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Special Note

Data for Operations with Less than Five Colonies has been suspended. Before deciding to suspend this data, we reviewed our estimating programs against mission- and user-based criteria as well as the amount of time remaining in the fiscal year to meet our budget and program requirements while maintaining the strongest data in service to U.S. agriculture. Information about all NASS surveys and reports is available online at www.nass.usda.gov.

United States Honey Production Up 2 Percent for Operations with Five or More Colonies in 2018

United States honey production in 2018 from producers with five or more colonies totaled 152 million pounds, up 2 percent from 2017. There were 2.80 million colonies producing honey in 2018, up 4 percent from 2017. Yield per colony averaged 54.4 pounds, down 2 percent from the 55.5 pounds in 2017. 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 29.1 million pounds on December 15, 2018, down 5 percent from a year earlier. Stocks held by producers exclude those held under the commodity loan program.

Honey Prices Down 2 Percent for Operations with Five or More Colonies in 2018

United States honey prices decreased 2 percent during 2018 to 216.6 cents per pound, compared to 219.9 cents per pound in 2017. 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 2017 crop reflect honey sold in 2017 and 2018. Some 2017 crop honey was sold in 2018, which caused some revisions to the 2017 crop prices.

Price Paid per Queen was 18 Dollars for Operations with Five or More Colonies in 2018

For operations with five or more colonies, the average prices paid in 2018 for honey bee queens, packages, and nucs were \$18, \$86, and \$110 respectively. For operations with five or more colonies, pollination income for 2018 was \$302 million, up 8 percent from 2017. Other income from honey bees for operations with five or more colonies in 2018 was \$94.6 million, up 17 percent from 2017. 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: 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 | 288 | 907 |
| Arizona | 22 | 40 | 880 | 97 | 199 | 1,751 |
| Arkansas | 29 | 68 | 1,972 | 197 | 197 | 3,885 |
| California | 335 | 41 | 13,735 | 2,198 | 216 | 29,668 |
| Colorado | 33 | 43 | 1,419 | 284 | 209 | 2,966 |
| Florida | 205 | 43 | 8,815 | 529 | 237 | 20,892 |
| Georgia | 99 | 32 | 3,168 | 190 | 300 | 9,504 |
| Hawaii | 19 | 131 | 2,489 | 25 | 153 | 3,808 |
| Idaho | 95 | 44 | 4,180 | 1,045 | 179 | 7,482 |
| Illinois | 11 | 46 | 506 | 167 | 509 | 2,576 |
| Indiana | 8 | 52 | 416 | 158 | 361 | 1,502 |
| Iowa | 35 | 58 | 2,030 | 1,035 | 226 | 4,588 |
| Kansas | 7 | 79 | 553 | 260 | 403 | 2,229 |
| Kentucky | 5 | 38 | 190 | 42 | 413 | 785 |
| Louisiana | 43 | 81 | 3,483 | 279 | 193 | 6,722 |
| Maine | 12 | 33 | 396 | 51 | 500 | 1,980 |
| Michigan | 87 | 45 | 3,915 | 822 | 242 | 9,474 |
| Minnesota | 126 | 62 | 7,812 | 1,016 | 193 | 15,077 |
| Mississippi | 18 | 86 | 1,548 | 124 | 182 | 2,817 |
| Missouri | 8 | 65 | 520 | 57 | 370 | 1,924 |
| Montana | 145 | 72 | 10,440 | 2,506 | 221 | 23,072 |
| Nebraska | 42 | 63 | 2,646 | 423 | 191 | 5,054 |
| New Jersey | 13 | 28 | 364 | 167 | 874 | 3,181 |
| New York | 57 | 56 | 3,192 | 766 | 303 | 9,672 |
| North Carolina | 11 | 41 | 451 | 99 | 458 | 2,066 |
| North Dakota | 455 | 74 | 33,670 | 4,377 | 191 | 64,310 |
| Ohio | 15 | 73 | 1,095 | 657 | 324 | 3,548 |
| Oregon | 78 | 40 | 3,120 | 998 | 210 | 6,552 |
| Pennsylvania | 16 | 46 | 736 | 177 | 351 | 2,583 |
| South Carolina | 16 | 34 | 544 | 27 | 270 | 1,469 |
| South Dakota | 255 | 57 | 14,535 | 6,541 | 207 | 30,087 |
| Tennessee | 7 | 41 | 287 | 75 | 457 | 1,312 |
| Texas | 120 | 66 | 7,920 | 2,297 | 217 | 17,186 |
| Utah | 27 | 31 | 837 | 67 | 208 | 1,741 |
| Vermont | 7 | 54 | 378 | 144 | 402 | 1,520 |
| Virginia | 6 | 35 | 210 | 46 | 577 | 1,212 |
| Washington | 77 | 45 | 3,465 | 1,594 | 244 | 8,455 |
| West Virginia | 6 | 40 | 240 | 50 | 393 | 943 |
| Wisconsin | 53 | 56 | 2,968 | 683 | 282 | 8,370 |
| Wyoming | 39 | 53 | 2,067 | 186 | 161 | 3,328 |
| Other States ^{5 6} | 34 | 43 | 1,473 | 184 | 443 | 7,968 |
| United States ^{6 7} | 2,683 | 55.5 | 148,980 | 30,662 | 219.9 | 334,166 |

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: 2018

[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 | 6 | 45 | 270 | 14 | 357 | 964 |
| Arizona | 24 | 38 | 912 | 109 | 282 | 2,572 |
| Arkansas | 28 | 50 | 1,400 | 84 | 187 | 2,618 |
| California | 335 | 41 | 13,735 | 3,022 | 206 | 28,294 |
| Colorado | 31 | 48 | 1,488 | 283 | 202 | 3,006 |
| Florida | 215 | 49 | 10,535 | 737 | 240 | 25,284 |
| Georgia | 98 | 34 | 3,332 | 200 | 279 | 9,296 |
| Hawaii | 17 | 103 | 1,751 | 18 | 183 | 3,204 |
| Idaho | 96 | 31 | 2,976 | 655 | 196 | 5,833 |
| Illinois | 11 | 41 | 451 | 108 | 501 | 2,260 |
| Indiana | 7 | 46 | 322 | 106 | 375 | 1,208 |
| Iowa | 38 | 49 | 1,862 | 1,005 | 235 | 4,376 |
| Kansas | 5 | 73 | 365 | 95 | 300 | 1,095 |
| Kentucky | 4 | 41 | 164 | 34 | 542 | 889 |
| Louisiana | 45 | 83 | 3,735 | 261 | 190 | 7,097 |
| Maine | 12 | 32 | 384 | 92 | 268 | 1,029 |
| Michigan | 92 | 44 | 4,048 | 729 | 237 | 9,594 |
| Minnesota | 119 | 61 | 7,259 | 1,161 | 188 | 13,647 |
| Mississippi | 20 | 87 | 1,740 | 70 | 205 | 3,567 |
| Missouri | 9 | 45 | 405 | 36 | 258 | 1,045 |
| Montana | 160 | 92 | 14,720 | 3,680 | 192 | 28,262 |
| Nebraska | 40 | 59 | 2,360 | 850 | 199 | 4,696 |
| New Jersey | 13 | 31 | 403 | 165 | 735 | 2,962 |
| New York | 56 | 48 | 2,688 | 833 | 334 | 8,978 |
| North Carolina | 10 | 33 | 330 | 63 | 555 | 1,832 |
| North Dakota | 530 | 72 | 38,160 | 4,579 | 188 | 71,741 |
| Ohio | 14 | 73 | 1,022 | 491 | 361 | 3,689 |
| Oregon | 93 | 35 | 3,255 | 1,009 | 222 | 7,226 |
| Pennsylvania | 19 | 44 | 836 | 309 | 373 | 3,118 |
| South Carolina | 16 | 48 | 768 | 15 | 304 | 2,335 |
| South Dakota | 255 | 47 | 11,985 | 5,154 | 198 | 23,730 |
| Tennessee | 7 | 46 | 322 | 84 | 399 | 1,285 |
| Texas | 132 | 56 | 7,392 | 1,035 | 206 | 15,228 |
| Utah | 26 | 41 | 1,066 | 75 | 209 | 2,228 |
| Vermont | 7 | 48 | 336 | 94 | 366 | 1,230 |
| Virginia | 4 | 40 | 160 | 35 | 683 | 1,093 |
| Washington | 77 | 43 | 3,311 | 563 | 211 | 6,986 |
| West Virginia | 6 | 37 | 222 | 38 | 416 | 924 |
| Wisconsin | 51 | 45 | 2,295 | 711 | 276 | 6,334 |
| Wyoming | 39 | 56 | 2,184 | 175 | 189 | 4,128 |
| Other States ^{5 6} | 36 | 39 | 1,399 | 314 | 593 | 8,599 |
| United States ^{6 7} | 2,803 | 54.4 | 152,348 | 29,091 | 216.6 | 333,482 |

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.

Honey Price by Color Class – United States: 2017 and 2018

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

| Color class | Price | | | | | |
|---|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | Co-op and private | | Retail | | All | |
| | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 |
| | (cents per pound) | (cents per pound) | (cents per pound) | (cents per pound) | (cents per pound) | (cents per pound) |
| Water white, extra white, white | 204.7 | 197.3 | 314.3 | 379.8 | 206.3 | 200.4 |
| Extra light amber | 206.0 | 200.1 | 487.3 | 425.2 | 217.3 | 209.2 |
| Light amber, amber, dark amber | 202.8 | 205.7 | 497.0 | 473.3 | 241.1 | 240.1 |
| All other honey, area specialties | 287.2 | 259.6 | 627.9 | 690.0 | 383.4 | 347.9 |
| All honey | 205.1 | 201.1 | 445.0 | 421.0 | 219.9 | 216.6 |

Queen, Package, and Nuc Prices Paid – United States: 2017 and 2018

[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 | |
|------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 2017 | 2018 | 2017 | 2018 | 2017 | 2018 |
| | (dollars per) | (dollars per) | (dollars per) | (dollars per) | (dollars per) | (dollars per) |
| Operations with | | | | | | |
| 5 or more colonies | 14 | 18 | 76 | 86 | 107 | 110 |

Pollination and Other Income – United States: 2016, 2017 and 2018

[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 | 2018 | 2016 | 2017 | 2018 |
| | (1,000 dollars) | (1,000 dollars) | (1,000 dollars) | (1,000 dollars) | (1,000 dollars) | (1,000 dollars) |
| 5 or more colonies | 252,108 | 280,779 | 301,853 | 83,767 | 80,566 | 94,643 |

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

Expenditures for Honey Bee Operations – United States: 2017 and 2018

[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 | |
|--|--------------------|-----------------|
| | 2017 | 2018 |
| | (1,000 dollars) | (1,000 dollars) |
| Varroa control and treatment | 17,240 | 17,788 |
| Other colony issues ¹ | 5,919 | 4,825 |
| Feed ² | 53,075 | 65,220 |
| Foundation | 9,775 | 9,534 |
| Hives/woodenware | 9,989 | 13,646 |

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: 2017 and 2018

[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 | |
|--------------------------|----------------|-----------|
| | 2017 | 2018 |
| | (workers) | (workers) |
| 5 or more colonies | 22,000 | 23,000 |

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 1 out of 3 that the final estimate will not be above or below the current estimate of 2.80 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 | 3 | 1 |
| Honey production | 1.3 | 2.4 | 1,059 | - | 4,796 | 3 | 1 |

- 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 |
| Tony Dorn, Head, Poultry and Specialty Commodities Section | (202) 690-3223 |
| Holly Brenize – Poultry Slaughter..... | (202) 720-0585 |
| Alissa Cowell-Mytar – Cold Storage, Capacity of Refrigerated Warehouses | (202) 720-4751 |
| Liana Cuffman – Catfish and Trout, Egg Products, Mink, Census of Aquaculture | (202) 720-8784 |
| Adam Peters – Broiler Hatchery, Chicken Hatchery | (202) 690-3237 |
| Kim Linonis – Layers, Eggs | (202) 690-3676 |
| Fatema Haque – Turkey Hatchery, Turkeys Raised | (202) 720-3244 |
| Vacant – Cost of Pollination, Honey, Honey Bee Colonies | (202) 720-6147 |

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- Cornell’s Mann Library has launched a new website housing NASS’s and other agency’s archived reports. The new website, <https://usda.library.cornell.edu>. All email subscriptions containing reports will be sent from the new website, <https://usda.library.cornell.edu>. To continue receiving the reports via e-mail, you will have to go to the new website, create a new account and re-subscribe to the reports. If you need instructions to set up an account or subscribe, they are located at: <https://usda.library.cornell.edu/help>. You should whitelist notifications@usda-esmis.library.cornell.edu in your email client to avoid the emails going into spam/junk folders.

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.

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