

# Ohio State University Extension Factsheet

## OARDC/Entomology, Honey Bee Lab

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# Answers to 10 Questions that Growers Frequently Ask Beekeepers

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### **Why are honey bees for pollination in short supply?**

In the mid-1980s, two new species of predaceous mites established themselves in the US. They have been infesting and killing both managed and wild colonies ever since. Finally, across the US, most wild honey bee colonies have been killed leaving only managed colonies to provide honey bee pollination services. The mites can be controlled in managed colonies. Concurrent with the colony decline, honey prices have risen causing some beekeepers to allocate colonies to honey production rather than crop pollination. Therefore, there are fewer honey bee colonies and many of the remaining colonies are being directed toward honey production.

### **What does a "strong" bee hive look like?**

The definition of a strong bee hive can vary depending on the season of the year. In the early spring months, a bee hive being used for tree fruit pollination should minimally have adult bees on five of the colony's ten frames. There should be developing bees (brood) on two or more frames of the five frames that are covered by adult bees (estimated population of 15,000 - 20,000 adult bees). A colony having adult bees on eight of the colony's ten frames and having five frames of brood is a stronger colony (20,000 - 32,000 adult bees) and would be a more efficient pollinating unit. Evaluating entrance activity without knowing internal colony conditions is not an accurate way to assess colony strength.

### **How many colonies should be used to pollinate an acre of tree crops? An acre of vine crops?**

One strong colony (or two average colonies) per acre for tree crops (See Question 2 above).

Two strong colonies per acre for vine crops (about 1 colony per 50,000 plants) (See Question 2 above).

### **Can bees other than honey bees be used?**

Yes, in fact, other species of bees can be frequently be better pollinators than honey bees. However, populations of these bees are difficult to manage and annual populations numbers may be erratic. Encourage populations of these bees in your area by providing undisturbed nesting areas and applying insecticides cautiously, but plan to rely on honey bee colonies as a pollinator insurance service.

**Can a grower keep his own bees?**

Certainly, but the grower must plan to become a beekeeper (to some extent). Different from past years, bees left untended cannot manage for themselves. Basic bee management and disease control cannot be ignored.

**Do bees from colonies that I rent wander from my crop or orchard?**

Yes they do. But if crop flowers are the most common flower and are nearby, many (if not most) bees will stay on the targeted crop. Decrease competition from other weed flowers within and around the orchard or field by mowing or using herbicides. Additionally, commercial bee attractants are available that will train bees to crop blossoms first. These attractants are helpful, but still will not keep all foragers on the targeted crop.

**Why have bee colony rental rates gone up in past years? What are average rental prices?**

The costs of controlling mites in bee hives has increased operating costs. Additionally, the costs of replacement bees has steadily risen (again in response to mite control costs) thereby increasing the costs of maintaining colony numbers. Depending on the crop, hives are renting for \$40 - \$70 based on colony strength and nearness to the crop to be pollinated.

**How much notification do beekeepers need before moving colonies in or moving colonies out?**

If prior arrangements have been made, the beekeeper should be expecting your call. Overall, probably twenty-four hours is common. However, weather can change everything. Both the grower and the beekeeper must remain flexible.

**Where is the best place for the beekeeper to put the colonies in my planting?**

In general, spread the colonies around the planting in groups. The larger the orchard or field, the larger the number of colonies in these "islands of bees". There is probably no practical reason for spreading colonies in singles or doubles. Foraging bees will equalize themselves within the crop. Make sure that the beekeeper can get trucks and equipment into the crop and that the colonies can be managed while they are on site. Avoid locations near human activity.

**Will the bees attack human workers in the orchard or planting?**

The most disturbing time for bee colonies is the morning after the move into the orchard. Give them a wide area then. Beyond that, just stay a reasonable distance away from the hive locations. Foraging bees within tree canopies or on vine crop blossoms are practically harmless and will make every effort to avoid human interaction.

For the past 127 years, the Ohio State Beekeepers' Association (OSBA) has been the organizing body for Ohio beekeepers. Currently a list of state beekeepers willing to provide bees for pollination is being compiled. This will be a continuing project beyond this current season. For information concerning this list or information concerning beekeeping or the OSBA, contact:

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| [Return](#) |