



July/August 2011

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Beekeeper Survey

Dr. Brian Johnson, our newly hired bee biologist, and I are trying to determine more details about the overall health of our honey bee populations in California. In order to do that, we have generated a six-page survey form that we hope many of you

will take the time to fill out and return to Brian. I believe that this survey has made the rounds in some places, but small scale beekeepers were discouraged from submitting data. I think that any beekeeper willing to invest the time in filling in the information should do so and have his or her data entered into the data bank.

As for confidentiality, Brian and I had to complete a rather extensive training course on the federal, state, and University policies pertaining to confidentiality of personal data. We will be breaking the law if we release any data that can be determined to be from a specific source. We thought that we might use the data to try to contact beekeepers who have had, or have not had, problems with colony mortality. But, instead, beekeepers have been coming to us asking us to please examine and analyze their bees for whatever we can find.

You will find most of this newsletter devoted to the survey, because it is rather exhaustive. You just might like to fill it in for your own edification.

# UC Davis Survey Questionnaire for 2011 Honey Bee Colony Health

(All information is confidential and will not be released)

Beekeeper name \_\_\_\_\_

Name of Beekeeping Company (if applicable) \_\_\_\_\_

Beekeeper Mailing Address \_\_\_\_\_

Warehouse Address \_\_\_\_\_

Beekeeper Contacts: Attended phone \_\_\_\_\_ E-mail: \_\_\_\_\_

\_\_\_\_\_ I would be willing to participate in the bee sampling program proposed in the accompanying letter (includes an initial visit by Dr. Johnson and subsequent sampling by beekeeper).

	2008	2009	2010
Peak number of colonies			
Number of colonies rented for almond pollination			
Number of colonies that died			
Number of colonies lost to CCD			
% of income generated from pollination			
% of income generated from honey production			
% of income generated from queens, packages, and nucs			
% of income generated from other hive products			

If you pollinated other crops, besides almonds, please list the crops: \_\_\_\_\_

\_\_\_\_\_

(cont.)

What is the general trend in colony numbers for your operation over the last four years?:

- Increasing in colony numbers
- Remaining about the same
- Decreasing in colony numbers

How do you make up your colony losses?:

- Collect swarms or extract colonies from buildings, etc. How many? \_\_\_\_\_
- Purchase colonies in hives How many? \_\_\_\_\_
- Purchase nucs (nucleus colonies) How many? \_\_\_\_\_
- Purchase packages How many? \_\_\_\_\_
- Make splits or divides How many? \_\_\_\_\_

If you purchased bees, whose stocks did you purchase?:

- Bees produced by neighboring beekeeper(s). How many? \_\_\_\_\_ queens;  
\_\_\_\_\_ packages; \_\_\_\_\_ nucs; \_\_\_\_\_ full colonies in hives

Who was or were those beekeepers? \_\_\_\_\_

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- Bees produced by a commercial bee breeding operations. How many?  
\_\_\_\_\_ queens; \_\_\_\_\_ packages; \_\_\_\_\_ nucs; \_\_\_\_\_ full colonies

Which operations(s) supplied the stocks? \_\_\_\_\_

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Colony examinations

How many times a year do you examine the brood nest of your colonies?:

- Never
- Once
- Twice
- Three times
- Four times
- Five times
- Six times
- Seven times
- Eight times
- Nine times
- Ten times
- More than ten times: Please specify a number \_\_\_\_\_ (cont.)

Requeening

How many times a year do you requeen your colonies?:

- \_\_\_\_\_ Every six months
- \_\_\_\_\_ Every year
- \_\_\_\_\_ Only when making splits or divides
- \_\_\_\_\_ Only when colony is lagging

When do you make splits or divides (please check all seasons that apply):

- |               |                 |
|---------------|-----------------|
| _____ Spring. | How many? _____ |
| _____ Summer  | How many? _____ |
| _____ Fall    | How many? _____ |
| _____ Winter  | How many? _____ |

Treatments used in the last year for mitigating colony health problems:

- |                             |   |                                       |
|-----------------------------|---|---------------------------------------|
| _____ NONE                  |   |                                       |
| _____ fluvalinate           | - | _____ How many times? (number please) |
| _____ coumaphos             | - | _____ How many times?                 |
| _____ amitraz               | - | _____ How many times?                 |
| _____ Apiguard              | - | _____ How many times?                 |
| _____ Api-life VAR          | - | _____ How many times?                 |
| _____ Sucroside             | - | _____ How many times?                 |
| _____ powdered sugar        | - | _____ How many times?                 |
| _____ oxalic acid           | - | _____ How many times?                 |
| _____ formic acid           | - | _____ How many times?                 |
| _____ Terramycin            | - | _____ How many times?                 |
| _____ tylosin               | - | _____ How many times?                 |
| _____ fumagillin            | - | _____ How many times?                 |
| _____ Honey B Healthy       | - | _____ How many times?                 |
| _____ essential oil patties | - | _____ How many times?                 |
| _____ menthol               | - | _____ How many times?                 |

Supplemental feeding

- |  |   |                                  |
|--|---|----------------------------------|
| _____ Sucrose syrup                            | - | _____ How much total per colony? |
| _____ High fructose corn syrup                 | - | _____ How much total per colony? |
| _____ Sucrose/HFCS blend                       | - | _____ How much total per colony? |
| _____ Partial inverted sucrose syrup           | - | _____ How much total per colony? |
| _____ Dry baker's Drivert (or similar)         | - | _____ How much total per colony? |
| _____ Combs of honey from previous years       | - | _____ How much total per colony? |
| _____ "Melter" or other heated honey           | - | _____ How much total per colony? |
| _____ Brewers' yeast-based homemade substitute | - | _____ How much total per colony? |
| _____ Soy flour-based homemade substitute      | - | _____ How much total per colony? |

(cont.)

\_\_\_\_\_ Commercially prepared substitute (if checked, which one or ones?  
\_\_\_\_\_  
\_\_\_\_\_ )  
\_\_\_\_\_ - \_\_\_\_\_ How many pounds per colony?

\_\_\_\_\_ Commercial pollen supplement – includes some pollen (if checked, which one or ones?  
\_\_\_\_\_  
\_\_\_\_\_ )  
\_\_\_\_\_ - \_\_\_\_\_ How many pounds per colony?

\_\_\_\_\_ Home made pollen supplement – includes some pollen in the mixture  
\_\_\_\_\_ - \_\_\_\_\_ How many pounds per colony?

\_\_\_\_\_ Straight pollen feedings - \_\_\_\_\_ How many pounds per colony?

### Beehive transportation

\_\_\_\_\_ Use company truck with boom lift - \_\_\_\_\_ How many gasoline boom trucks?  
- \_\_\_\_\_ How many diesel boom trucks?  
\_\_\_\_\_ Use company truck and forklifts - \_\_\_\_\_ How many gasoline company trucks?  
- \_\_\_\_\_ How many diesel company trucks?  
- \_\_\_\_\_ How many company gasoline forklifts?  
- \_\_\_\_\_ How many company diesel forklifts?  
- \_\_\_\_\_ How many compressed gas forklifts?  
- \_\_\_\_\_ How many electric forklifts?

\_\_\_\_\_ Hire commercial truckers - \_\_\_\_\_ How many truckloads, annual total?

\_\_\_\_\_ Average number of times an apiary (truckload) is moved during the year

\_\_\_\_\_ Average number of substantial accidents, towing requirement, etc. encountered annually

\_\_\_\_\_ Nets are used to cover all loads when hauling

\_\_\_\_\_ Hives are sprayed with water before and during each move, depending on distance and weather

\_\_\_\_\_ Encountered difficulty moving bees across state borders (if so, please explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ )

### Colony damage apparently due to pesticides (please supply an estimate):

\_\_\_\_\_ Average number of “significant” visible kills (can see many dying and dead bees on the ground in front of the hives) across the operation each year

(cont.)

- \_\_\_\_\_ Average number of times substantial numbers of frames of bees suddenly drop in otherwise normal looking colonies (a sprinkle of bees out front)
- \_\_\_\_\_ Average number of times brood seems to be way below normal
- \_\_\_\_\_ Average number of times pupae fail to emerge (heads uncapped, with tongues sticking out), emerging bees cannot escape their cells, newly emerged bees are malformed, often with crumpled wings (make sure *Varroa* and deformed wing virus are not heavy)

Colony losses apparently due to mismanagement (please supply an estimate):

- \_\_\_\_\_ Average number of colonies lost to starvation (no honey; bees plugged headfirst into cells)
- \_\_\_\_\_ Average number of colonies lost to dehydration (especially after moves to dry spots)
- \_\_\_\_\_ Average number of colonies lost to being overwhelmed by *Varroa* (all workers leave the hive, but many die on bottom board and on the ground; white mite fecal deposits on the tops of many worker and drone cells)
- \_\_\_\_\_ Average number of colonies lost with many adults with deformed wings
- \_\_\_\_\_ Average number of colonies lost to tracheal mite infestations (all the adult bees walk out of the colony on a given day, scattering over the ground and climbing things – not writhing, like pesticides – often with K-wing)
- \_\_\_\_\_ Average number of colonies lost to American foulbrood disease
- \_\_\_\_\_ Average number of colonies lost to flooding
- \_\_\_\_\_ Average number of colonies with populations reduced and retarded by swarming

Miscellaneous losses

- \_\_\_\_\_ Average number of colonies lost to bear damage
- \_\_\_\_\_ Average number of colonies lost to ant invasions
- \_\_\_\_\_ Average number of colonies lost to wasp predation
- \_\_\_\_\_ Average number of colonies lost to skunk predation

Honey bee problem diagnosis (please supply an estimate)

- \_\_\_\_\_ Average number of colony or yard samples taken and examined for tracheal mite infestations
- \_\_\_\_\_ Average number of colony or yard samples taken and examined for varroa mite infestations (sticky boards are appropriate to count, here)
- \_\_\_\_\_ Average number of colony or yard samples taken and examined for *Nosema* infections (all methods count, despite inherent problems with providing exact numbers – high, medium, low infestation estimates good enough)
- \_\_\_\_\_ Average number of samples taken and submitted for virus determinations
- \_\_\_\_\_ Average number of samples taken and submitted for pesticide residue analysis

Beekeeping information sources (please check all that apply)

- \_\_\_\_\_ Obtain most of my beekeeping information through the grapevine from beekeepers visits in coffee shops, fast food restaurants, etc. (cont.)

- \_\_\_\_\_ Obtain most of my beekeeping information from local newspapers, radio and television
- \_\_\_\_\_ Obtain most of my beekeeping information from the Internet
- \_\_\_\_\_ Obtain most of my beekeeping information from pollination broker services
- \_\_\_\_\_ Belong to an area beekeeping organization
- \_\_\_\_\_ Belong to a state beekeeping organization
  - \_\_\_\_\_ visit organization's web page
- \_\_\_\_\_ Belong to a regional beekeeping organization (California or southeastern U.S. bee breeders' group, EAS, HAS, WAS, etc.)
- \_\_\_\_\_ Belong to a national beekeeping organization (ABF, AHPA, AIA, AAPA)
- \_\_\_\_\_ Belong to a honey bee advisory committee of some kind
- \_\_\_\_\_ Subscribe to The Speedy Bee
- \_\_\_\_\_ Subscribe to the American Bee Journal
- \_\_\_\_\_ Subscribe to Bee Culture magazine
- \_\_\_\_\_ Belong to the American Apitherapy Society
- \_\_\_\_\_ Subscribe to one or more apiary newsletters from various universities
- \_\_\_\_\_ Subscribe to Apis, Catch the Buzz, or other on-line sources of beekeeping information
- \_\_\_\_\_ Subscribe to or visit the web sites of other industry organizations such as Project *Apis m* (PAm), the Almond Board of California, and international web sites such as Apinews
- \_\_\_\_\_ Contact cooperative extension farm advisors
- \_\_\_\_\_ Visit the UC Davis Entomology web site of Extension Apiculturist Eric Mussen
- \_\_\_\_\_ Contact the office of the county agricultural commissioner
- \_\_\_\_\_ Contact the California Department of Food and Agriculture
- \_\_\_\_\_ Contact the California Department of Pesticide Regulation
- \_\_\_\_\_ Contact the California Attorney General
- \_\_\_\_\_ Contact the California Secretary of State
- \_\_\_\_\_ Contact the California Department of Justice

Thank you very much for taking the time to complete this questionnaire for Dr. Brian Johnson and me. The information will help us prioritize our research efforts on topics of benefit for the beekeepers who took the time to share their answers with us. We will be contacting some of you, soliciting samples for a study on parasite and pathogen loads in California honey bee colonies. Perhaps answering these questions also prompted you to think about less-frequently considered aspects of colony management in your operation.

If you desire to download or print further copies of this questionnaire, please visit my UC Davis web page and look in my Bee Briefs for "2011 Questionnaire."

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### USDA Disaster Assistance


Under the 2008 Farm Bill, there are a number of different disaster assistance programs that are run through the Farm Service Agency. The ELAP (Emergency Livestock Assistance Program) covers honey bees, under the current Farm Bill. Losses are supposed to be reported “within 30 days of when the loss is apparent” or “no later than December 29, 2011.” Don’t wait until the end. You have to shuffle a bit of paper work and get an official letter that backs up your losses.

### California 4-H'er Strikes Gold

Fourteen-year-old California 4-H'er Rachel Ricchiuto of Gold River was the first California author, in a long time, to have her essay chosen as the winning entry in the Foundation for the Preservation of Honey

Bees 2011 Beekeeping Essay Contest. In her essay, “The Buzz on Honey Bees,” Rachel wrote about the preferences of 25 people who tasted various honeys and then chose the ones they liked best. She received \$750 for her efforts.

Sincerely,



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