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This newsletter written and/or edited by
Marvin A. Owings, Jr.

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June 2010
To: Henderson County Beekeepers
From: Marvin A. Owings, Jr., Extension Agent, Agriculture
What: Next Meeting
When: Monday, June 7, 2010 from 7 - 9:00 p.m.
Where: Extension Office (Jackson Park)

Dear Beekeeper,

According to Phil Holbert and other local beekeepers the honey flow is lite this season compared to the large amount of flowers produced this Spring. So... we would have to conclude that for some reason the honey flow for all nectar plants is relatively short. It doesn't seem to matter what blooming plants you are talking about. Even the Tulip Poplar honey flow was shorter than expected! Every year is different and this year is no exception.

For a two to three week period last month, swarming was in full swing. So, you need to insure your hives are "queen right" and they have adequate room for your queen to lay in. Phil will give an overview on "queen right' hives at next weeks meeting.

Make sure you mark you calendar for the club's date change next month. We are moving our club meeting date from the first Monday of the month to the third Monday (19 July)!

**June in Your Beeyard:**
- Inspect once for congestion, queenright, diseases, mites, and stores.
- Process spring honey.
- Watch for swarming.
- Try to find pollination contracts.

**July in Your Beeyard:**
- Inspect colonies once for congestion, queenright, diseases, mites, and stores.
- Put on sourwood supers.
Researchers and educators from America’s land-grant universities, government agencies and industry have banded together to provide a comprehensive resource for science-based information on bee health management strategies. It’s on eXtension, (pronounced E-extension), http://www.extension.org.

Pollinating bees are essential members of American agro-ecosystems. The high death rates of bee colonies and the emergence of Colony Collapse Disorder (CCD) concern many fruit and vegetable producers from home gardeners to commercial growers.

“In these challenging times for the beekeeping industry, with several factors contributing to reductions in pollination, a large cooperative effort is needed among researchers, extension personnel, beekeepers, crop producers and associated industry people to provide answers and solutions that benefit everyone,” said John Skinner, professor at the University of Tennessee and leader of the new eXtension resource that amassed the latest research information about health of all species of bees.

Keith Delaplane, professor at the University of Georgia, explained, “The eXtension concept is a direct response to concerns about information quality on the Internet. Users can access eXtension with the same confidence they access their own state university extension networks. Information published on the bee health Web site represents the best summary opinions of scientific authorities across America. One of the exciting things about working with eXtension is that it represents a practical forum for bee scientists as well as beekeepers.”

The bee health site provides help for new and inexperienced producers, as well as those with experience but who need an answer to a specific question. The site includes answers to frequently asked questions (FAQs). If a question cannot be found in the FAQs, eXtension’s “Ask an Expert” feature can be used for a quick response. The site also includes in-depth, peer-reviewed articles covering bee biology and production.

Pollinator losses
In “A Survey of Honey Bee Colonies Losses in the U.S. Between September 2008 and April 2009,” the Apiary Inspectors of America and researchers at the USDA-Agricultural Research Service Beltsville Honey Bee Lab found that colony losses are still high in the majority of operations surveyed. Overall the colony losses were 28.6 percent. This is down from the previous winters of 2007/2008 and 2006/2007 when colony losses were recorded at 35.8 and 31.8 percent respectively. Only 15 percent of colonies died with CCD symptoms this year compared to 60 percent the previous year.

In the 2006 release of the National Research Council report, “Status of Pollinators in North America,” many bees other than the honey bee (non-apis bees) are recognized as important pollinators of crop and non-crop plants. The report identified the need for improved management and disease control of non-apis bees, such as bumble bees and alfalfa leaf cutting bees, as well as conservation strategies in the field.

These losses underline the need to get the most up to date and accurate information to beekeepers as quickly as possible to improve bee health and continue to improve survival. Bee declines are likely a product of negatively interacting factors in pathology, immunology, nutrition, toxicology, genetics, ecosystems management and bee husbandry.

“Declining honey bee health is complex and the answers that are needed to improve colony survival will only come from a concerted effort by a diverse group of scientists, beekeepers, extension specialists and other interested parties working closely together to improve honey bee health,” said Jeff Pettis, research leader at the USDA-ARS Bee Research Laboratory.

continued on page 4
THE BEE DANCE - NOT EXACTLY THE "ELECTRIC SLIDE!"
By Helen Coats, Age 10 Rock Hill, SC - Winner of the 4H Beekeeping Essay Contest

Have you ever wondered where the honey on your toast comes from? If you answered, "the store," you're incorrect. The honey you and millions of others enjoy is made by the _Apis mellifera_ (Honey Bee).

Believe it or not, scientists think that the complexity of the Honey Bee's language is second only to ours![1] The, _Apis mellifera_, communicates by dancing. It uses this dance to start the honey-making process. Pretty amazing, huh? "Oh, sure," you may be sarcastically thinking, "the honey bee does the Electric Slide. . . ha, ha, ha." Well, I've got to admit the dance I'm thinking of has nothing in common with the Electric Slide, but it is the honey bee's very own, amazingly unique, form of communication.

Aristotle described a certain bee behavior in his _Historia Animalium_ in 330 B.C. He had noticed that forager bees (foragers are always female) laden with nectar perform two certain dances on their return to the hive. The forager dances upon the comb in a kind of circular pattern, occasionally crossing it with a zig-zag or a waggle, across the center. This behavior was thought to attract the attention of other bees. In 1947 Karl Von Frisch recognized the fact that the runs and turns of the dance could relate to the location of the food source from the hive. He also put forth the theory that the bees use the sun's position to help guide forager bees to the nectar. He also found proof that the more vigorous the display is, the more quality the food has. In 1973 Von Frisch was awarded the Nobel Prize in Physiology of Medicine for his awe-inspiring discoveries. [2]

The honey bee performs three dances, composed of a series of patterns and waggles: the Round dance, the Waggle dance, and the Crescent dance. Different types of bees-German, Italian, and Western, among others—use different dances for when the nectar is closer or farther away from the hive. (Italian honey bees are favored by bee keepers in the U.S.) For instance, the Italian honey bee (_Apis mellifera_ ligustica) performs the Round dance in cases of the nectar being zero through 20 feet from the hive. The tempo of the dance also portrays the quality and quantity of the source. The Crescent dance is an intermediate between the Round dance and the Waggle dance, and is used for approximately 25 to 75 feet from the hive. The Waggle dance is the most complex, and is used for when the nectar is at least 115 feet from the hive. In the Waggle dance also, the speed conveys the quality and quantity of the nectar. The forager bee pretends that the top of the honeycomb is the "sun." The straight portion of the dance in relation to the angle of the "sun" shows the angle that the real nectar is to the angle of the real sun. For example, if the honey bee dances the straight portion thirty degrees to the right of the "sun," the nectar is at a thirty-degree angle to the right of the real sun. Thus the dance attendees will know how to find the food. [3]

The distance is also shown by the speed of the dance. For instance, if the nectar is further away, the dance is slower. If it is closer, the dance is faster. For example, if the bee dances 11 cycles in 30 seconds, it means the nectar is 2000 feet away from the hive. And if she dances 15 cycles in 30 seconds, it means the nectar is approximately 1000 feet away. That's a fast dance! [4]

The bees following a dance are known as "dance attendees." The dance attendees will touch the dancing bee with their antennae. The bee performing the dance will also stop from time to time and give the dance attendees a taste of the nectar that she is bringing back. This probably gives them information on the taste and smell of the nectar they are attempting to pinpoint. [5]

Amazingly bees communicate longer distances for the same flower on a day of harsh wind than for a day of calm. By doing this, they show the dance attendees the amount of energy it will take to get to the flower. [6]
Paul Brown represented the Henderson County Beekeepers Association last Saturday, May 30th at the 1st Boyd BBQ Cookoff held at Detz Field, HHS.

Paul set up his booth with his observation hive and bee handouts promoting Henderson County’s finest. He was able to sign up 10 people who are interested in joining our club. We salute Paul for a job well done!!!

The Mills River Farmer Market is seeking vendors for this season. We would love to have someone selling honey or other bee related products as one of our regular vendors. The market opened on Saturday May 8, 2010 with the hours of 8:00 AM until 12:00 noon. If you, or someone you know, would be interested, please contact James Reed at 828-890-4105 or email us at millsriver-farm@yahoo.com.
Honey bees have lived for millions of years, and humans have only been harvesting honey from them for thousands of years. Obviously, the bee dance has been going on much longer than the Electric Slide! The oldest record of humans using honey for their own benefit is a 9,000-year old cave painting in Spain which portrays a figure apparently sneaking honey from a hive on a cliff. Even today people still take honey from bees, when they can find it, in various parts of the world. [7]

Different kinds of honey can be made from different kinds of flowers. Honey made from clover is one of the most popular in the U.S. We tend to take honey for granted, but it takes 154 trips from the hive to make one teaspoon of honey! A forager bee only makes one twelfth of a teaspoon in her entire lifetime. The entire hive carefully guards the honey—every hexagon comb of the hive is turned slightly upward so none of the honey spills out. [8]

Because of the Bee Dance the *Apis mellifera* is successful in making honey. So successful, in fact, that six hundred thousand tons of honey are sold annually world wide, with plenty left over for the bees! [9]

So let's hear a round of applause for our little friends, who communicate through circles, wiggles, and waggles (and do the "Bee Electric Slide") in order to create one of the world's favorite sweeteners-honey.

End Notes

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**Preliminary Results: Honey Bee Colonies Losses in the U.S., winter 2009-2010**

The Apiary Inspectors of America (AIA) and USDA-ARS Beltsville Honey Bee Lab conducted a survey to estimate winter colony losses for 2009/2010. Over 22.4% of the country’s estimated 2.46 million colonies were surveyed. A total loss of 33.8% of managed honey bee colonies was recorded. This compares to total losses of 29%, 35.8% and 31.8% recorded respectively in the winters of 2008/2009, 2007/2008 and 2006/2007.

In all 4,207 beekeepers responded to the on-line survey and an additional 24 were contacted by phone. This response rate is orders of magnitude greater than previous years efforts which relied on phone or email responses only (2008/2009 n=778, 2007/2008 n=331, 2006/2007 n=384).

On average responding beekeepers lost 42.2% of their operation, this is an 8 point or 23% increases in the average operational loss experienced by beekeepers in the winter of 2008/2009. Average losses were nearly 3 times greater than the losses beekeepers reported that they considered acceptable (14.4%). Sixty-one percent of beekeepers reported losses in excess of what they would consider acceptable.

Colony Collapse Disorder (CCD) is characterized, in part, by the complete absence of bees in dead colonies and apiaries. This survey was not designed to differentiate between definitive cases of CCD and colonies lost as the result of other causes that share the “absence of dead bees” symptom. Only 28% of operations reported that at least some of their dead colonies were found dead without dead bees. However this group lost a total of 44% of their colonies, as compared to the total loss of 25% experienced by beekeepers who did not report losses indicative of CCD.

Responding beekeepers attributed their losses to starvation (32%), weather (29%), weak colonies in the fall (14%), Mites (12%), and poor queens (10%). Only 5% of beekeepers attributed CCD as the major cause for their losses.

It is also important to note that this survey only reports on winter losses and does not capture the colony losses that occurs throughout the summer as queens or entire colonies fail and need to be replaced. Preliminary data from other survey efforts suggest that these “summer” losses can also be significant. All told the rate of loss experienced by the industry is unsustainable.

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Important Dates:

**Henderson County Beekeepers Association** - Regular monthly meetings are now held on the third Monday of each month, at the Henderson County Extension Center, 740 Glover Street (in Jackson Park) from 7 - 9 pm. For more information, please call the extension office at 697-4891.

July 8-10 - NCSB meet in China Grove, NC

July 15-17 - South Carolina Beekeepers meet in Clemson, <www.scstatebeekeepers.org>

August 2-6 - Eastern Apicultural Society Annual Conference in Boone, NC. For more details go to www.easternapiculture.org.

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Every effort has been made to provide correct, complete and up-to-date pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are possible. These recommendations are not a substitute for pesticide labeling. Please read the label before applying any pesticide.

Person with disability and persons with limited English proficiency may request accommodations to participate in programs mentioned in this newsletter, by contacting Marvin Owings at 828 697-4891 or in person at the County Extension Office at least 4 days prior to the event.

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