

Alberta 2012 Beekeepers' Survey Results



Acknowledgements

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This report is also available on the Internet at:

[http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/sdd12589](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/sdd12589)

To obtain additional copies, please contact:

Alberta Agriculture and Rural Development
Economics and Competitiveness Division
Statistics and Data Development Branch
#302, 7000-113 Street
Edmonton, Alberta
T6H 5T6
Phone: 780-427-4011
Fax : 780-427-5220

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Alberta 2012 Beekeepers' Survey

Purpose of Survey

To address some of the data gaps and information needs of the beekeeping industry in Alberta, each year the Statistics and Data Development (SADD) Branch conducts a survey of beekeepers in the province. The survey results along with information from other sources are used in the development of provincial and regional estimates for selected honey variables such as colony numbers, yield, production and prices. These estimates, along with the survey results, are shared with survey participants, industry and other stakeholders.

This report focuses on the results of the Alberta 2012 Beekeepers' Survey and the related estimates generated.

Methodology

The Alberta Beekeepers' Survey, which is provincial in scope, collects data from producers through a non-probability survey. In November 2012, survey questionnaires were mailed out to 622 beekeepers across the province. The questionnaire specifically asked survey participants to provide, at their earliest convenience, information on colony numbers, production, yield, bee purchases, prices (expected/actual), carry-over stocks and selected management practices, for their related beekeeping operation in 2012.

Participants were made aware that participation in the survey was voluntary. They were also assured that all individual responses would be kept confidential under both the Statistics Act of Canada, and the Alberta Freedom of Information and Protection of Privacy (FOIP) Act, by which the SADD Branch is governed and operates. In return for their participation, respondents who were interested in the survey results were mailed the Branch's publication highlighting the results of the 2012 Beekeepers' survey. As of October 11, 2013, a total of 347 questionnaires were received, of which 329 were usable and formed the basis in developing the Alberta 2012 honey production estimates.

Survey responses received were reviewed for data completeness, validated and entered into an electronic database. The data was then subjected to computerized analyses, the results of which were rolled up into group summaries, to preserve the confidentiality of data provided by individual respondents. In turn, the group summaries, in conjunction with input from industry, the provincial apiculturist and other Alberta Agriculture and Rural Development (ARD) staff, were used to develop provincial and regional estimates on the number of producers, colonies, yield and production.

It should be noted that the derived estimates could be subject to error. Some of the possible causes of error include data coding, data entry, editing and tabulation. Nonetheless, we believe that the statistics published in this report are reliable estimates for Alberta.

For further information regarding the survey or survey results, please do not hesitate to contact:

John Paul Emunu
Livestock Statistician
Alberta Agriculture and Rural Development
Economics and Competitiveness Division
Statistics and Data Development Branch
Phone: 780-427-4243; Fax 780-427-5220
E-mail: john.paul.emunu@gov.ab.ca

Highlights of the Alberta 2011/2012 Paired Beekeeping Surveys

The following survey highlights are based on the responses of 168 producers in Alberta who participated in both the 2011 and 2012 Alberta Beekeepers' Surveys (See Table 1).

Paired Sample Highlights:

- ▶ In 2012, beekeepers purchased less packages/nucs than in 2011. Purchases decreased 44.2 per cent, with the average beekeeper buying 31.3 packages/nucs, compared to 56.1 in 2011. The majority of packages/nucs purchased in 2012 were imported (96.1 per cent), with the remainder purchased locally.
- ▶ The distribution of imported packages was as follows: New Zealand (88.9 per cent) and Australia (11.1 per cent) and "Other" (less than one per cent). Compared to 2011, imports of packages from New Zealand increased, while Australia showed a decline.
- ▶ In 2012, beekeepers sourced 64.4 per cent of their nuc purchases from Alberta, 20.7 per cent from British Columbia and 14.8 per cent from other Canadian Provinces (mostly Saskatchewan). Imports of nucs from other Canadian Provinces were up compared to the previous year, while those from British Columbia were down. The 2012 average nuc price in British Columbia was \$147.68, while in Alberta it was \$148.97, and \$138.50 for other Canadian provinces.
- ▶ Individual queen purchases decreased 11.1 per cent in 2012, with producers purchasing 211 queens on average, compared to 237 in 2011. Most of the queen purchases were sourced from outside of the province. Hawaii continues to be the primary source of imports, accounting for 65.3 per cent of the total, while other US States were second with 25.3 per cent and Australia third, with 6.0 per cent.
- ▶ Average queen prices in 2012 ranged from \$20.00 to \$24.96, depending upon the source of purchase. Prices were lowest in Saskatchewan at \$20.00 per queen, followed by Australia at \$21.02 per queen, then British Columbia and other US States at \$21.25, respectively. New Zealand had the highest price at \$24.96 per queen.
- ▶ In 2012, the percentage deathloss for queens purchased in packages and nucs dropped to 13.4 per cent, from 20.4 per cent in 2011. For individual queens, the comparable percentage was also down, falling 6.0 per cent, from 6.7 per cent in 2011.
- ▶ On June 30, 2012, there was less honey in inventory than a year earlier. Producers on average had 1,112 pounds in stock, down 53.3 per cent from 2,380 pounds in 2011.
- ▶ Alberta continues to be the preferred location for the over-wintering of bees. In 2012, 97.1 per cent of over-wintering activity occurred in Alberta, with the rest carried out in British Columbia.

- ▶ "Outdoor" over-wintering is still the favored practice, accounting for 83.8 per cent of the total colonies over-wintered in 2012.
- ▶ In 2012, the average beekeeper reported 15.9 years of beekeeping experience. Years of experience in over-wintering "outdoor" was lower at 13.9 years, while for "indoor" it was 12.9 years.
- ▶ Producer prices received in 2011 for honey were higher than expected for both retail and wholesale. The average price realized for wholesale honey was \$153.95 per cwt, \$0.80 higher than the expected price of \$153.15 per cwt. The average realized price for retail honey was \$276.64 per cwt, \$7.94 higher than the expected price of \$268.70 per cwt. The 2012 expected prices for honey are \$164.10 per cwt wholesale, and \$350.92 per cwt retail.

Table 1 - 2011 AND 2012 BEEKEEPING SURVEY RESULTS - ALBERTA*
(GROUP AVERAGES)**

DESCRIPTION	2011	2012	12/11 (%)
PACKAGES/NUCS:			
Average number of packages/nucs purchased in spring per beekeeper:	56.12	31.31	-44.2
Package queen/nuc deathloss (%):	20.38	13.38	-34.3
Percent of packages/nucs purchased:			
- Locally (Alberta) (%)	1.75	3.91	123.4
- Imported (%)	98.25	96.09	-2.2
Distribution of imported packages purchased:			
- New Zealand (%)	78.92	88.86	12.6
- Australia (%)	20.74	11.05	-46.7
- Other (%)	0.34	0.10	-71.8
Distribution of nucs purchased:			
- Alberta (%)	16.22	64.44	297.3
- British Columbia (%)	80.56	20.74	-74.3
- Other Canadian provinces (%)	3.22	14.81	359.9
Average price per package (2 lb equivalent) purchased from:			
- New Zealand (\$)	139.49	136.39	-2.2
- Australia (\$)	134.00	145.00	8.2
Average price per nuc purchased from:			
- Alberta (\$)	147.45	148.97	1.0
- British Columbia (\$)	147.17	147.68	0.3
- Other Canadian provinces (\$)	146.09	138.50	-5.2
INDIVIDUAL QUEENS:			
Average number of queens purchased in spring per beekeeper:	236.68	210.52	-11.1
Purchased individual queen deathloss (%):	6.73	5.97	-11.3
Percent of individual queens purchased:			
- Locally (Alberta) (%)	0.14	0.07	-50.0
- Imported (%)	99.86	99.93	0.1
Distribution of imported queens:			
- British Columbia (%)	1.25	0.02	-98.4
- Saskatchewan (\$)	0.04	0.07	75.0
- Other Canadian provinces (%)	0.52	0.35	-32.7
- New Zealand (%)	2.69	1.55	-42.4
- Australia (%)	0.02	5.99	n/a
- Hawaii (%)	65.23	65.27	0.1
- Other United States (%)	28.54	25.34	-11.2
- Chile (%)	1.20	1.12	-6.7
- Other (%)	0.52	0.28	-46.2
Average price per individual queen purchased from:			
- British Columbia (\$)	25.97	21.25	-18.2
- Saskatchewan (\$)	26.67	20.00	-25.0
- Other Canadian provinces (\$)	24.63	24.88	1.0
- New Zealand (\$)	21.89	24.96	14.0
- Australia (\$)	23.75	21.02	-11.5
- Hawaii (\$)	22.13	22.50	1.7
- Other United States (\$)	21.20	21.25	0.2
- Chile (\$)	23.68	24.72	4.4
- Other (\$)	23.12	24.29	5.1

* Based on paired sample ** Weighted n/a Not applicable Note: Some totals may not add up due to rounding.

Source: Alberta Agriculture and Rural Development, Economics and Competitiveness Division, Statistics and Data Development Branch

Table 1 (Cont'd) - 2011 AND 2012 BEEKEEPING SURVEY RESULTS - ALBERTA*
(GROUP AVERAGES)**

DESCRIPTION	2011	2012	12/11 (%)
OTHER SELECTED STATISTICS:			
Honey in inventory as of June 30th, per beekeeper (lbs.):	2,379.84	1,112.33	-53.3
Experience in beekeeping (years):	15.19	15.87	4.5
Estimated number of colonies per active beekeeper:	348.26	304.40	-12.6
Over-wintering intentions for active colonies:			
- indoors in Alberta (%)	28.72	13.29	-53.7
- outdoors in Alberta (%)	68.35	83.78	22.6
- in British Columbia (%)	2.81	2.93	4.3
Experience in over-wintering (years):			
- indoors	9.77	12.94	32.4
- outdoors	13.70	13.86	1.2
Price received for 2011 honey crop:			
- Retail (\$/cwt)	268.70***	276.64****	-----
- Wholesale (\$/cwt)	153.15***	153.95****	-----
Price expected for 2012 honey crop:			
- Retail (\$/cwt)	n/a	350.92	-----
- Wholesale (\$/cwt)	n/a	164.10	-----

* Based on paired sample ** Weighted *** Expected price in 2011 **** Actual price received in 2011 n/a Not applicable

Note: Some totals may not add up due to rounding.

Source: Alberta Agriculture and Rural Development, Economics and Competitiveness Division,
 Statistics and Data Development Branch

Honey Production in Alberta

In 2012, there were 883 beekeepers in Alberta, up 10.7 per cent from 2011 (see tables 3 and 4), and the highest number since 1988. For the third consecutive year, colony numbers were at record highs reaching 278,400 colonies in 2012 and up 1.4 per cent from the 2011 total of 274,600. Preliminary statistics indicate that while Alberta accounts for a relatively small percentage (9.8 per cent) of the nation's total beekeepers (8,126), it had 39.9 per cent of the honey producing colonies in Canada.

Alberta produced less honey in 2012 than was previously forecasted. Final estimates show total production at 38.0 million pounds, compared to the preliminary fall 2012 forecast of 40.5 million pounds. Even so, the 2012 production is the third highest on record, and up 11.6 per cent over 2011. The rise in production was driven by an increase in colony numbers and higher yield per colony. The average yield per colony was up 9.7 per cent to 136 pounds, compared to 2011.

Preliminary estimates by Statistics Canada peg total Canadian honey production in 2012 at 90.9 million pounds, compared to 79.8 million pounds in 2011. Based on the preliminary estimates, Alberta accounted for 44.6 per cent of the nation's honey production.

In 2012, honey production was up across all the regions of Alberta except in the North West. At 10.3 million pounds, the Peace region produced the highest amount of honey, and accounted for 27.2 per cent the total provincial production of 38.0 million pounds (see tables 2 and 4). The North West was second with 10.2 million pounds, (or 26.9 per cent), followed by the South with 10.0 million pounds (or 26.4 per cent). The Central region had the lowest production with 3.71 million pounds (or 9.8 per cent), then the North East with 3.74 million pounds (or 9.9 per cent). It cannot be over emphasized that the estimated honey production on a regional basis is directly tied to colony numbers and yield per colony, hence, explaining the variation among regions.

The Alberta Beekeepers' Survey also included questions regarding the pollination of crops. Based upon the survey results (and which did not include all beekeepers involved in pollination activities), 18,046 colonies were rented for pollination in 2012, with an average rental charge of \$163.33 per colony.

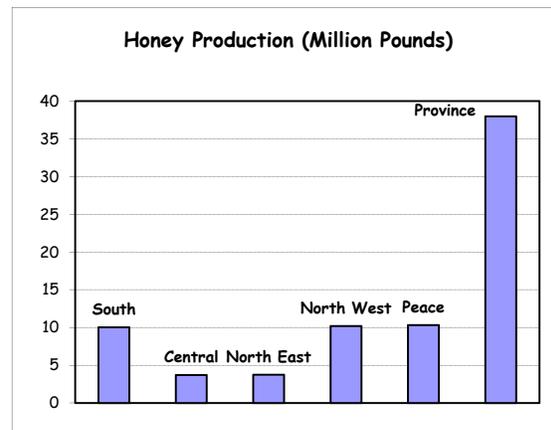
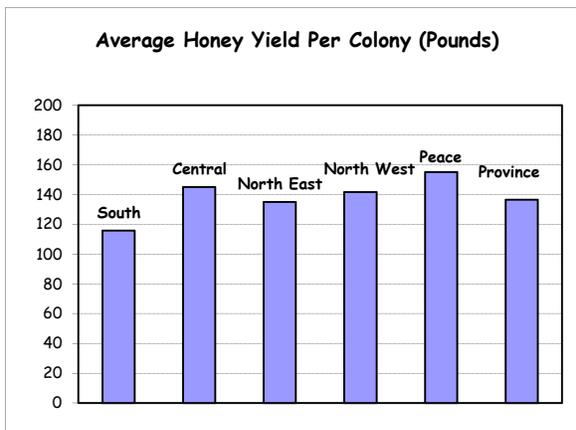
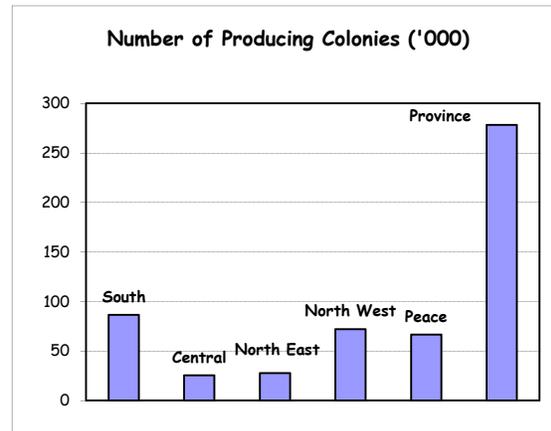
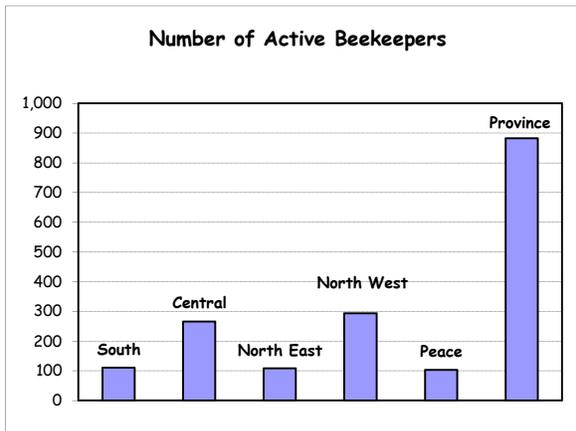
Table 2 - 2012 HONEY PRODUCTION ESTIMATE - ALBERTA

Region	Number of Registered Beekeepers	Number of Producing Colonies	Honey Yield Per Colony		Total Honey Produced	
			lbs	kg	lbs	tonnes
South	111	86,437	116	53	10,011,412	4,541
Central	266	25,571	145	66	3,709,177	1,682
North East	109	27,720	135	61	3,743,428	1,698
North West	294	72,022	142	64	10,201,104	4,627
Peace	103	66,651	155	64	10,334,879	4,688
Province	883	278,400	136	62	38,000,000	17,237

Note: Yield and honey production rounded to the nearest pound, kilogram or tonne.

Totals may not add due to rounding.

**2012 REGIONAL DISTRIBUTION OF ALBERTA'S ESTIMATED HONEY PRODUCTION
(SELECTED HONEY STATISTICS)**

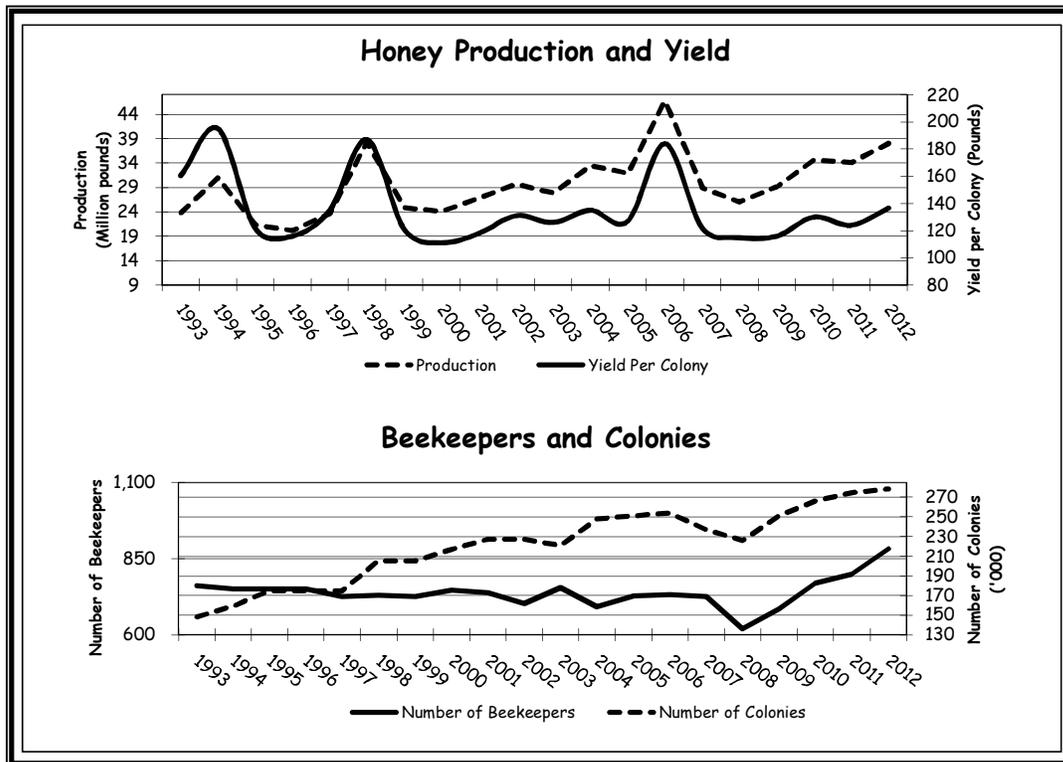


Source: Alberta Agriculture and Rural Development, Economics and Competitiveness Division, Statistics and Data Development Branch

Table 3 - ALBERTA HONEY STATISTICS, 1993-2012

Year	No. of Beekeepers	No. of Colonies	Production ('000 pounds)	Yield per Colony (pounds)	No. of Colonies Per Beekeeper
1993	761	148,000	23,745	160	194
1994	750	159,000	31,005	195	212
1995	750	175,000	21,306	122	233
1996	750	175,000	20,215	116	233
1997	725	175,000	23,625	135	241
1998	730	205,000	38,335	187	281
1999	725	205,000	24,805	121	283
2000	747	217,000	24,087	111	290
2001	739	227,000	26,786	118	307
2002	702	227,000	29,737	131	323
2003	754	221,000	27,846	126	293
2004	693	248,000	33,480	135	358
2005	728	251,000	31,877	127	345
2006	733	254,000	46,736	184	347
2007	726	237,000	28,914	122	326
2008	620	226,000	25,990	115	365
2009	683	251,000	29,116	116	367
2010	769	266,000	34,580	130	346
2011	798	274,600	34,050	124	344
2012	883	278,400	38,000	136	315

Alberta Honey Production, Yield, Beekeepers and Colonies, 1993-2012



Source: Alberta Agriculture and Rural Development, Economics and Competitiveness Division, Statistics and Data Development Branch

Table 4 - HONEY PRODUCTION BY REGION IN ALBERTA (2005-2012)

Region	2005	2006	2007	2008	2009	2010	2011	2012
Number of Active Beekeepers								
South	90	90	94	90	94	94	101	111
Central	150	151	141	128	147	176	216	266
North East	117	115	110	87	96	118	107	109
North West	255	262	267	227	244	274	274	294
Peace	116	115	114	88	102	107	100	103
Province	728	733	726	726	683	769	798	883
Number of Producing Colonies								
South	66,923	65,671	66,895	66,901	66,934	73,039	83,948	86,437
Central	17,100	18,240	17,819	17,604	19,611	20,742	22,501	25,571
North East	33,297	30,799	27,780	25,439	26,689	27,682	26,111	27,720
North West	68,564	73,076	64,480	63,546	74,209	73,183	75,757	72,022
Peace	65,116	66,213	60,026	52,510	63,558	71,354	66,283	66,651
Province	251,000	254,000	237,000	226,000	251,000	266,000	274,600	278,400
Average Yield (pounds per colony)								
South	60	117	72	49	64	92	78	116
Central	142	198	103	76	144	130	96	145
North East	129	225	139	160	154	156	139	135
North West	175	253	164	137	122	154	163	142
Peace	140	152	131	164	140	134	142	155
Province	127	184	122	115	116	130	124	136
Honey Production ('000 pounds)								
South	4,036	7,702	4,842	3,306	4,250	6,745	6,557	10,011
Central	2,430	3,611	1,827	1,334	2,829	2,704	2,150	3,709
North East	4,306	6,928	3,850	4,058	4,106	4,323	3,618	3,743
North West	12,015	18,455	10,551	8,700	9,043	11,243	12,320	10,201
Peace	9,090	10,040	7,844	8,591	8,887	9,565	9,406	10,335
Province	31,877	46,736	28,914	25,990	29,116	34,580	34,050	38,000

Note: Some totals may not add up due to rounding.

Source: Alberta Agriculture and Rural Development, Economics and Competitiveness Division, Statistics and Data Development Branch