

NASS Survey Training

Bee and Honey Inquiry - December 2023 (BEE AND HONEY PDI)



**United States Department of Agriculture
National Agricultural Statistics Service**



WPSD
December 2023



Survey Overview

- *Apiculture*: The raising and care of bees.
- The Bee and Honey Inquiry is conducted:
 - To compare conditions from year to year:
 - # of colonies, production, honey inventory (by state)
 - Sales and revenues
 - To help promote industry programs.
 - To provide information on the viability of beekeepers and agricultural pollination services.

Survey Information

- Project Code: **196 - Bee and Honey Survey**
- Target population:
 - All known U.S. producers with 5 or more colonies
- Questionnaires:
 - Mailed December 21st
 - Web reporting option available
- Release:
 - *Honey* Report
 - March 15, 2024

Screening Questions

- Own or control any apiaries in 2023?
 - “Yes”: Continues to Colonies & Honey Stocks
- “NO”: Have any honey stocks for sale in 2023?
 - “Yes”: Continues to Colonies & Honey Stocks
- “NO”: Sell any honey during 2023?
 - “Yes”: Continues to Honey Sales
- “NO”: Receive income from pollination services?
 - “Yes”: Report \$ received
- “NO”: Any other income from bees in 2023?
 - “Yes”: Report income received
 - “No”: Other Bee activity/status of operation? (Leave good notes)

General Information: Multiple States

- Many operators have multiple states in which they harvest (“pull-off”) honey.
- For example:
 - A beekeeper is based in North Dakota.
 - The operator trucks the same hives across states to use as pollinators for multiple crops.
 - Starts in California (for almond pollination) for a few weeks, then moves hives to other states for several weeks at a time.

Colonies & Honey Stocks

- Colonies and honey stocks for each state
- Begins with the state the operation is located in
 - **Largest number of colonies** in that state?
 - From **how many colonies** was **honey harvested**?
 - **How many pounds** were harvested from those colonies?
 - **Pounds of honey stocks** this operation had for sale in *[state]* on December 15?
 - Exclude honey under government or CCC loans.

Colonies & Honey Stocks

- Then report for any *additional* states in which there were colonies or stocks of honey.
 - Repeats for each state where operation has colonies or stocks
 - Can report the same colonies in more than one state
 - Especially if they traveled as pollinators
- Total pounds of honey harvested in all states in 2023?
 - Sum of production from all states

Honey Sales

- Any honey sold during 2023?
 - Including honey produced in 2023 **and** 2022
 - Exclude honey purchased from other operations and resold
- If “Yes”:
 - What Honey Color Class sold?
 - Amount sold and dollars received:
 - For each color class of honey
 - For honey produced in 2023 **and** 2022, reported separately
 - Reported for each marketing channel:
 - Cooperatives
 - Private processors
 - Wholesale
 - Retail

General Information: Honey Classes

- Honey is classified into colors based upon how much light passes through a sample.
- Four Classes:
 - Water white, extra white, white
 - Extra light amber
 - Light amber, amber, dark amber
 - Area specialties such as Sourwood, Tupelo, Buckwheat, etc.
 - Also anything not included in any other class

Survey Questions

- Notes/ Comments
 - Space is provided for operator to include comments on bee/honey production in their area.
- Receive any income from contracting colonies as pollinators?
 - Report total received to nearest whole \$
- Any other income from honey bees?
 - Includes: sales of queens, beeswax, propolis, royal jelly, etc
 - Report total received to nearest whole \$

Survey Questions Cont'd.

- During 2023 how many self-created queens used for requeening or creating new colonies?
 - Exclude queens raised for sale
- In 2023, number purchased and amount spent on:
 - Purchased queens/queen cells
 - Purchased packages
 - Purchased nucs

Expenses

- In 2023, what were the total expenditures on the operation for:
 - Varroa control/treatment
 - Prevent/treat other colony health issues
 - Include: Nosema, tracheal mites, foulbrood, paralysis, Kashmir, cloudy wing, etc.
 - Feed
 - Include: Syrup, sugar water, pollen patties, etc.
 - New foundation for combs
 - Exclude if comb purchased with nucs
 - New hives/woodenware
 - Langstroth, Top bar, other

Survey Questions, Cont'd.

- During 2023, did this operation pay to winter colonies in a warehouse or on land?
 - If yes, report total wintering fees to nearest whole \$ amount
- Peak number of people working with operation's bee colonies in 2023?
 - Include “yourself”
 - Exclude employees that did not work with colonies, i.e. office staff, etc.

Things to watch out for:

- High/low production per colony
 - 2022 state averages ranged from 30-93 pounds per colony
- Unusually high/low price per pound
 - 2022 state averages ranged from \$2.09-\$8.17 per pound
- Total sales of 2023 honey exceeds total production of 2023 honey

In conclusion:

- NASS is the only comprehensive source of this vital bee, honey, and pollinator information
 - Colonies, honey production and stocks
 - Important that we have the information correctly recorded for each state
 - And honey sales
- Work through some practices on your iPad
- Leave good notes
- Contact your supervisor/local office for any questions specific to your area

Bee and Honey Extra Info

- Honey production 125 million pounds in 2022
- 2.67 million colonies producing honey
- Average of 47.0 pounds of honey per colony
- Average prices:
 - Honey: \$2.96/lb
 - Queens: \$22.00
 - Packages: \$98.00
 - Nucs: \$129.00
- North Dakota #1 producer
 - Followed by SD, CA, FL, TX
 - These five states produce almost half of US honey

- **Apiary:** A place where bees are kept; a collection of hives of colonies kept for their honey
 - May also be referred to as a “bee yard”
- **Colony:** A group of worker bees, drones, queen, and developing brood living together in a hive
 - **Brood:** Immature/developing bees: egg, larvae or pupae
- **Super:** A box with frames in which bees store honey
 - **Frame:** Rectangular structure designed to hold honey comb, usually spaced a bee-space apart in the super
- **Queen:** A female bee with a fully developed reproductive system that is responsible for all the egg laying of a colony
 - **Re-Queening:** Replacing an existing queen by removing her and introducing a new queen
- **Drone:** male bees which are the product of an unfertilized egg, primary role is to mate with a queen
 - Drones do not have stingers or participate in nectar and pollen gathering
- **Worker Bee:** is any female that lacks the full reproductive capacity of the queen bee
 - Collect nectar and pollen for hive honey and food source

- **Nuc** (short for nucleus): A small hive of bees which consists of fewer frames than a typical hive and used primarily for starting new colonies or rearing or storing queens
- **Package:** A quantity of adult bees (2 to 5 pounds), with or without a queen, contained in a screened shipping cage with a food source
- **Varroa Mites:** A very common, external parasitic mite that attacks honey bees
 - The disease caused by the mites is called varroosis
- **Comb:** A mass of hexagonal wax cells built by honeybees in their nests to contain their larvae and stores of honey and pollen.
- **Hive:** An enclosed structure in which honeybees live and raise their young.
- **Winter Colonies:** A process to pass through or wait out the winter season. Activity almost completely ceases until conditions become more favorable.
- **Beeswax:** A natural wax produced by honey bees, used to form cells for honey-storage and larval and pupal protection within the beehive.
- **Propolis:** Also known as bee glue, is a resinous mixture that honey bees produce by mixing saliva and beeswax with exudate gathered from tree buds, sap flows, or other botanical sources. It is used as sealant for unwanted open spaces in the hive.
- **Royal Jelly:** Is a honey bee secretion that is used in the nutrition of larvae, as well as adult queens. It is secreted from the glands in the hypopharynx of worker bees, and fed to all larvae in the colony, regardless of sex or caste.