National Honey Bee Pests and Diseases Survey

Questions and Answers

Why should the public care about honey bees?

Bee pollination is responsible for $15+ billion in added crop value, particularly for specialty crops such as almonds and other nuts, berries, fruits, and vegetables. About one mouthful in three in our diet directly or indirectly benefits from honey bee pollination. While there are native pollinators, honey bees are more prolific and easier to manage for the large scale pollination that US agriculture requires. As an example, in California, the almond crop alone uses 1.6 million colonies of bees, greater than one half of all honey bees in the United States.

Why does a honey bee survey need to be conducted?

The number of managed honey bee colonies has dropped from 5 million in the 1940s to approximately 2.5 million today. At the same time, the call for honey bee colonies to supply pollination services continues to increase. Pollination based agriculture is expanding to feed our growing population faster than pollinators can be provided. This means honey bee colonies are transported across the nation by truck in order to temporarily fill pollination gaps and meet the growing pollination demand.

Honey bee colony health has also been declining since the 1980s with the introduction of new pathogens and pests. The spread to the United States of Asian varroa mites, small hive beetles from Africa, Nosema ceranae, deformed wing virus, acute paralysis virus, bacteria, and fungus has created significant overall health challenges for honey bees.

A national survey is a major step in searching for factors that are affecting the health of the Apiculture Industry in the US. The survey focuses on exotic pathogens and parasites as well as existing threats which may be contributing the decline of colony health.

This survey is being sponsored by the USDA Animal and Plant Health Inspection Service (APHIS) in collaboration with the USDA Agricultural Research Service (ARS), and is primarily geared at establishing the absence of *Apis cerana*, Slow Paralysis Virus (SPV) and the parasitic mite Tropilaelaps in the US. To maximize the information gained from this survey effort, samples will be analyzed for other diseases and parasites known to be present in the US.

Is the survey voluntary?

Yes, the survey is completely voluntary. Active participation by the industry is vital to our success. It will take the sample collector approximately 30-45 minutes to sample eight colonies.

What is the benefit of participating?

A beekeeper participating in this survey will receive a summary report from the USDA ARS on the average apiary level of Nosema, virus, and Varroa loads in the sampled apiary.

Is there a charge for the sampling?

No. APHIS is funding the collection and analysis of the samples.

How many samples are going to be collected?

Each state participating in the survey will sample 24 apiaries. Eight hives will be selected for sampling within each apiary. Once all the samples from an apiary are collected, they are packed and transported to the USDA Honey Bee Research Lab in Beltsville, Maryland for analysis.

Who will collect the samples?

Only Federal or State/County cooperators are authorized to collect official samples using standardized collection protocols. This ensures uniform sample collection, consistent analysis, and a verifiable chain of custody for the samples. The sample collector will schedule a visit with beekeepers; provide them information on the collection and when an individual apiary results analysis will be sent.

When and how do I get samples results?

Samples will be processed in the order they are received. To preserve privacy, sample results will be mailed directly to participating beekeepers and the Apiary Specialist. Beekeepers participating in this survey receive a summary report from the USDA Agricultural Research Service (ARS) 4 - 6 months after sampling. This report provides information on the average level of Nosema, viruses, and Varroa loads in an apiary. This report also includes the visual screening results for exotic honey bee species or sub-species such as the Asian honey bee (*Apis ceranae*) and the Tropilaelaps mite. Annual reports summarizing results will be posted on the internet.

How will the result data be stored and used in the future?

The National Honey Bee Pest and Disease Survey data will be entered into the USDA APHIS NAPIS database. The data will also be stored in a comprehensive data base on

honey bee health being developed in collaboration with the Bee Informed Partnership (www.beeinformed.org). The data will be securely stored to protect individual results but will permit giving temporal and geographic context to future disease diagnosis results. For instance, a beekeeper can compare his or her Nosema load with all other Nosema loads in a certain month in a certain area. These data will also be made available to honey bee researchers who are interested in looking at disease trends in the US.

What if I do not participate?

No problem. This is a voluntary collaborative effort with individual beekeepers to help, protect and defend the US Beekeeping Industry.

Beekeeper help is needed and appreciated.

Who should I contact for more information?

Contact the USDA APHIS National Program Manager for Honey Bees (Robyn Rose) at HoneyBeeSurvey@aphis.usda.gov