



## Have you seen many honeybees?

Recently I have been engaged in numerous conversations dealing with the fate of the honeybee population. People are concerned about our pollinator friends. Agriculture in the United States depends on honeybee pollination. Without these pollinators food crops will diminish and we will experience increased food prices and decreased food availability.

Higher than normal colony losses have been reported since 2006. This is what is known as colony collapse disorder (CCD). Colonies affected by CCD appear healthy, but then the adult bees disappear from the colonies. Collapsed colonies contain no adult bees and they have food stores that are not taken by neighboring bees or colony pests. Colonies that are collapsing do not have enough bees to maintain the colony brood. They have a workforce that consists of younger adult bees and they also contain a queen.

So what causes CCD? The true cause of CCD has yet to be determined, despite ongoing research. Here are some possible causes of CCD:

- **Bee pests and diseases.** These may lead to problems but are not most likely responsible for CCD.
- **Bee management.** Not all beekeepers are going to manage their hives the same way but poor management can make the problem worse.

- **Queen source.** The genetic diversity and bee lineage of a colony is affected by the queen.
- **Chemical use in bee colonies.** Chemicals that are used to treat bee colonies and pests may have a sub-lethal effect on the bees.
- **Chemical toxins in the environment.** Bees can inhale them directly, drink contaminated water or be exposed to toxins while foraging.
- **Varroa mites.** Varroa mites remain the world's destructive honey bee killer. These mites transmit viruses which can wipe out a colony of bees.
- **Nutrition.** A lack of nutrition (malnutrition) causes stress to bees which can then weaken their immune systems.
- **New pests and diseases.** Introduced pests and pathogens are considered possible causes of CCD.

Many scientists believe that CCD is caused by a combination of these factors which makes CCD very difficult to study. Honeybees are more than just honey producers. They pollinate many of the foods that we enjoy. Our scientists here at UT Extension are conducting many studies that relate to bees and CCD. I will be very interested to see the results when the information is released. I will keep you posted.

Until next time, happy gardening!



*Christopher Cooper*