# Honey

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## United States Honey Production Up 11 Percent in 2023

United States honey production in 2023 totaled 139 million pounds, up 11 percent from 2022. There were 2.51 million colonies producing honey in 2023, down 6 percent from 2022. Yield per colony averaged 55.2 pounds, up 17 percent from 2022. 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 44.0 million pounds on December 15, 2023, up 90 percent from a year earlier. Stocks held by producers exclude those held under the commodity loan program.

## Honey Prices Down 16 Percent in 2023

United States honey prices decreased 16 percent during 2023 to $2.52 per pound, compared to $3.01 per pound in 2022. 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 2022 crop reflect honey sold in 2022 and 2023. Some 2022 crop honey was sold in 2023, which caused some revisions to the 2022 crop prices.

## Price Paid per Queen was 19 Dollars in 2023

The average prices paid in 2023 for honey bee queens, packages, and nucs were $19, $91, and $120, respectively. Pollination income for 2023 was $255 million, up 6 percent from 2022. Other income from honey bees in 2023 was $57.7 million, up 5 percent from 2022. These estimates, along with expenditure and apiary worker information, can be found on page 4 of this report.

## Colonies, Yield, Production, Stocks, Price, and Value – States and United States: 2022

[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) | (dollars) | (1,000 dollars) |
| Alabama | 10 | 40 | 400 | 84 | 4.80 | 1,920 |
| Arizona | 23 | 45 | 1,035 | 476 | 2.70 | 2,795 |
| Arkansas | 20 | 56 | 1,120 | 426 | 2.70 | 3,024 |
| California | 305 | 38 | 11,590 | 811 | 2.69 | 31,177 |
| Colorado | 31 | 42 | 1,302 | 339 | 3.35 | 4,362 |
| Florida | 210 | 35 | 7,350 | 368 | 3.27 | 24,035 |
| Georgia | 103 | 32 | 3,296 | 99 | 3.08 | 10,152 |
| Idaho | 94 | 29 | 2,726 | 627 | 2.73 | 7,442 |
| Illinois | 10 | 47 | 470 | 141 | 6.27 | 2,947 |
| Indiana | 9 | 63 | 567 | 261 | 4.74 | 2,688 |
| Iowa | 48 | 51 | 2,448 | 710 | 3.06 | 7,491 |
| Kansas | 6 | 62 | 372 | 167 | 4.34 | 1,614 |
| Kentucky | 7 | 36 | 252 | 68 | 6.12 | 1,542 |
| Louisiana | 42 | 61 | 2,562 | 359 | 2.96 | 7,584 |
| Maine | 10 | 23 | 230 | 64 | 6.40 | 1,472 |
| Michigan | 82 | 41 | 3,362 | 706 | 3.04 | 10,220 |
| Minnesota | 102 | 51 | 5,202 | 728 | 2.79 | 14,514 |
| Mississippi | 21 | 95 | 1,995 | 60 | 3.20 | 6,384 |
| Missouri | 8 | 41 | 328 | 151 | 5.23 | 1,715 |
| Montana | 123 | 61 | 7,503 | 2,176 | 2.64 | 19,808 |
| Nebraska | 34 | 44 | 1,496 | 598 | 2.89 | 4,323 |
| New Jersey | 16 | 39 | 624 | 62 | 4.26 | 2,658 |
| New York | 54 | 53 | 2,862 | 916 | 3.82 | 10,933 |
| North Carolina | 13 | 39 | 507 | 198 | 6.93 | 3,514 |
| North Dakota | 520 | 60 | 31,200 | 4,680 | 2.60 | 81,120 |
| Ohio | 19 | 66 | 1,254 | 464 | 3.52 | 4,414 |
| Oregon | 92 | 37 | 3,404 | 1,191 | 3.27 | 11,131 |
| Pennsylvania | 23 | 46 | 1,058 | 487 | 5.59 | 5,914 |
| South Carolina | 13 | 39 | 507 | 91 | 5.00 | 2,535 |
| South Dakota | 185 | 39 | 7,215 | 2,814 | 2.57 | 18,543 |
| Tennessee | 9 | 47 | 423 | 102 | 5.65 | 2,390 |
| Texas | 157 | 53 | 8,321 | 166 | 3.27 | 27,210 |
| Utah | 26 | 46 | 1,196 | 120 | 3.00 | 3,588 |
| Vermont | 6 | 47 | 282 | 121 | 6.75 | 1,904 |
| Virginia | 7 | 38 | 266 | 45 | 7.94 | 2,112 |
| Washington | 86 | 32 | 2,752 | 660 | 3.18 | 8,751 |
| West Virginia | 7 | 39 | 273 | 98 | 5.91 | 1,613 |
| Wisconsin | 53 | 55 | 2,915 | 816 | 3.22 | 9,386 |
| Wyoming | 30 | 45 | 1,350 | 230 | 2.65 | 3,578 |
| Other States [5] [6] | 53 | 63 | 3,316 | 501 | 4.03 | 13,363 |
| United States [6] [7] | 2,667 | 47.0 | 125,331 | 23,181 | 3.01 | 377,246 |

[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] Includes data for States not published in this table.
[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.

## Colonies, Yield, Production, Stocks, Price, and Value – States and United States: 2023

[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) | (dollars) | (1,000 dollars) |
| Alabama | 10 | 40 | 400 | 120 | 5.45 | 2,180 |
| Arizona | 34 | 42 | 1,428 | 600 | 2.23 | 3,184 |
| Arkansas | 19 | 46 | 874 | 131 | 3.20 | 2,797 |
| California | 324 | 42 | 13,608 | 5,035 | 2.27 | 30,890 |
| Colorado | 25 | 41 | 1,025 | 195 | 3.69 | 3,782 |
| Florida | 147 | 32 | 4,704 | 706 | 2.95 | 13,877 |
| Georgia | 77 | 33 | 2,541 | 152 | 3.43 | 8,716 |
| Idaho | 92 | 32 | 2,944 | 442 | 1.63 | 4,799 |
| Illinois | 9 | 49 | 441 | 146 | 7.05 | 3,109 |
| Indiana | 9 | 53 | 477 | 329 | 4.34 | 2,070 |
| Iowa | 40 | 66 | 2,640 | 739 | 2.99 | 7,894 |
| Kansas | 5 | 52 | 260 | 86 | 5.41 | 1,407 |
| Kentucky | 10 | 30 | 300 | 84 | 6.21 | 1,863 |
| Louisiana | 32 | 45 | 1,440 | 101 | 3.90 | 5,616 |
| Maine | 12 | 18 | 216 | 41 | 4.46 | 963 |
| Michigan | 70 | 55 | 3,850 | 924 | 2.84 | 10,934 |
| Minnesota | 106 | 58 | 6,148 | 861 | 1.99 | 12,235 |
| Mississippi | 19 | 42 | 798 | 367 | 3.02 | 2,410 |
| Missouri | 9 | 43 | 387 | 101 | 4.81 | 1,861 |
| Montana | 114 | 85 | 9,690 | 3,392 | 2.00 | 19,380 |
| Nebraska | 33 | 48 | 1,584 | 554 | 2.26 | 3,580 |
| New Jersey | 15 | 36 | 540 | 54 | 7.16 | 3,866 |
| New York | 41 | 58 | 2,378 | 761 | 4.59 | 10,915 |
| North Carolina | 11 | 44 | 484 | 179 | 6.02 | 2,914 |
| North Dakota | 511 | 75 | 38,325 | 9,198 | 1.77 | 67,835 |
| Ohio | 20 | 65 | 1,300 | 546 | 5.23 | 6,799 |
| Oregon | 90 | 37 | 3,330 | 1,099 | 2.71 | 9,024 |
| Pennsylvania | 20 | 55 | 1,100 | 638 | 4.96 | 5,456 |
| South Carolina | 11 | 52 | 572 | 114 | 4.53 | 2,591 |
| South Dakota | 212 | 87 | 18,444 | 12,542 | 2.02 | 37,257 |
| Tennessee | 12 | 40 | 480 | 77 | 6.00 | 2,880 |
| Texas | 111 | 35 | 3,885 | 505 | 3.01 | 11,694 |
| Utah | 24 | 42 | 1,008 | 202 | 1.92 | 1,935 |
| Vermont | 6 | 49 | 294 | 76 | 5.09 | 1,496 |
| Virginia | 5 | 39 | 195 | 82 | 8.58 | 1,673 |
| Washington | 83 | 27 | 2,241 | 740 | 2.71 | 6,073 |
| West Virginia | 6 | 51 | 306 | 177 | 6.35 | 1,943 |
| Wisconsin | 62 | 45 | 2,790 | 1,004 | 3.02 | 8,426 |
| Wyoming | 27 | 78 | 2,106 | 400 | 1.64 | 3,454 |
| Other States [5] [6] | 46 | 66 | 3,038 | 516 | 4.68 | 14,218 |
| United States [6] [7] | 2,509 | 55.2 | 138,571 | 44,016 | 2.52 | 349,199 |

[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.
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[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: 2022 and 2023

| Color class | Co-op and private | | Retail | | All | |
|---|---|---|---|---|---|---|
| | 2022 | 2023 | 2022 | 2023 | 2022 | 2023 |
| | (dollars per pound) | (dollars per pound) | (dollars per pound) | (dollars per pound) | (dollars per pound) | (dollars per pound) |
| Water white, extra white, white | 2.70 | 1.99 | 5.57 | 5.87 | 2.81 | 2.09 |
| Extra light amber | 2.66 | 2.17 | 5.62 | 5.78 | 2.78 | 2.33 |
| Light amber, amber, dark amber | 2.87 | 2.63 | 6.09 | 6.78 | 3.23 | 3.20 |
| All other honey, area specialties | 3.41 | 3.08 | 7.91 | 8.51 | 4.16 | 4.30 |
| All honey | 2.77 | 2.23 | 6.02 | 6.55 | 3.01 | 2.52 |

## Income and Expenditures – United States: 2022 and 2023

[Represents income and expenditures on the total number of colonies, regardless of whether honey was harvested]

| Item | 2022 | 2023 |
|---|---|---|
| | (1,000 dollars) | (1,000 dollars) |
| **Income** | | |
| Pollination income | 241,042 | 254,945 |
| Other income [1] | 55,188 | 57,720 |
| **Expenditures** | | |
| Varroa control and treatment | 13,724 | 15,112 |
| Other colony issues [2] | 5,096 | 4,967 |
| Feed [3] | 44,517 | 46,868 |
| Foundation | 6,934 | 5,753 |
| Hives/woodenware | 10,835 | 10,496 |

[1] Includes sales of queens, queen cells, beeswax, propolis, etc.
[2] Includes Nosema, tracheal mites, foulbrood, paralysis, Kashmir, cloudy wing, etc.
[3] Includes syrup, sugar water, honey, pollen patties, and other feeds.

## Queen, Package, and Nuc Prices Paid – United States: 2022 and 2023

[Represents prices paid on the total number of colonies, regardless of whether honey was harvested]

| Item | 2022 | 2023 |
|---|---|---|
| | (dollars) | (dollars) |
| Queen | 22 | 19 |
| Package | 98 | 91 |
| Nuc | 129 | 120 |

## Apiary Workers – United States: 2022 and 2023

[Represents number of paid and unpaid workers that worked with colonies, regardless of whether honey was harvested]

| Item | 2022 | 2023 |
|---|---|---|
| | (workers) | (workers) |
| Apiary workers | 25,000 | 25,000 |

## Statistical Methodology

**Survey Procedures:** Data for honey producing operations are collected from a stratified sample of all known operations with at least 5 honey bee colonies 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 0.3 percent. This means that chances are 1 out of 3 that the final estimate will not be above or below the current estimate of 2.51 million colonies by more than 0.3 percent. Chances are 9 out of 10 that the difference will not exceed 0.6 percent.

## Reliability of Honey Estimates

[Based on data for the previous ten 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 ..... | 0.3 | 0.6 | 5 | - | 25 | 7 | - |
| Honey production ..... | 0.5 | 0.8 | 394 | - | 1,660 | 7 | - |

- 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@usda.gov

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- Holly Brenize – Poultry Slaughter..... (202) 720-0585
- Liana Cuffman – Catfish and Trout, Mink, Census of Aquaculture ..... (202) 720-8784
- Fatema Haque – Turkey Hatchery, Turkeys Raised ..... (202) 720-3244
- Derron Martin – Chicken Hatchery, Egg Products ..... (202) 690-3237
- Seth Riggins – Honey, Honey Bee Colonies ..... (202) 690-4870
- Shulonda Shaw – Cold Storage, Capacity of Refrigerated Warehouses ..... (202) 720-3240
- Autumn Stone – Layers, Eggs ..... (202) 690-3676
- Takiyah Walker – Broiler Hatchery..... (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@usda.gov.


# USDA Spring Data Users' Meeting

## Join Us Online or in Chicago

**April 16, 2024**

University of Chicago – Gleacher Center
450 North Cityfront Plaza Drive
Chicago, IL 60611

USDA's National Agricultural Statistics Service (NASS) will hold an open forum for users of U.S. domestic and international agriculture data. NASS is organizing the 2024 Spring 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/go/data_users).