OHIO INFO BEE

Ohio State University Extension Service
Ohio Department of Agriculture

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Communication

We are asking for information 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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APIARY INSPECTION

John C Grafton

On April 21, 1904 the Ohio legislative leaders and then governor Myron T Herrick signed into law house bill 28. The first paragraph stated:

[House Bill No. 28]

AN ACT

To provide for county inspectors of apiaries and defining their duties, and providing for their compensation, for the purpose of curing and avoiding foul brood or other diseases among bees and their hives.

It is now almost 103 years later and the Ohio Department of Agriculture apiary program operates under Ohio Revised Code section 909. The law and rules have changed several times during that time frame however the purpose remains virtually the same. The program is still charged with the duty of inspecting honey bees and their hives for the purpose of identifying diseases and aiding beekeepers in implementing control measures.

That first law was primarily interested in the control of foul brood, which today is known as American Foulbrood. Records indicate that 20% of the colonies

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COLONY COLLAPSE DISORDER (CCD) – A DIFFERENT PERSPECTIVE

James E. Tew

I very nearly don't know what to say about this issue. The publicity on this subject has exceeded any science supporting a causative agent. Giving it a new name and saying that it is worse than previous outbreaks have given the condition an emergency status that has elicited what I have called *electronic hysteria.* Make no mistake; those migratory beekeepers who have lost bee colonies are experiencing pain and financial distress. They deserve our concern and support. Alternatively, our bee colonies in Ohio that died from winter starvation are none-the-less dead, too. If I combine our winter-kill problem with the national issue of CCD, the question is begged, *"Who would want to keep bees?"* Therefore, my primary concern for Ohio beekeepers is

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that the negative publicity toward beekeeping will make new people fearful about becoming beekeepers. As serious as a decline in bees is, a more serious condition would be an excessive decline in new beekeepers or discouraging establishing beekeepers so much that they drop out.

Once the spring season is here and we can go about our business of recovering, we will recover. The 2006 Ohio season will be historically recorded as being a bad bee year, but strange as it may seem, the CCD episode has made me a more thoughtful beekeeper.

I would suggest that we remember that:

- bees – though they appear to be domesticated – are none-the-less wild animals.
- as wild animals, bees are easily stressed as we manage and manipulate colonies for our human good.
- stressing bee colonies with migratory activity and general colony manipulation upsets the colony's natural resistance to diseases and pests making them more vulnerable – not more resistant – to being overrun by a pathogen outbreak.
- such an outbreak can have multiple causes; thereby clouding the root cause – colony stress, resulting in conditions like that called Colony Collapse Disorder.
- chemical treatments are only short-term fixes, for any bee disease, and that we should always expect side effects from the use of any chemical (hard or soft) in our bee colonies – particularly comb contamination.
- the configuration of a modern hive and the configuration of a bee yard are designed for human convenience and are not necessarily conducive to natural honey bee biology.
- abnormal concentrations of colony numbers and equipment only serve to concentrate and homogenize bee diseases and pests.
- most of the time, the best thing a beekeeper can do for a bee colony is leave it alone.

This colony is not suffering from CCD.

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inspected at that time were found to be infected and subsequently destroyed. Today Ohio's apiary inspectors still look for and find American Foulbrood, last year it was less than 2% of the colonies inspected. The inspectors also look for European Foulbrood, Chalkbrood, Varroa mite, Tracheal mite, Small Hive Beetle, Nosema, Sacbrood, and other abnormalities within the colony that may require the beekeepers attention.

As the 2007 apiary inspection season is about to unfold these same inspectors will be asked to be attentive to colonies that may have the African honey bee genetics which will require sampling for testing by the USDA labs in Tucson, AZ. Many Ohio beekeepers suffered a heavy loss of colonies over the last few months and will be buying replacement bees from producers in the southern states. Several of these states have confirmed cases of Africanized honey bees. The aggressive nature of these bees makes it imperative that the Ohio beekeeper use caution when ordering replacement honey bees and avoid areas that have

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confirmed cases. In addition to the Africanized honey bee situation the inspectors will also be aiding in gathering information pertaining to the current Colony Collapse Disorder (CCD) situation. Colony Collapse Disorder has certainly brought much attention to the struggling beekeeping industry as the severe decrease in colony numbers will affect the pollination of crops.

In 1904 the major concern was foul brood, today's inspector and beekeepers not only need to be concerned with foul brood but also a number of other factors all of which mandates that he/she keeps abreast of all that is happening in the beekeeping industry. As package bees are shipped in from such places as Australia the world becomes more connected and so do our potential problems.

HIGH BEE LOSS — CCD OR BAD BEE KARMA

John C Grafton

There has been much talk and publicity recently about what is being termed Colony Collapse Disorder (CCD). In fact the last issue of the *INFO BEE* devoted a great deal of space to the disorder as will this issue. It is hard to say if something is or is not CCD as there is no clear definition of CCD. The bottom line is that the colony of honey bees is dead and there are virtually no dead bodies to be found. Every dead bee hive this spring does not shout CCD anymore than an aggressive colony last year shouted Africanized Honey Bee. It is something to consider but not the only thing.

A recent survey (March 14—19, 2007) of Ohio beekeepers found that on average there is a 72% loss of live colonies from September 2006 until March 2007. A closer breakout indicates that beekeepers with fewer than 100 colonies had an average 55% loss, those with 100 to 500 colonies averaged 67%, and those with over 500 colonies averaged 75% loss. There did not appear to be any difference in area of the state. Why the difference in loss as the size of operation increases? The thought that comes to mind the quickest is time spent per colony. Is an average of 72% loss unusual? Yes, at one time a 10% or less loss was considered normal then with mites that number rose to nearly 30%. The 72% is an unheard of amount.

So what caused the loss, a new abnormality called colony collapse disorder or just bad bee karma? Karma is believed, by some eastern religions, to be the total effect of a person's (bee's) actions and conduct during the successive phases of the person's (bee's) existence, regarded as determining the person's (bee's) destiny. As stated earlier we have no clear definition of CCD. Let us then think then in terms of karma. Fall of 2006 in most parts of Ohio had a dearth of nectar thus poor diets for the honey bee colony, in some cases the queen reduced egg laying due to the dearth resulting in older bees in the colony and a reduced population. Many beekeepers fed their bees but was it the proper diet? Various medications are being used by the beekeeper to control mites and foulbrood within a colony, are these medications reacting with each other and affecting the bee? Genetics, as beekeepers breed bees to resist mites are they also resisting longevity? There are a number of other factors that could also be related, all of which need to be considered when thinking of CCD.

In the above mentioned survey the two most often cited reasons beekeepers believed to be the cause of their loss were starvation and small clusters. They believed both of those were brought on by the fall of 2006. CCD or bad Bee Karma, you decide.

MANAGING SURVIVING COLONIES

Best guesses on what to do, what not to do, and when to do it

James E. Tew

Make no mistake about it – many Ohio beekeepers have had a bad year. The spring season of 2006 was one of the worst in years. The fall season was little better, so our bees went into winter light in stores. We hoped for a mild winter, but instead we had the harshest winter we've had in several years. Significantly more colonies than usual have died from simple winter starvation. It appears that our winter-kill percentage will range between 50% - 80%. That's shocking.

This is happening to Ohio beekeepers at a time when much of the US is experiencing a condition called Colony Collapse Disorder (CCD). Ohio apparently has missed the brunt of this malady, but it certainly cannot be said that we are home free. It has been remarkably difficult to get sympathy for our routine plight when others are seemingly suffering from some new, exotic problem. Either way, as beekeepers we must recover and we can only do that in concert with our surviving colonies.

Replacement bees

Replacement bees are going to be in short supply and will be expensive. For some of us, simply buying replacement bees will be the best way to go. For those of us who had any colonies survive, nurturing them enough to divide them later in the season will be the more obvious – but slower – way to go.

Surviving colonies

My goal – to deftly nurture the surviving colony, getting it up to full strength as quickly as possible with the least amount of intrusion.

What to do right now (Mid-to-late March)

Lift the back of the wintering colony to get an approximation of the overall colony weight. Prepare to feed all colonies, regardless of the colony's weight, but pay particular attention to light colonies. Light to very light colony weight will mean that this colony will have to have help or it could still starve as the winter/spring season progresses. Feeding frames of capped honey is the best feed but few of us have it. Quietly clear the entrance but leave it reduced. There's not much else that can be done outside the colony right now. If the colony must be opened, do it on a day and at a time when the bees can recover from the manipulation.

In all things, stress the colony as little as possible. Top feeders would seem to be less invasive than division board feeders. Entrance feeders are nearly impractical but slightly better than nothing. Feed thick syrup. Corn syrup is probably easiest but some types of corn syrup are suspected of causing digestive problems within the bee colony. However, if the decision must be made to feed suspect corn syrup or feed nothing, corn syrup certainly wins. Though our industry does not have a perfect pollen substitute, put on a pollen substitute cake. Place this feed as quietly and as quickly as possible. In general, cause the least confusion within the colony as possible. Use only enough smoke to subdue the bees. If these colonies are weak already, I suggest that you feed much longer usual. Our Ohio colonies have been weakened by several unexciting spring seasons with the spring of 2006 being particularly bad. My suggestion is to feed in order to pump up the colony as much as possible – especially if the spring flow is light again.

The problem that will develop as the spring season progresses is that the colony will divert much of the feed to bees and not to food stores. There's nothing you, the beekeeper, can or should do about that. If swarming, by some delightful turn of events, appears to become a problem, split the colony in half, letting the queenless half produce its own queen. If you don't want to make colony increase, you can recombine the two colonies later in the season. I don't want to do all this feeding only to have the work swarm away.

Mites

As the season progresses, but before spring passes, perform some kind of Varroa mite treatment. Varroa treatment right now can be tricky. If you didn't treat at all last year, and you commonly treat, consider doing something this season. If you don't commonly treat, be sure to monitor mite populations as they build up. While our colonies died predominantly from winter starvation, high mite populations are still a potential

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Managing Surviving Colonies continued from page 4. . .

problem if left unchecked. Though it is probably not absolutely necessary, but because our colonies are challenged, it would probably be a good idea to put on grease patties. Tracheal mites are not on anyone's radar, but they should not be completely ignored. Don't have supers on when applying miticides.

Queens

If you have marginal queens heading recovering colonies, first stabilize the colony with feed until well into spring. Consider requeening as the season warms and all the stresses of cold weather are gone. This should be considered a recovery year for most of us; therefore, it will not be a good year to let the bees produce their own queens. All new queens are not necessarily good. All new queens are not necessarily accepted. Do whatever it takes to get a new queen in place.

Other bee diseases

Just because we are focused on recovering from the problems of winter losses, Varroa mites, and CCD, it would be folly to ignore any other common disease. Constantly watch for American foulbrood. Before next fall, I will be recommending that you treat for Nosema with Fumadil-B, but that is some time from now. Otherwise, not much can be done for common diseases such as chalk brood other than monitoring for it. Due to our recovery year status, it is not a good year to tinker with curing American foulbrood.

Colony splits

Our colony numbers are low. Do not try to recover all your losses in one year, but strive only for colonies that you can feed and develop into winterable colonies before next fall. This past year has been serious enough and our colony count is at a point low enough that we must protect our base. Once that has been accomplished, we can get on with increasing colony numbers next year.

In summary

Feed any colony that has survived – and feed abundantly. Feed both pollen and sugar feeds until it is crystal clear that the colony does not want it. Monitor for any other disease and install a new queen if needed. Perform these tasks with the least amount of intrusion. Many of our colonies have been seriously damaged and challenged. We need to give them serious time and support to recover.

UPCOMING 2007 MEETINGS:

OSBA SUMMER MEETING - Saturday, June 16 at Kingwood Center in Mansfield, Ohio. Contact: Dawn Feagan at 330-336-3211 or e-mail: dawn@beeculture.com.

OSU EXTENSION HONEY BEE FIELD NIGHTS

- ***Thursday, June 26*** at OSUE Honey Bee Lab, Wooster, OH. Contact: Sherry Ferrell at 330-263-3684 or e-mail: ferrell.6@osu.edu

- ***Thursday, July 28*** at OSU South Centers, Piketon, Ohio. Contact: Shawn Wright at 740 289 2071 or e-mail: wright.705@osu.edu

HEARTLAND APICULTURE SOCIETY - July 12-14 at Kentucky State University, Frankfort, Kentucky. More information: http://www.heartlandbees.com/

EASTERN APICULTURE SOCIETY - Beekeeping Short Course, August 6 to 8 and Conference, August 8 to 10 at University of Delaware, Clayton, Conference Center, Laird Campus, Newark, Delaware. Contact: Dewey Caron at dmcaron@udel.edu or visit their website: www.easternapiculture.org

WEST VIRGINIA HONEY FESTIVAL - August 25-26 at Parkersburg City Park, Parkersburg, WV. Contact: WV Honey Festival, PO Box 2149, Parkersburg, WV 26102; tel: 304-485-6437.