Cornell University
College of Agriculture and Life Sciences

Honey Bee Research and Extension Program
Dyce Lab for Honey Bee Studies
209 Freese Rd, Ithaca NY 14850
www.pollinator.cals.cornell.edu

NYS Beekeeper Tech Team

Spring 2017 Honey Bee Health Report

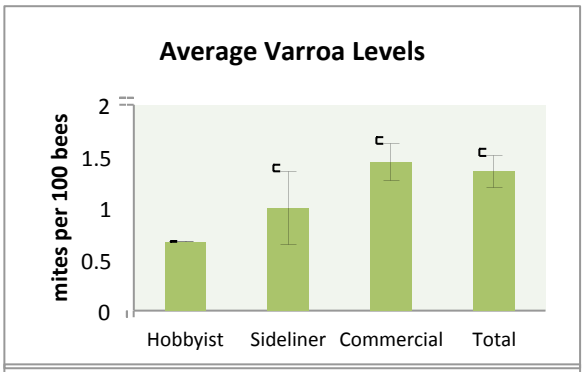
Methods

The NYS Beekeeper Tech Team sampled 320 honey bee colonies from 34 beekeeping operations in Northern, Central and Western New York between May 30 and June 12, 2017, with support from the Bee Informed Partnership. The sample included 8 hobbyists who manage fewer than 50 colonies, 13 sideliners who manage 50 to 499 colonies, and 13 commercial beekeepers who manage 500 colonies or more. Our team sampled one colony from each hobbyist, four colonies from each sideliner, and twenty colonies from each commercial beekeeper. We visually inspected each colony for queen status, population strength, and a variety of diseases. We collected and shipped a sample of bees from each colony to the University of Maryland Honey Bee Lab, where *Varroa* and *Nosema* levels were quantified.

Results

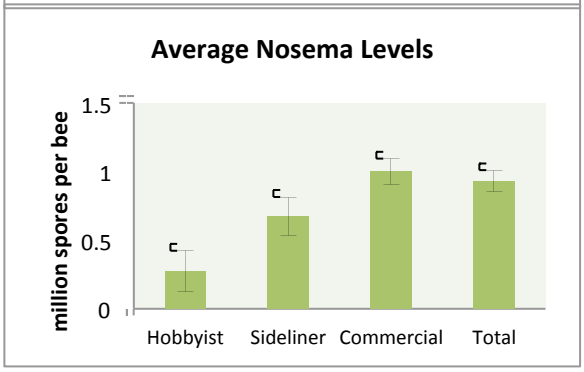
Varroa

We detected *Varroa* mites in 55% of colonies in our sample, and recorded mite levels as high as 24.5 mites per 100 bees. Sixty-two colonies (19%) had mite levels above the economic threshold of 2 mites per 100 bees, while 12 colonies (3.8%) exhibited visual signs of Parasitic Mite Syndrome, an advanced stage of combined *Varroa* and viral infestation. Across the entire sample, *Varroa* levels averaged 1.35 mites per 100 bees. Commercial beekeepers had the highest mite counts, on average, while hobbyists had the lowest.



Nosema

Eighty-four percent of colonies in our sample had *Nosema*, with spore counts reaching a high of 9.4 million spores per bee. *Nosema* levels exceeded the economic threshold of 1 million spores per bee in 27% of colonies, and the sample average of 0.93 million spores per bee was just below this threshold. On average, *Nosema* spore counts were lowest among hobbyists and highest among commercial beekeepers.



American & European Foulbrood

Colony inspections identified American Foulbrood (AFB) in four colonies (1.3%) from four different operations. AFB infections were reported to the State Apiculturist, and NYS Apiary Inspectors were sent out to verify the presence of AFB, inspect additional colonies in infected yards, test for antibiotic resistance, and oversee the destruction of infected colonies. European Foulbrood (EFB) was observed in nine colonies (2.8%) from five different operations.

Other Pests & Diseases

Symptoms of sacbrood virus were observed in 9% of colonies, followed by chalkbrood (7%) and deformed wings (3%). Small hive beetles were present in 3% of inspected colonies, while wax moths were seen in just three colonies (1%).