



OHIO INFO BEE



Ohio State University Extension Service
Ohio Department of Agriculture

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Communication



We are asking for informatoin from you, the reader. While we are able to talk with various people

around the state and attend meetings, we would still like to hear from you. What is your local association doing? What are the colonies in your area doing? Is there a beekeeping problem in your area? E-mail Sherry at ferrell.6@osu.edu

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COLONY COLLAPSE DISORDER

What's going on?

By Dr. James E. Tew

Colony Collapse Disorder (CCD)

As discussed elsewhere within this publication, it has been recently reported, there has been a die-off of bee colonies that has been called serious in some parts of the US; yet in other areas, beekeepers have not been affected. Obviously, this is a threatening situation to beekeepers, who in past years have been subjected to colony losses from pesticides, Africanized honey bees, Varroa mites, Tracheal mites, Small Hive Beetles, and now the formidable sounding Colony Collapse Disorder (CCD). To some it would appear that CCD is the new version of what older bee books labeled *Spring Dwindling*, *Fall Collapse*, *Autumn Decline*, *May Disease* or *Disappearing Disease*¹. Since we did not have the internet communication system and the efficient electronic news network we now have during previous outbreaks, it has been assumed that those outbreaks were not as serious as the one we are experiencing today. Indeed, they may not have even been the same malady. I doubt that we will ever know.

¹ Tew, James E. 2002. *Disappearing Disease - An urban myth? Is this a disease? How can you tell?* Bee Culture. Nov. 2002. <http://www.beeeculture.com/storycms/index.cfm?cat=Story&recordID=171>

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APIARY REGISTRATION

By Mr. John Grafton

Ohio Revised Code section 909.02 requires that any person keeping honey bees within Ohio must have them registered with the Ohio Department of Agriculture. The requirement is that any person keeping honey bees must register the location with the department by the first of June of each year or within 10 days of coming into ownership of the bees. The cost is five \$5 per apiary regardless of the number of colonies within the apiary site.

In 2006 there were 3,224 individuals registered representing a total of 5,032 locations with approximately 32,803 colonies. This is the highest number of registered individuals since 1999 which indicates the interest in beekeeping is strong in Ohio. The majority of these are hobby or sideline beekeepers with fewer individuals making their living from beekeeping.

Symptoms of Colony Collapse Disorder²

1. In collapsed colonies:
 - a. The complete absence of adult bees in colonies, with no or little build-up of dead bees in the colonies or in the front of those colonies,
 - b. The presence of capped brood in colonies,
 - c. The presence of food stores, both honey and bee bread
 - i. Which is not robbed by other bees
 - ii. When attacked by hive pests such as wax moth and small hive beetle, the attack is noticeably delayed
2. In cases where the colony appears to be actively collapsing:
 - a. An insufficient workforce to maintain the brood that is present
 - b. The workforce seem to be made up of young adult bees
 - c. The queen is present
 - d. The cluster is reluctant to consume provided feed, such as sugar syrup and protein supplement.

However, some *beekeeper* characteristics are the same as those in former outbreaks. Since their economic viability is at stake, affected beekeepers have been very vocal; as well they should. Those of us not affected worry that somehow we will lose our protection and suffer the same mysterious fate. It becomes important that hysteria does not overrun us. In the absence of science, guesses and predictions become the only available “news bite.” Comments like, “*We are not certain, but we feel like it is a contagious disease*”³ certainly sound somber but should not be taken as fact until it is shown to be fact.



Figure 1 An apiary with an unexplained bee loss

² From: The Colony Collapse Disorder (CCD) Working Group, *Summary of purpose and responsibility* www.ento.psu.edu/MAAREC/pressReleases/CCDSummaryWG0207.pdf

³ Alarm sounded over US honey bee die-off. Wikinews. February 10, 2007.

A second characteristic that is the same as in outbreaks of the past is that presently, other than general symptoms, essentially nothing is known about the causative agent. Consequently, everything becomes suspect – nutrition shortages, viral infections, bacterial infections, genetic paternity conflicts, chemical misuse, high mite populations, digestive diseases, amoeba infestations, immune system failure, and fungal infections, are common suggestions for possibly causing the unexplained colony deaths.

Then the suggestion appears in the media that this new problem may have been on-going for three to four years⁴. The numerous general symptoms combined with the broad timeframe become encompassing enough to include nearly *any* dead colony. Again, it becomes important that hysteria does overtake scientific investigation. Apparently, and I stress *apparently*, the problem has – so far - focused on bees that have been “*recently stressed;*” or said another way, bees that have been moved to different locations; or said even another way, CCD affects migratory commercial beekeepers.

When discussing CCD characteristics, it is frequently said that hobby beekeepers are not as observant as commercial beekeepers; consequently, their colonies that recently died were simply counted as mite-afflicted or caused by a poor queen. In defense of some of those hobby keepers, I must counter that many hobby beekeepers are stunningly observant, and would have readily observed symptoms as those exhibited by CCD – especially had it been ongoing for several years.

What should Ohio beekeepers do in the face of this highly publicized problem? At this time, do nothing. We don't yet know what it is and if historical precedent holds true, a causative agent will not be determined this time either. I hope that is not the case. Disturbing a wintering colony for no other reason than to see if it is dead from CCD will only hinder the colony. Again, if historical precedents hold true, with the arrival of the spring season, the symptoms will fade into remission. Though frustrating, no one knows the cause or the scope of this disorder. Don't panic and question much of what you hear.

As objective information is gathered and true understanding grows, I will upgrade and alter the Colony Collapse Disorder (CCD) information released through Ohio State University Extension.

⁴ Mystery ailment strikes honey bees. Genaro C., Armas, Associated Press Writer. Sunday February 11, 2007. 11:17PM ET

COLONY COLLAPSE DISORDER

By Mr. John Grafton

Beginning in the fall of 2006 several beekeepers reported large bee loss, and since that time many more beekeepers have reported the same type of problem. This is being called “Colony Collapse Disorder.” It has not been determined if there is any common cause for the disappearing bees. A study group called the CCD research group comprised of university researchers, state and federal regulatory officials, cooperative extension educators and industry representatives are working to determine if the cause is related to chemicals, management, breeding stock, environmental, bee stress or some other factor. The CCD group and Bee Alert Technology are requesting that beekeepers fill out the National Bee Loss Survey, which can be found at <http://www.beesurvey.com> . This survey can be filled out by any size beekeeper whether or not a loss has been suffered; the more information obtained the better the chance of finding a cause.

MEDICATIONS

By Mr. John Grafton

The bee supply catalogs are arriving in the mail and most have several pages of medications that are a “must use” to keep your colonies alive. If you go to the web pages of the companies that produce the medications you will see, not only will the colonies survive, they will produce more honey, have more bees, pollinate better and have higher quality queens.

How can you afford not to medicate your colonies? Have you checked your colonies to know what ails them? Do they need medications? Did you have problems with a specific disease last season? Will the medications build up in the comb and affect the developing brood, queen, drones or stored honey? Will the medications react with each other? Is there resistance in your colonies to any medications? Do you have the equipment to properly administer the medication? What are the alternatives to using medications?

Do your colonies have a problem that needs medication? If so what is available and are there alternatives. If you have medicated for the problem previously maybe you need to use a different product to decrease the chances of resistance. Depending on the problem, you may want to consider some of the more resistant stock or look for an underlying cause that may need attention.

Medications have a definite role in colony management however the entire picture needs to be viewed to obtain the best solution for any problem.

COLONY STRESS AND SPRING MANAGEMENT

By Dr. James E. Tew

The basic premises of common spring management are well documented. Reverse brood bodies, reverse inner covers, and remove entrance reducers. Feed colonies both sugar syrup and pollen substitute. Consider replacing the queen and monitor for pests and diseases. Provide space before the colony responds to the swarming impulse. A change in my personal opinion on spring management is that stress is a factor in colonies not thriving. I contend that every time you open your colony, you stress it – no matter how good your intentions are. All of us enjoy the occasional visit to the colony’s brood nest. Remember - even if the colony is calm - the bees still know you were there and are alerted. Bees are unintentionally crushed and if frames are rotated, colony efficiency is temporarily reduced. For the most part, a bee colony should be left alone. There is only so much help that we can provide and beyond that, we cause harm while trying to do good. I sense that part of the problem is that bees appear to be domesticated, but make no mistake; they are still wild animals with all their instincts in place. Perform your management tasks and then leave the colony alone.

BUYING HONEY BEES

By Mr. John Grafton

It is that time of year when many people are buying honey bees either to increase numbers, replace winter loss or to get into the business. This is done by obtaining packages, splits, nucs, queens to make your own splits or buying established colonies. Regardless of the method you use to get more bees, remember to ask about disease inspection. The person selling should be able to supply a health certificate showing any problems that were found in his/her apiaries. Ohio Revised Code states that any bees brought in from another state must first be inspected and a health certificate sent to the Ohio Department of Agriculture. When ordering bees you need also to keep in mind the spread of the Africanized Honey Bee and its relationship to where you are ordering. If you have any questions concerning health certificates contact the Ohio Department of Agriculture for more information.

WINTER KILLS FROM COLONY STARVATION

By Dr. James E. Tew

The ability of a colony to survive the winter season is primarily preset during the previous nectar flow season. The nectar flow of 2006 was unusually scant – even nonexistent in many areas of Ohio. Colonies went into winter very light. Even intensive feeding would not have saved many of these colonies. The long and very cold period during January and February, 2007, was more than many of these light colonies could endure. I am concerned that CCD only presents part of the picture. The combined loss of colonies – from all causes – could be higher than normal in Ohio this spring. This will require replacement packages, nucs and queens for replenishing Ohio's colony numbers. Naturally, the cost of these replacement bees will be higher than in past years – if beekeepers can even find a supplier.



Figure 2 A wintering colony dead from starvation

This spring, it will be important that surviving colonies be boosted with supplemental sugar syrup and pollen substitutes. As modern-day beekeepers, we must accept the fact that our bees need our measured help more than they did just a few decades ago. We should no longer cling to the belief that the typical bee colony can routinely fend for itself. I would strongly suggest that Ohio beekeepers feed sugar and pollen substitutes copiously and monitor for pests such as *Varroa* and diseases such as American foulbrood. Those of you who are accomplished in queen production would do well to produce enough queens to replace queens that have begun to fail. Another management change is that we can only hope for about a year's production from a queen – no matter how good she is. I suppose I am saying that a strong, well proportioned colony is increasingly the exception and not the rule. Though that may be distasteful to those of us who have been keeping bees for many years, at least it enhances the need for competent beekeeper assistance.

DO YOU KNOW? DO YOU CARE?

By Dr. James E. Tew

The Stanley Tool and Level Company is world renowned for the extensive line of hand planes that it manufactured for many years. The Stanley #1 Bench Plane, small enough to fit in a coat pocket, is highly collectible. The plane, which has not been manufactured since 1947, cost less than \$3.00 when new, but now the price range is \$800-\$1400 – depending on condition. Recently, a woodworking magazine reported that the primary use of the little plane was by beekeepers who used it in the apiary to level super edges in order to improve the beehive's fit. Maybe we should all rummage through our old bee stuff to see if a little plane is there. Don't sell it at a garage sale. (*Popular Woodworking, December, 2006, Issue #159*)