Honey

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United States Honey Production Down 9 Percent for Operations with Five or More Colonies in 2017

United States honey production in 2017 from producers with five or more colonies totaled 148 million pounds, down 9 percent from 2016. There were 2.67 million colonies producing honey in 2017, down 4 percent from 2016. Yield per colony averaged 55.3 pounds, down 5 percent from the 58.3 pounds in 2016. Colonies which produced honey in more than one State were counted in each State where the honey was produced. Therefore, at the United States level yield per colony may be understated, but total production would not be impacted. Colonies were not included if honey was not harvested. Producer honey stocks were 30.6 million pounds on December 15, 2017, down 26 percent from a year earlier. Stocks held by producers exclude those held under the commodity loan program.

Operations with Less than Five Colonies Produced 599 Thousand Pounds of Honey in 2017

United States honey production in 2017 from producers with less than five colonies totaled 599 thousand pounds, down 22 percent from 2016. There were 20 thousand colonies from which honey was harvested in 2017, down 17 percent from 2016. The average yield was 30.0 pounds per colony in 2017, down 6 percent from the previous year.

Honey Prices Up 2 Percent for Operations with Five or More Colonies in 2017

United States honey prices decreased during 2017 to 215.6 cents per pound, up 2 percent from 211.9 cents per pound in 2016. United States and State level prices reflect the portions of honey sold through cooperatives, private, and retail channels. Prices for each color class are derived by weighting the quantities sold for each marketing channel. Prices for the 2016 crop reflect honey sold in 2016 and 2017. Some 2016 crop honey was sold in 2017, which caused some revisions to the 2016 crop prices.

Price Paid per Queen was 14 Dollars for Operations with Five or More Colonies in 2017

For operations with five or more colonies, the average prices paid in 2017 for honey bee queens, packages, and nucs were $14, $76, and $107 respectively. The average prices paid in 2017 for operations with less than five colonies were $34 per queen, $117 per package, and $138 per nuc. For operations with five or more colonies, pollination income for 2017 was $435 million, up 29 percent from 2016. Other income from honey bees for operations with five or more colonies in 2017 was $163 million, up 10 percent from 2016. These estimates along with expenditure and apiary worker information can be found on pages 4 and 5 of this report.

Number of Colonies, Yield, Production, Stocks, Price, and Value – States and United States: 2016

[Operations with 5 or more colonies that also qualify as a farm. Colonies which produced honey in more than one State were counted in each State]

State	Honey producing colonies [1]	Yield per colony	Production	Stocks December 15 [2]	Average price per pound [3]	Value of production [4]
	(1,000)	(pounds)	(1,000 pounds)	(1,000 pounds)	(cents)	(1,000 dollars)
Alabama	7	52	364	33	345	1,256
Arizona	27	46	1,242	261	197	2,447
Arkansas	24	69	1,656	99	185	3,064
California	310	36	11,160	2,009	204	22,766
Colorado	32	40	1,280	282	224	2,867
Florida	215	50	10,750	538	243	26,123
Georgia	96	39	3,744	899	269	10,071
Hawaii	16	113	1,808	127	231	4,176
Idaho	97	34	3,298	1,253	182	6,002
Illinois	10	48	480	77	542	2,602
Indiana	7	62	434	208	346	1,502
Iowa	37	48	1,776	746	208	3,694
Kansas	7	48	336	54	304	1,021
Kentucky	5	46	230	48	402	925
Louisiana	50	86	4,300	301	194	8,342
Maine	12	34	408	65	338	1,379
Michigan	89	60	5,340	1,709	237	12,656
Minnesota	124	59	7,316	1,390	169	12,364
Mississippi	19	85	1,615	113	173	2,794
Missouri	8	62	496	30	231	1,146
Montana	159	77	12,243	3,183	177	21,670
Nebraska	48	46	2,208	640	191	4,217
New Jersey	12	27	324	198	709	2,297
New York	64	57	3,648	1,167	319	11,637
North Carolina	12	37	444	89	478	2,122
North Dakota	485	78	37,830	6,809	185	69,986
Ohio	15	79	1,185	664	393	4,657
Oregon	74	35	2,590	622	191	4,947
Pennsylvania	19	50	950	266	303	2,879
South Carolina	16	45	720	36	457	3,290
South Dakota	280	71	19,880	12,127	176	34,989
Tennessee	6	55	330	69	488	1,610
Texas	133	70	9,310	2,607	208	19,365
Utah	31	32	992	169	193	1,915
Vermont	6	52	312	69	364	1,136
Virginia	5	38	190	30	585	1,112
Washington	84	35	2,940	412	199	5,851
West Virginia	5	32	160	43	392	627
Wisconsin	54	62	3,348	1,205	267	8,939
Wyoming	40	68	2,720	190	178	4,842
Other States [5] [6]	35	44	1,525	416	424	6,466
United States [6] [7]	2,775	58.3	161,882	41,253	211.9	343,028

[1] Honey producing colonies are the maximum number of colonies from which honey was harvested during the year. It is possible to harvest honey from colonies which did not survive the entire year.
[2] Stocks held by producers.
[3] Average price per pound based on expanded sales.
[4] Value of production is equal to production multiplied by average price per pound.
[5] Alaska, Connecticut, Delaware, Maryland, Massachusetts, Nevada, New Hampshire, New Mexico, Oklahoma, and Rhode Island not published separately to avoid disclosing data for individual operations.
[6] Due to rounding, total colonies multiplied by total yield may not exactly equal production.
[7] United States value of production will not equal summation of States.

Number of Colonies, Yield, Production, Stocks, Price, and Value – States and United States: 2017

[Operations with 5 or more colonies that also qualify as a farm. Colonies which produced honey in more than one State were counted in each State]

State	Honey producing colonies [1]	Yield per colony	Production	Stocks December 15 [2]	Average price per pound [3]	Value of production [4]
	(1,000)	(pounds)	(1,000 pounds)	(1,000 pounds)	(cents)	(1,000 dollars)
Alabama	7	45	315	22	277	873
Arizona	22	40	880	97	196	1,725
Arkansas	29	77	2,233	223	191	4,265
California	335	41	13,735	2,198	209	28,706
Colorado	33	43	1,419	284	206	2,923
Florida	205	43	8,815	529	240	21,156
Georgia	99	32	3,168	190	296	9,377
Hawaii	12	131	1,572	16	151	2,374
Idaho	95	44	4,180	1,045	179	7,482
Illinois	11	46	506	167	476	2,409
Indiana	7	48	336	128	394	1,324
Iowa	35	58	2,030	1,035	222	4,507
Kansas	7	79	553	260	418	2,312
Kentucky	5	38	190	42	408	775
Louisiana	43	81	3,483	279	188	6,548
Maine	12	33	396	51	545	2,158
Michigan	87	45	3,915	822	241	9,435
Minnesota	126	62	7,812	1,016	186	14,530
Mississippi	13	80	1,040	83	181	1,882
Missouri	8	65	520	57	353	1,836
Montana	145	72	10,440	2,506	230	24,012
Nebraska	42	63	2,646	423	199	5,266
New Jersey	13	28	364	167	786	2,861
New York	57	56	3,192	766	301	9,608
North Carolina	11	41	451	99	434	1,957
North Dakota	455	74	33,670	4,377	189	63,636
Ohio	15	73	1,095	657	312	3,416
Oregon	78	40	3,120	998	189	5,897
Pennsylvania	16	46	736	177	340	2,502
South Carolina	16	34	544	27	306	1,665
South Dakota	255	57	14,535	6,541	191	27,762
Tennessee	7	41	287	75	468	1,343
Texas	120	66	7,920	2,297	211	16,711
Utah	27	31	837	67	206	1,724
Vermont	7	45	315	120	417	1,314
Virginia	5	35	175	39	573	1,003
Washington	77	45	3,465	1,594	225	7,796
West Virginia	6	40	240	50	385	924
Wisconsin	53	56	2,968	683	277	8,221
Wyoming	39	53	2,067	186	159	3,287
Other States [5] [6]	34	43	1,473	184	411	6,054
United States [6] [7]	2,669	55.3	147,638	30,577	215.6	318,308

[1] Honey producing colonies are the maximum number of colonies from which honey was harvested during the year. It is possible to harvest honey from colonies which did not survive the entire year.
[2] Stocks held by producers.
[3] Average price per pound based on expanded sales.
[4] Value of production is equal to production multiplied by average price per pound.
[5] Alaska, Connecticut, Delaware, Maryland, Massachusetts, Nevada, New Hampshire, New Mexico, Oklahoma, and Rhode Island not published separately to avoid disclosing data for individual operations.
[6] Due to rounding, total colonies multiplied by total yield may not exactly equal production.
[7] United States value of production will not equal summation of States.

Number of Colonies, Yield, and Production – United States: 2016 and 2017

[Operations with less than 5 colonies that also qualify as a farm]

State	Honey producing colonies [1]		Yield per colony		Production	
	2016	2017	2016	2017	2016	2017
	(1,000)	(1,000)	(pounds)	(pounds)	(1,000 pounds)	(1,000 pounds)
United States [2]	24	20	31.9	30.0	766	599

[1] Honey producing colonies are the maximum number of colonies from which honey was harvested during the year. It is possible to harvest honey from colonies which did not survive the entire year.

[2] Due to rounding, total colonies multiplied by total yield may not exactly equal production.

Honey Price by Color Class – United States: 2016 and 2017

[Operations with 5 or more colonies that also qualify as a farm]

Color class	Price					
	Co-op and private		Retail		All	
	2016	2017	2016	2017	2016	2017
	(cents per pound)	(cents per pound)	(cents per pound)	(cents per pound)	(cents per pound)	(cents per pound)
Water white, extra white, white	189.1	199.9	463.8	380.1	195.5	201.6
Extra light amber	190.8	202.7	433.7	458.8	200.8	213.5
Light amber, amber, dark amber	194.8	198.4	452.9	484.8	233.0	232.2
All other honey, area specialties	245.7	285.9	781.6	624.1	385.2	373.8
All honey	192.0	201.0	474.5	477.7	211.9	215.6

Queen, Package, and Nuc Prices Paid – United States: 2016 and 2017

[Operations that qualify as a farm. Represents prices paid by operations, regardless of whether honey produced. For more estimates on the total number of colonies, see the *Honey Bee Colonies* report]

United States	Queen		Package		Nuc	
	2016	2017	2016	2017	2016	2017
	(dollars per)	(dollars per)	(dollars per)	(dollars per)	(dollars per)	(dollars per)
Operations with						
5 or more colonies	19	14	89	76	117	107
Less than 5 colonies	33	34	109	117	122	138

Pollination and Other Income – United States: 2016 and 2017

[Operations that qualify as a farm. Represents incomes from the total number of colonies, regardless of whether honey was harvested. For more estimates on the total number of colonies, see the *Honey Bee Colonies* report]

United States	Pollination income		Other income [1]	
	2016	2017	2016	2017
	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
5 or more colonies	337,834	435,003	148,523	163,100
Less than 5 colonies	(S)	(S)	(S)	(S)

(S) Insufficient number of reports to establish an estimate.

[1] Includes sales of queens, queen cells, beeswax, propolis, etc.

Expenditures for Honey Bee Operations – United States: 2016 and 2017

[Operations that qualify as a farm. Represents expenditures on the total number of colonies, regardless of whether honey was harvested. For more estimates on the total number of colonies, see the *Honey Bee Colonies* report]

Expenditures	5 or more colonies		Less than 5 colonies	
	2016	2017	2016	2017
	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)	(1,000 dollars)
Varroa control and treatment	16,042	17,239	262	313
Other colony issues [1]	6,647	5,919	82	121
Feed [2]	50,307	53,075	482	538
Foundation	7,294	9,776	320	326
Hives/woodenware	9,014	9,989	706	796

[1] Includes Nosema, tracheal mites, foulbrood, paralysis, Kashmir, cloudy wing, etc.
[2] Includes syrup, sugar water, honey, pollen patties, and other feeds.

Apiary Workers – United States: 2016 and 2017

[Operations that qualify as a farm. Represents number of paid and unpaid workers that worked with colonies, regardless of whether honey was harvested. For more estimates on the total number of colonies, see the *Honey Bee Colonies* report]

United States	Apiary workers	
	2016	2017
	(workers)	(workers)
5 or more colonies	24,000	22,000
Less than 5 colonies	19,000	19,000

Statistical Methodology

Survey Procedures: Data for honey producing operations are collected from a stratified sample of all known operations that also meet USDA's definition of a farm. To qualify as a farm, an operation must be any place from which $1,000 or more of agricultural products were produced and sold, or normally would have been sold, during the year. NASS Regional Field Offices maintain a list of all known operations and use known sources of operations to update their lists. All sampled operations are mailed a questionnaire and given adequate time to respond by mail or electronic data reporting (EDR). Those that do not respond by mail or EDR are telephoned or possibly enumerated in person. Prices are collected by color class and marketing channel from operations with five or more colonies.

Estimation Procedures: Sound statistical methodology is employed to derive the estimates from reported data. All data are analyzed for unusual values. Data from each operation are compared to their own past operating profile and to trends from similar operations. Data for missing operations were estimated based on similar operations or historical data. State offices prepare these estimates by using a combination of survey indications and historic trends. Prices for each color class are derived by weighting the quantities sold for each marketing channel. Individual State estimates are reviewed by the Agricultural Statistics Board for reasonableness.

Revision Policy: The previous year's estimates are subject to revision when current year's estimates are made. Revisions are the result of late reports or corrected data. Price revisions can be the result of additional sales reported the following year. Estimates will also be reviewed after data from the 5-year Census of Agriculture are available. No revisions will be made after that date.

Reliability: Since all operations are not included in the sample, survey estimates are subject to sampling variability. Survey results are also subject to non-sampling errors such as omissions, duplication, and mistakes in reporting, recording, and processing the data. While these errors cannot be measured directly, they are minimized through strict quality controls in the data collection process and a careful review of all reported data for consistency and reasonableness.

To assist in evaluating the reliability of the estimates in this report, the "Root Mean Square Error" is shown for selected items in the following table. The "Root Mean Square Error" is a statistical measure based on past performance and is computed using the differences between first and final estimates. The "Root Mean Square Error" for honey producing colonies over the past 10 years is 1.3 percent. This means that chances are 2 out of 3 that the final estimate will not be above or below the current estimate of 2.67 million colonies by more than 1.3 percent. Chances are 9 out of 10 that the difference will not exceed 2.4 percent.

Reliability of Honey Estimates

[Based on data for the past 10 years]

Item	Root mean square error	90 percent confidence level	Difference between first and latest estimate				
			Average	Smallest	Largest	Years	
						Below latest	Above latest
	(percent)	(percent)	(1,000)	(1,000)	(1,000)	(number)	(number)
Honey producing colonies	1.3	2.4	17	-	85	4	1
Honey production	1.3	2.4	1,073	-	4,796	3	2

- Represents zero.

Information Contacts

Listed below are the commodity specialists in the Livestock Branch of the National Agricultural Statistics Service to contact for additional information. E-mail inquiries may be sent to nass@nass.usda.gov

Travis Averill, Chief, Livestock Branch ..... (202) 720-3570

Bruce Boess, Head, Poultry and Specialty Commodities Section ..... (202) 720-4447
- Holly Brenize – Egg Products, Mink..... (202) 720-0585
- Aaron Cosgrove – Catfish Production, Poultry Slaughter, Trout Production, Turkey Hatchery, Turkeys Raised ..... (202) 690-3237
- Alissa Cowell-Mytar – Cold Storage, Capacity of Refrigerated Warehouses ..... (202) 720-4751
- Mike Guo – Cost of Pollination, Honey, Honey Bee Colonies ..... (202) 720-6147
- Fatema Haque – Broiler Hatchery, Chicken Hatchery ..... (202) 720-3244
- Kim Linonis – Layers, Eggs ..... (202) 690-3676
- Miste Salmon – Census of Agriculture, Census of Aquaculture ..... (202) 690-8632

Access to NASS Reports

For your convenience, you may access NASS reports and products the following ways:

- All reports are available electronically, at no cost, on the NASS web site: www.nass.usda.gov
- Both national and state specific reports are available via a free e-mail subscription. To set-up this free subscription, visit www.nass.usda.gov and click on "National" or "State" in upper right corner above "search" box to create an account and select the reports you would like to receive.

For more information on NASS surveys and reports, call the NASS Agricultural Statistics Hotline at (800) 727-9540, 7:30 a.m. to 4:00 p.m. ET, or e-mail: nass@nass.usda.gov.

USDA NASS Data Users' Meeting

Tuesday, April 24, 2018

University of Chicago – Gleacher Center
450 North Cityfront Plaza Drive
Chicago, Illinois 60611
312-464-8787

USDA's National Agricultural Statistics Service will hold an open forum for users of U.S. domestic and international agriculture data. NASS is organizing the 2018 Data Users' Meeting in cooperation with five other USDA agencies – Agricultural Marketing Service, Economic Research Service, Farm Service Agency, Foreign Agricultural Service, and World Agricultural Outlook Board – and the Census Bureau's Foreign Trade Division. Agency representatives will provide updates on recent and pending changes in statistical and information programs important to agriculture, answer questions, and welcome comments and input from data users.

For registration details or additional information about the Data Users' Meeting, see the meeting page on the NASS website (https://www.nass.usda.gov/Education_and_Outreach/Meeting/index.php). Contact Tina Hall (NASS) at 202-720-3896 or tina.hall@nass.usda.gov or Patricia Snipe (NASS) at 202-720-2248 or patricia.snipe@nass.usda.gov for information.

The Data Users' Meeting precedes the Industry Outlook Conference at the same location on Wednesday, April 25, 2018. The outlook meeting brings together analysts from various commodity sectors to discuss developments and trends. For registration details or additional information about the Industry Outlook Conference, see the conference page on the LMIC website (http://lmic.info/page/meetings) or contact James Robb at 303-716-9933.