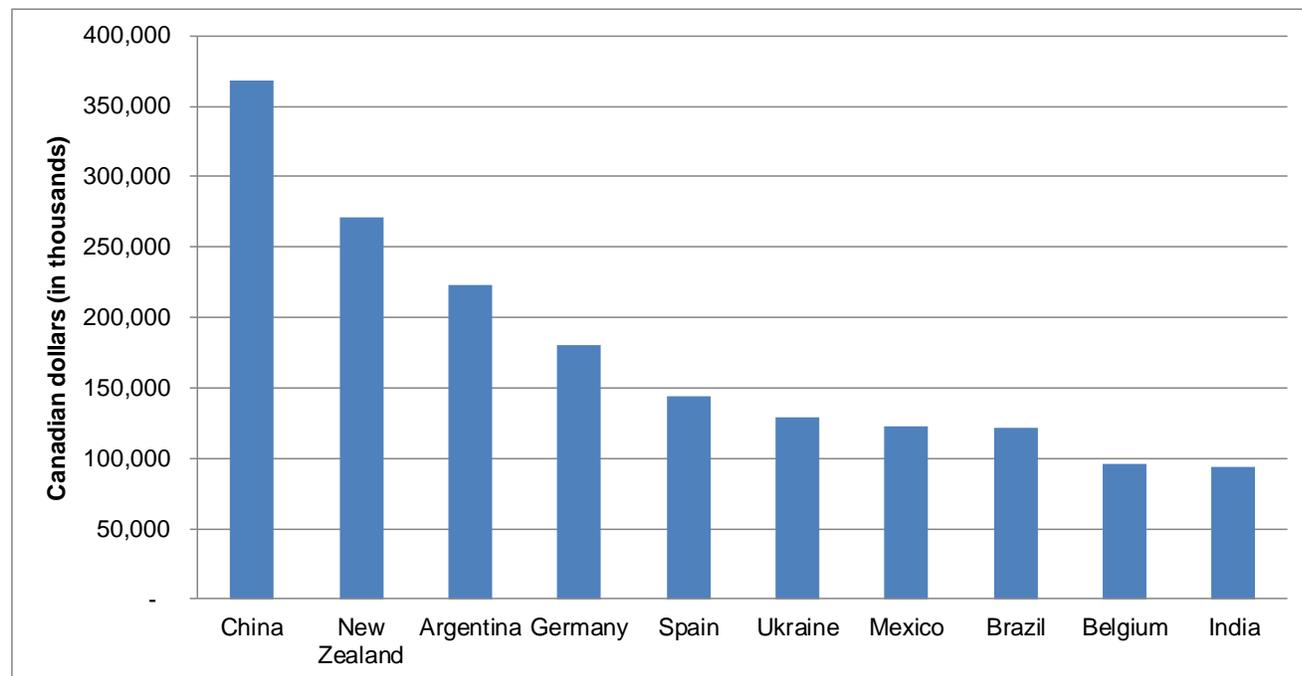
4. World data

4.1. Top 10 exporters of honey worldwide – value (thousands of Canadian dollars)

	2012	2013	2014	2015	2016
China	214,624	254,821	288,046	370,299	367,884
New Zealand	103,745	144,133	185,525	253,729	271,606
Argentina	215,152	217,318	224,349	208,015	223,089
Germany	121,146	134,764	155,648	168,799	180,199
Spain	79,911	94,788	132,191	129,985	144,399
Ukraine	30,962	54,739	103,466	108,802	129,046
Mexico	101,861	115,906	161,318	196,692	123,115
Brazil	52,393	55,830	108,566	104,106	122,073
Belgium	54,137	68,580	83,454	107,533	95,963
India	60,753	78,038	85,400	155,276	93,744
Others	665,459	1,141,962	879,087	963,277	834,652
Total	1,700,142	2,360,879	2,407,050	2,766,513	2,585,770

Source: Global Trade Tracker (June 2017)

4.2. Top 10 honey-exporting countries, 2016



Source: Global Trade Tracker (June 2017)

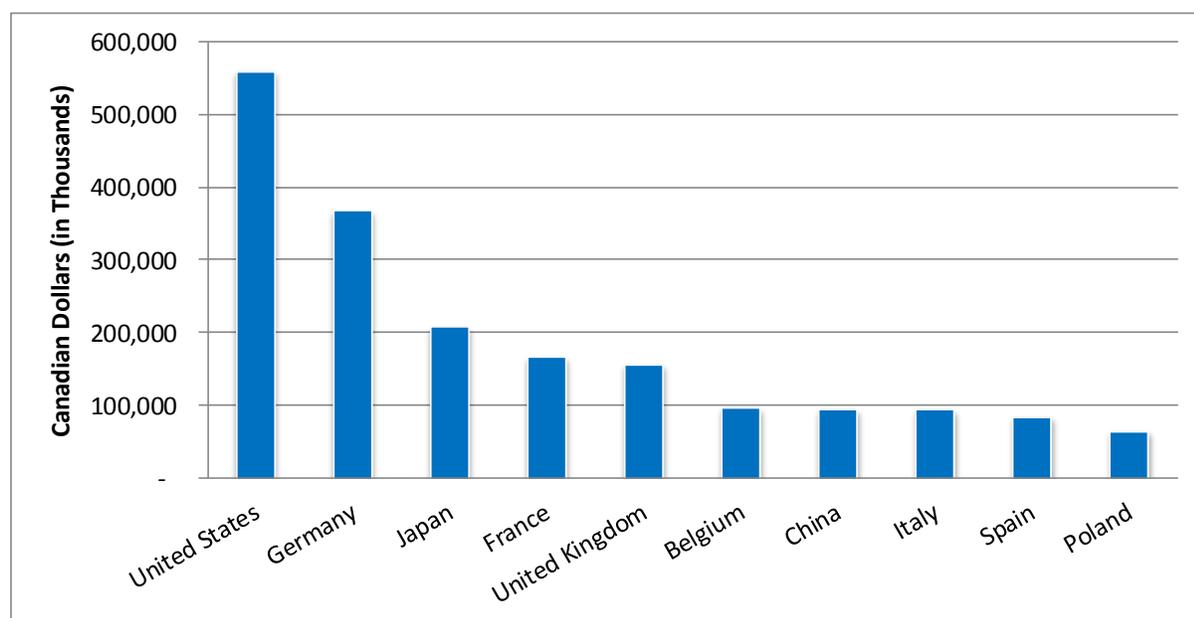


4.3. Top 10 importers of honey worldwide – value (thousands of Canadian dollars)

	2012	2013	2014	2015	2016
United States	430,371	513,947	641,588	770,164	559,604
Germany	281,283	335,528	353,906	425,046	369,948
Japan	105,220	119,602	132,676	150,898	209,152
France	94,229	118,225	171,385	164,567	168,489
United Kingdom	112,215	130,550	146,563	168,236	158,143
Belgium	55,739	65,375	85,930	115,404	98,076
China	26,219	44,284	64,754	96,064	96,505
Italy	55,921	77,875	100,075	108,883	95,982
Spain	48,155	54,944	67,204	93,012	86,542
Poland	34,925	49,794	61,885	62,920	66,902
Others	444,708	515,563	651,754	738,223	693,373
Total	1,688,984	2,025,687	2,477,720	2,893,417	2,602,716

Source: Global Trade Tracker (June 2017)

4.4. Top 10 honey-importing countries, 2016



Source: Global Trade Tracker (June 2017)



Section B: Honey bee pollination

5. Economic value of honey bee pollination of Canadian agriculture

5.1. Background

Honey bee pollination is a critical input for many agricultural commodities. An established methodology can be applied to estimate the value of the direct economic contribution to agriculture generated by honey bee pollination.

Honey bees placed near target crops by commercial and hobbyist beekeepers are the most common form of managed pollination, though alfalfa leafcutter bees, bumblebees and some other insect species are used in specific agricultural circumstances. This analysis attempts to exclude the contribution of natural and controlled pollinators other than honey bees. Pollination services for blueberry, cranberry, orchard fruit and canola seed production generate the bulk of the demand for honey bee pollination.

This analysis relies on 2016 Canadian farm gate value or farm cash receipts for key commodities. The estimation uses established coefficients for each crop to determine the proportion of the crop harvest reliant on insect pollination and the proportion of insect pollination that is delivered by honey bees.

5.2. Value of bee pollination by crop

The contribution of honey bee pollination to agricultural production can be estimated using an established formula:

$$V \times D \times P$$

where

V = Annual value of crop

D = Dependency of the crop on insect pollinators

P = Proportion of effective insect pollinators of the crop that are honey bees

The estimates used for D and P are those used by Morse and Calderone (2000).



5.3. Estimated contribution of Canadian honey bee pollination to value of key crops in 2016 – thousands of Canadian dollars

Crop	D ¹ (1 =100%)	P ² (1 =100%)	D x P ³ (1 =100%)	V ⁴ (CAN\$ '000)	Value of honey bee pollination D x P x V (CAN\$ '000)
Tree fruits				344,873	282,074
Apples	1	0.9	0.9	222,525	200,273
Apricots	0.7	0.8	0.56	1,603	898
Sour Cherries	0.9	0.9	0.81	4,759	3,855
Sweet Cherries	0.9	0.9	0.81	55,733	45,144
Nectarines	0.6	0.8	0.48	8,545	4,102
Peaches	0.6	0.8	0.48	35,852	17,209
Pears	0.7	0.9	0.63	9,129	5,751
Prunes/Plums	0.8	0.9	0.72	6,727	4,843
Berries				682,611	386,152
Grapes	0.1	0.1	0.01	151,093	1,511
Blueberries	1	0.9	0.9	261,532	235,379
Raspberries	0.8	0.9	0.72	35,369	25,466
Strawberries	0.2	0.1	0.02	99,271	1,985
Cranberries	1	0.9	0.9	135,346	121,811
Cucurbits				123,048	51,807
Cucumbers	0.9	0.9	0.81	38,483	31,171
Melons	0.8	0.9	0.72	20,674	14,885
Pumpkin	0.9	0.1	0.09	25,868	2,328
Squash/Zucchini	0.9	0.1	0.09	38,023	3,422
Oilseeds				12,261,397	1,841,143
Canola	0.2	0.9	0.18	9,238,330	1,662,899
Sunflower	1	0.9	0.9	15,965	14,369
Mustard Seed	0.2	0.8	0.16	122,911	19,666
Soybeans	0.1	0.5	0.05	2,884,191	144,210
Forage seed				94,072	9,407
Alfalfa Seed	1	0.1	0.1	94,072	9,407
Total					2,570,583

Notes:

1. D = Dependency of the crop on insect pollinators.
2. P = Proportion of effective insect pollinators of the crop that are honey bees.
3. D x P = Combined coefficient.
4. V = 2016 value of crop.

Sources:

The estimates for D and P used are those used by Morse and Calderone (2000)

The estimates for crop value: Statistics Canada



5.4. Impact of bee pollination on crop production

Fruits and Vegetables

Insect pollination is critical to the economic performance of key crops in the horticulture (fruit and vegetable) sector. In Table 5.3, the established methodology is used to estimate the contributions of honey bee pollination to the Canadian harvest of major insect-pollinated crops. Apple production in Canada in 2016 generated a total harvest value of \$223 million (farm gate value) of which honey bees were responsible for 90% or \$200 million. For berries, in the rapidly growing blueberry sector honey bees are responsible for \$235 million out of \$262 million (90%) in high-bush and low-bush blueberries combined. In total, the 2016 economic contribution of honey bee pollination to production of fruits and vegetables is estimated at \$720 million.

Canola

Special consideration of the contribution of honey bees to the production of canola is merited. Most canola planted in Canada today is hybrid seed. The production of hybrid canola seed grown to be subsequently planted by farmers the following season requires precisely timed and thorough insect pollination to bring together the separate genetic lines of the male and female parent plant strains. Since hybrid canola seed is produced primarily with managed pollinators, a portion of the value of this crop can be included as part of the direct agricultural contribution of honey bees through pollination.

Most of the hybrid canola seed produced in Canada is subsequently planted in Canada. While commodity canola is primarily wind-pollinated, research indicates that honey bees foraging on canola can add to harvest quantity and quality. Researchers offer a wide range of estimates for the increase in production linked to honey bee foraging depending on plant variety and a number of local conditions, including the abundance of natural pollinators. The highest estimates suggest a gain approaching 20% in additional harvest value, while more modest gains from 2% to 15% have also been reported. Most of the 488,790 hives in the Prairie provinces forage on commodity canola for several weeks in the peak of summer.

Honey bees are estimated to be responsible for about half of the pollination that makes the production of hybrid canola seed possible (with alfalfa leafcutter bees primarily responsible for the other half). One approach to estimating the magnitude of this contribution is to take this share (50%) of the total farm gate value of canola into account as a key economic contribution of honey bees to the total value produced by Canadian agriculture. Total farm cash receipts for producers of canola were \$9.2 billion in 2016. If honey bees are credited with making 50% of the production of canola seed possible (for a contributed value \$4.6 billion), in order to avoid double counting, the additional estimated contribution from honey bee pollination to commodity canola from Table 5.3 must be removed from the total contribution. The additional agricultural value of all other crop pollination, less canola, is \$908 million, generating a total estimate for the contribution of honey bees of \$5.5 billion.

An alternative model for estimating the contribution of honey bees to canola crops could be based on the additional contribution to harvest volume through the development and adoption of hybrid canola seed technology over the past twenty years - made possible through the use of managed insect pollination. Hybrid canola seed has increased harvest volumes by a (conservatively) estimated 30%, all other things being equal, compared with non-hybrid canola. If honey bees make half of the 30% increase in canola harvest value possible as they provide about half of the managed pollination to make the seed, for 2016 that contribution (half of 30%, or 15% of total harvest) would be valued at \$1.4 billion. The total contribution to agriculture of honey bees from adopting this approach is \$3.97 billion: \$2.57 billion (for contribution to increased harvest 'in field' from Table 5.3) and \$1.4 billion in value contribution by making possible the adoption of more productive hybrid canola seed technology.



5.5. Estimated economic contribution of honey bee pollination to crop production

The 2016 total annual economic contribution of honey bee pollination through direct additional harvest value is estimated at \$2.57 billion (Table 5.3). Value beyond this is created by the contribution of honey bees to the production of hybrid canola seed which, depending on the approach chosen, was valued at between \$1.4 billion and \$4.6 billion per year in 2016. The contribution to canola production combined with other agricultural production which benefits from honey bee pollination suggests the economic harvest value contributed by honey bees ranges from \$3.97 to \$5.5 billion per year.

While a more rigorous and detailed scientific assessment of each commodity in production could produce higher or lower estimates, this analysis shows that the value to agriculture of honey bee pollination is substantially greater than the value of honey and other hive products produced (about \$200 million per year). This estimate does not capture the growing contribution of alfalfa leafcutting bees to canola and blueberry production, nor the valuable contribution of natural pollinators.



6. Key Resources

- Global Trade Tracker
- Statistics Canada. (CANSIM TABLE 001-0007)
- Statistics Canada. (CANSIM TABLE 002-0001)
- Statistics Canada. CATSNET

Import and export data is based on the following Harmonized System Codes (H.S. Codes):

Honey for import: 0409000010 0409000021 0409000022 0409000023 0409000024
0409000025 0409000026 0409000029 0409000090

Honey for export: 04090000

Honey Bees for import: 0106410011 0106410012 0106410020 0106900011 0106900012
0106900020