

# NASS Survey Training

## Quarterly Colony Loss – 2022

(BEE COLONY LOSS Quarterly)



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



NOD-Training Group  
July 2022



# Survey Overview

- Bee diseases and death loss became a significant issue starting in 2008
- 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
- Release:
  - *Honey Bee Colonies*, August 1<sup>st</sup>, 2022

# 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

# Highlights from 2021 Report

- Honeybee Colonies up 2%
- Varroa Mites are the top stressor of honeybee colonies
  - Affecting up to 31-55% of all colonies, depending on quarter surveyed
- Colonies showing Colony Collapse Disorder symptoms down 27%

# 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?
  - There may be previously reported data prepopulated in CAPI and CASI – will discuss further a little later in this presentation
- 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 1<sup>st</sup> 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 5 – 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 Parasites<sup>1</sup>
  - Diseases<sup>2</sup>
  - Pesticides
  - Other<sup>3</sup>
  - 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.

# Quarterly Colony Loss and NERD

- Quarterly Colony Loss will use NERD
- What is NERD?
  - Non Edited Respondent Data
  - We use raw, unedited data from respondent/operator
  - Sources: Web, Field, Phone, Mail

# NERD

- What will you or the operator see?
  - Prefilled data from the operator during a previous survey in each applicable data box.
    - All data available will be displayed when you enter the record.
  - Data will show on the Web (CASI) and CAPI instruments, only

The screenshot shows a survey form titled "Colonies Owned" with two questions. The first question asks for the number of total colonies owned on April 1, 2022, with a pre-filled value of 200. The second question asks for the number of total colonies owned on June 30, 2022, with a pre-filled value of 0. A blue arrow points from a yellow callout box to the first question's input field.

Colonies Owned

1. On April 1, 2022, how many total colonies did this operation own, regardless of location?  
200 colonies

2. On June 30, 2022, how many total colonies did this operation own, regardless of location?  
colonies

Example of Non-Edited  
Respondent Data data in  
CAWI/CAPI



# Quarterly Colony Loss NERD

Item that may have  
Non-Edited  
Respondent Data  
For Quarterly  
Colony Loss

ITEM CODE	DESCRIPTION
2706	Colonies owned on April 1

**Only one item will potentially have NERD!  
The end of quarter colonies reported in the last  
Quarterly Colony Loss Survey will be populated  
in the Colonies owned on April 1 cell!**

# NERD

- How you will use NERD:
  - Enumerators will ask respondents questions using pre-filled NERD
    - Enumerators will first remind respondents of the previous reporting time

# Quarterly Colony Loss and NERD

- How you will use NERD:

- “At the end of last quarter, we **recorded** XX colonies, is this number correct for the beginning of this quarter?”
  - “We is NASS or NASDA”
  - » Be careful not to say “Last time you **REPORTED**”
    - The information we have recorded as their NERD may not have been reported by the specific person that is being interviewed now.
- Your goal is to use words that remind the operator what **was** reported **for their operation**. Remember when the data was reported is not included in this pilot.

## Use the "Reminder / Still Method"

*Example of the question:*

*"At the end of last quarter, we recorded XX colonies, is this number correct for the beginning of this quarter?"*

Respondent says **"YES"**:

The enumerator should accept the prefilled information as the current answer and move on to the next question.

Respondent says **"NO"**:

The enumerator should ask the standard question as it is worded in the instrument and change the prefilled answer to reflect the respondent's current answer.

# NERD

- Enumerators reporting OOB, Refusal, & Inaccessible records
  - Do not have to worry about removing NERD data from CAPI. These records will be scrubbed before being read into Blaise. Please follow your normal procedures.
- If you are entering Complete data (9901 =1) from paper you will have to change any non-valid NERD pre-filled in CAPI.

# NERD

- FYI- Producers will be notified of the presence of NERD
  - NERD Impact Statement: Presurvey Letter
  - NERD Impact Statement: CASI

# NERD

## Example of pre-survey letter

- Pre-Survey Letters will be sent from each RFO with the NERD Impact Statement.
  - NERD Impact Statement:
    - *Some answers in your online questionnaire may be pre-filled with information from previous NASS surveys of your operation.*

### What do I do next?

Complete your survey:



**Online at [agcounts.usda.gov](http://agcounts.usda.gov). Online reporting is fast, convenient, and secure.** All you need is your unique survey code on the enclosed form to **begin**. Some answers in your online questionnaire may be pre-filled with information from previous NASS surveys of your operation.



**By mail or fax.** Complete the questionnaire and mail it back in the prepaid return envelope provided or fax it to [Click to enter FAX # - text].

# NERD

- NERD Impact Statement: CASI
  - All producers and enumerators with NERD populated in CASI will view the Impact Statement below. The goal of the statement is to ensure producers review and update NERD when valid.

## Introduction

You may notice that some questions in this survey may be pre-filled with information we have from previous surveys of this operation. We hope this information helps you complete the survey.

Please click NEXT to continue.

**NERD Impact  
Statement: CASI  
example**





# 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.