

NASS Survey Training

Quarterly Colony Loss – 2021

(BEE COLONY LOSS Quarterly)



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



NOD-Training Group
December 2020



Survey Overview

- Bee diseases and death loss have become a significant issue over the last few years
 - Some of the loss is due to unknown causes
- NASS doesn't measure losses and diseases on our Annual Bee & Honey survey
- You will be collecting important information on the extent and causes of loss and disease



Survey Information

- Project Code: **115**-Quarterly Colony Loss Survey
 - Jan. 1, Apr. 1, Jul. 1, and Oct. 1 Reference Dates
- Questionnaires:
 - Mailed out about a week before reference date
 - EDR option also available
- Release:
 - *Honey Bee Colonies, August, 2021*



Did You Know?

- Bee pollination is responsible for more than \$15 billion in increased crop value yearly
- Honey bees pollinate crops that make up about one-third of our entire diet
- Two million flowers are visited to produce one pound of honey
- A hive of bees must fly 55,000 miles to produce one pound of honey
- An average worker bee makes only about 1/12 of a teaspoon of honey in its lifetime



Select Highlights from 2020 Honey Bee Colonies Report



Honey Bee Colonies

ISSN: 2470-993X

Released August 3, 2020, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA).

January 1 Honey Bee Colonies Up 8 Percent for Operations with Five or More Colonies

Honey bee colonies for operations with five or more colonies in the United States on January 1, 2020 totaled 2.88 million colonies, up 8 percent from January 1, 2019. The number of colonies in the United States on April 1, 2020 was 2.98 million colonies. During 2019, honey bee colonies on January 1, July 1, and October 1 were 2.67 million, 3.18 million, and 3.02 million colonies, respectively.

Varroa Mites Top Colony Stressor for Operations with Five or More Colonies

Colonies Lost with Colony Collapse Disorder Symptoms Up 76 Percent for Operations with Five or More Colonies



Section 1 – Apiaries

- Own or control any apiaries?
 - If YES, how many colonies owned:
 - During the past 3 months
 - If NO, was there any change in operation



Section 2 – Colonies Owned

- On [first day of quarter/reference period], how many total colonies did this operation own, regardless of location?
- On [Last day of quarter/reference period], how many total colonies did this operation own, regardless of location?



Section 3 – Colonies by State: [During Previous Quarter]

2) Were these colonies located in the state on the first day of the quarter?

- Yes/No. (Check 'no' if colonies were moved in anytime after the 1st day of the quarter)

3) How many colonies in each state on Day 1, or when they were first moved into the state?

4) Of the colonies in Item 3, how many were completely lost/dead out during the quarter?



Section 3 – Colonies by State: [During Previous Quarter]

Report for all colonies owned by this operation during the reference period/quarter.

– (Day 1 will refer to the first day of the quarter.)

1) Report, separately, each state where colonies were located.

– (Exclude states that were passed through to reach destination)



Section 3 – Colonies by State: [During Previous Quarter]

5) Of the colonies in Item 3, how many were requeened?

- Exclude completely lost/dead out colonies from Item 4

6) Of the colonies in Item 3, how many received nucs or packages?

- Exclude completely lost/dead out colonies from Item 4

7) How many new colonies were added?

- Include: splits, newly created, and replacement colonies.
- Exclude: Colonies reported in Item 5 and Item 6



Section 3 – Colonies by State: [During Previous Quarter]

- During the quarter, did this operation sell or give away any of the colonies in column 3?
 - Exclude packages and nucs created specifically for sale
- If YES:
 - How many colonies from those reported in Item 3 were sold or given away



Section 4 – Loss

- Did any of the lost/dead out colonies experience ALL four of these symptoms:
 - Little to no build-up of dead bees
 - In the hive or at hive entrance
 - Rapid loss of adult bees
 - Despite presence of queen, capped brood, food reserves
 - Absence or delayed robbing of the food reserves
 - Loss not attributable to Varroa or Nosema
- How many lost colonies experienced all of these symptoms?



Section 6 – Colony Health

- Report, by state, the colonies affected.
- Of the total colonies owned (during the quarter) how many were affected by, but not necessarily *lost* to:
 - Varroa Mites
 - Other Pests and Parasites¹
 - Diseases²
 - Pesticides
 - Other³
 - Unknown
- Comments?



Remember:

- There are many potential “relationships” between different answers throughout the survey
 - Be mindful of the data reported across the different sections
 - We don’t want to omit **OR** double count anything
- If it seems odd, probe. Leave good notes.



Things to Watch Out For:

- Large change in quarterly number of colonies
- Large number of lost colonies
- Large portion of colonies receiving new queens and/or additional bees
- “Double reporting” of colonies lost, colonies receiving bees, new colonies added
 - Watch the specific include/excludes for the items
- Inconsistent total number of colonies and sum of colonies for all states



Things to Watch Out For:

- Sum of new colonies/new bees added not consistent with sums reported for all states
- Colonies lost exhibiting ALL four symptoms exceeds total losses reported
- Losses/hives renovated but no problems reported
- Note: Across each section, these numbers may not all *exactly* match up...BUT they should be in the ballpark
 - If I initially report 100 colonies BUT then the sum across all states is 500 colonies – that’s likely to be a problem!
 - If I report losses or that I had to replace bees, but then report 0 hives with problems – how?



Reluctant Response

- Why should I report?
 - That's a great question. Your report, along with those from other beekeepers selected, is the basis for unbiased information that tells the true state of bee colony health. Accurate information helps reduce uncertainty and provides more reliable facts on bee colony health.
- My operation is too small to make a difference.
 - I can understand how it may seem that way. All operations count, and small operations have different characteristics than large operations. Together, small operations make a major contribution to American agriculture.



Conclusion

- Very important survey, in service to the bee and honey industry and agriculture as a whole
 - NASS will be a primary source of nationally representative data on losses and disease prevalence
- Be empathetic towards struggles beekeepers may be facing
- Practice some examples on your iPad
- Questions? Contact your supervisor or Regional Field Office.

