

**Aiken Beekeepers
Association Newsletter**

The Buzz

The Education Hub for Practical Beekeeping

<http://aikenbeekeepers.org> **November - December 2011**

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Meetings will be the fourth Tuesday of the month at 7:00pm

Our new location is Trinity United Methodist Church, 2724 Whiskey Road, Aiken, SC

Please join us!

Presidents Bees-ness

Buzz from the Hive

Hello Aiken Beekeepers.

I would like to thank everyone again for letting me serve as your president for the last two years. We are fast approaching the winter holidays. I hope each and everyone has a wonderful and feeling Thanksgiving and a very Merry Christmas.

I hope everyone has their bees taken care of and are ready for winter. It's time to start thinking about next spring and the wonderful nectar that is to be harvested. Over the winter tools can be cleaned and repaired. Check your boxes and frames, and repair as needed. Make a wish list for Christmas and ask for the tools of the trade.

Again, thanks for the experience. Excuse me but I need to go and make some new boxes for my new girls coming in the spring.

David McNeely

Beekeeping Chores

Beekeeping does not work by recipe, and an outline like this is no substitute for knowledge and experience. This section is provided primarily for new beekeepers or beekeepers new to the area and others who may want a synopsis of seasonal activities and expectations.

Beekeeping Calendar of Management Practices: November

- Rake all leaves and dead grass away from the colony to prevent fire. Cut tall grass.
- Feed one gallon of a two to one sugar syrup with 7/8 teaspoon Fumagilin-B.
- Check all tops to be sure they are waterproof.
- If daytime temperatures remain warm, continue to feed a 2:1 sugar syrup to hives low on honey.
- Make sure there is enough ventilation to allow excess moisture to exit the hive. Moisture causes more harm than cold does; it causes hypothermia in the bees, and they will die.

Beekeeping Calendar of Management Practices: December

- Clean supers, hive bodies, covers and frames of burr comb and propolis.
 - Cull combs. Cut all combs with more than six square inches of drone cells from the frames.
 - Build any equipment you desire for the next bee season. Don't put this off until the equipment is needed. Usually, you are busy with something else, and good bee management is not putting off what needs to be done when it needs to be done.
- Sit in front of the fire with a cup of tea sweeten with honey and your favorite book or bee magazine and enjoy the fruits of your and your girls labor.

Mixing Fumagilin-B

Dissolve seven-eighths teaspoon of the Fumagilin-B in 1/3 cup of warm water. Stir until thoroughly dissolved. Dissolve seven pounds of granulated sugar in 1¾ quarts of hot tap water. Add the 1/3 cup of thoroughly dissolved Fumagilin-B to the sugar syrup. Feed one gallon to the colony in November.

Overwintering a Honey Bee Colony

A colony of honey bees will over winter well when you prepare them for winter conditions. The colony must have enough bees to cover five or more brood frames. Smaller colonies usually will not survive the winter.

A colony should have at least 40 pounds of honey in mid October for winter stores. This is equal to one full super and six frames in the second super. One hive body filled with honey weighs about 60 pounds.

Check the brood chamber for a laying queen and healthy brood in early October. Treat the colony three times at weekly intervals with [Terramycin](#) in sugar or once with Terramycin extender patty. Treat with Fumagilin-B in November. Give a colony one gallon of the Fumagilin-B medicated syrup.

Reduce the entrance opening by inserting the entrance reducer in late October.

Ventilate the top of the colony in November (Fig. 51) to vent excess moisture from the colony during the winter months. Vents and exits can be made by cutting slots 5/8 inch or wider through the inner cover cleat. Turn the slotted inner cover upside down, cleated side down and slide the outer cover forward over the hive.

Replace harvested honey

Some beekeepers remove all honey in the fall and replace it with sugar syrup. Unless there is a threefold difference in the price of sugar and honey, the practice is not recommended. Please be aware that bees expend energy to process sugar syrup before storing. This task may require the energy equivalent of as much as 25% of the sugar being fed.

Protein

Pollen is not only the principal protein source to bees, but it also provides vitamins, minerals and fats essential for the development of brood and young adult bees. The protein content of pollen can vary from 7 to 30% (by weight) with an average of about 22%.

Longer periods of insufficient protein will affect the entire colony, resulting in reduced egg laying and brood development. Young nursing bees may not fully develop their hypopharyngeal glands, causing insufficient production of brood food. This in turn may lead to spotty brood patterns that are often misdiagnosed as the result of a failing queen. To offset any pollen shortages, pollen supplements or substitutes can be given. Pollen supplements will not necessarily cause the bees to reduce pollen collection in the field.

The rate at which bees consume the pollen supplement is influenced by its location in the hive relative to the brood cluster. It is important that the pollen supplement is readily accessible to nurse bees. The greatest consumption takes place directly above and to the sides of the brood area. Pollen substitutes (such as Brewer's Yeast, soya flour, etc.) are more readily accepted when natural pollen is added.

Feeding Formulations

The most effective pollen substitutes and supplements are those that most closely resemble chemical composition and physical consistency of stored pollen. Brewer's Yeast is very similar to the protein

nutritious as the best pollens.

===== IPM for HONEY BEE PESTS, PARASITES, PATHOGENS and PREDATORS =====

PESTS: Wax Moths and Small Hive Beetles

- Keep all of your unused combs in mothproof stacks or in a mothproof room or building, preferably unheated. Tape cracks between supers or repair supers so they fit tightly together. Inspect regularly! Treat with Paramoth® or Fumigator® at first sign of [wax moth](#).
- The best solution for wax moths during the winter is to keep your combs in an unheated, mothproof room where they will freeze during the winter, but not be re-infected in the spring.

To minimize damage from [Small Hive Beetles](#):

- Extract honey within one week of removing it from the hive and return supers to hives or place in cold storage.
- Return extracted supers to the hive to be cleaned out. Place them above an [escape board](#) (an inner cover with the center hole left open) in the evening or on a cold or rainy day to avoid robbing. Do not set them outside to be robbed out.

PARASITES: Parasitic Mites and Nosema

- If you have not already done so, initiate fall treatment for *Varroa destructor* with Mite-Away II, Apistan, CheckMite+ or Api-Life VAR after removing honey crop.
- Initiate treatment for tracheal mites with Mite-Away II, Mite-A-thol or a [grease patty](#) after removing honey crop.
- Wear [nitrile rubber gloves](#) when handling Apistan or CheckMite+. See the labels for Api-Life VAR and Mite-Away II for special handling instructions.
- If your bees are rearing brood through October, you will need to exchange drone combs one more time during the last two weeks of October.
- Feed 2 gallons of 2:1 sugar syrup (by weight) with Fumagilin-B for control of *Nosema apis* after removing honey crop.

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Feeding Bees with Hard Candy

The hard candy method is more work but reduces moisture problems associated with syrup feeding during the cold weather. **Preparing the candy**

- Ingredients: 12 pounds table sugar
1 ½ pounds honey
1 ¼ quart water
¼ teaspoon cream of tartar

Heat the water while adding the sugar and honey. Stir continuously until the mixture is liquid. Remove the spoon; do not stir, but continue to heat the mixture. Heat the boiling mixture to 238° F. Do not stir while cooking. When the temperature reaches 238° F, remove from the heat source and add the cream of tartar. Cool the mixture to 125° F and stir vigorously until the mixture becomes cloudy white. Pour the mixture into a rectangular cake pan or candy feeder box. Candy molded in cake pan can be wrapped in wax paper and placed in the hive.

A candy feed box can be constructed from a piece of one-half inch plywood the size of an inner cover. A 1 ¼-inch rail is nailed around the perimeter of the plywood to make a tray. Nail 12 roofing nails into the inside bottom of the plywood tray to anchor the candy after it hardens.

Place the tray, candy-side down, over the bees. Cover the tray with the inner and outer covers.

The Honey Bee During Winter

the world. Presumably, the winter months are the one of the reasons that we get a great honey crop. The bees work all spring, summer and fall, storing honey for the months when nothing is blooming (usually winter, but really dry months are another good time to use your stores when you're a bee!)

When the days start getting shorter and the temperature drops, the bees begin to stay home more. All of the nectar-producing blooms are on the way out, so the drive to go out at dawn and forage to dusk wanes. As you might imagine, when you change from a job that has you in 4th gear, most of the day, to one where your primary job is keeping warm

and producing a bit of heat yourself, the stress on the old body lessens dramatically. In addition, when you're not out presenting a tasty little meal to some wayward bird or hornet, your life span also increases. For this reason, bees live for 3, 4, 5 and (very rarely) 6 months during the winter months (as opposed to 2 months during the nectar months!)

Obviously, with fewer bees dying off, the drive to lay a bunch of eggs decreases dramatically. Not only are you in a situation where resources are thin, but you need a temperature of 92 degrees for eggs and larva to grow (and it becomes really hard to keep a large brood nest warm when it is 10 degrees F). The goal of the hive is to keep enough bees to keep the hive warm, but not so much that all of the stored honey is used up before the Maples and Hollies bloom in spring. The decreasing day length and cooler temperatures begin to affect the Queen in October. By November, egg laying should be virtually stopped.

The bees form the cluster and hang on for the ride. As we all know, the days begin to lengthen around December 21 and this is the sign to the queen to start ramping up her egg laying. For the first couple of weeks, the rate barely creeps up (but it definitely should not be decreasing anymore at this point.)

Once the main cluster reaches 57 degrees F (or thereabouts), the bees form the cluster. They slowly begin to gravitate to one another, shaking their thoraxes violently to create heat (the thorax is where most of the bee muscle is, so this is effectively like doing 'jumping jacks' to increase their core temperature and give off some heat into the cluster. As more and more bees come together, a ball forms. The further you get from the center, the colder the bees become. By the time you get to the edge of the cluster, most of these bees are barely able to do much 'shaking'. They begin to work their way back towards the middle of the cluster, taking in the heat of their warmer sisters, warming their bodies up to begin the cycle again, center-to-edge, edge-to-center. (*And interesting side note about the 'cluster' is a term known as 'balling'. Here, the bees form a small ball around a predator (like a hornet) and also begin to generate heat. They can actually cook the invader with this action and it is a defense mechanism used sometimes in non-Winter months.*)

As mentioned before, the cluster maintains a 90+ degree temperature in the center, when raising brood. When no brood is present, the temperature can drop to the low- to mid-80's.

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The Hazelnut Tree Hip tree or shrub for bees!

One way to jump start the honeybee year is to make sure there is plenty of late winter pollen available and a good way to do this is to make sure your bees have some hazelnut trees or shrubs planted nearby. There are many varieties of hazel nuts, each variety can supply pollen for a few weeks; each one has its own time to begin blooming. The earliest begin blooming in December, most are later, the latest go into April. The shrubby, often multi-stemmed, trees are well suited for this area and produce delicious nuts for you to enjoy provided you can outwit the birds and squirrels!

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LURING VARROA MITES TO THEIR DOOM

Agricultural Research, July 2009

The mite, *Varroa destructor*, is only about 1/16" long but that hasn't stopped the eight-legged, bloodsucking parasite

from becoming the single worst pest of honeybees since first being detected in Florida in the 1980s. So it is with quite a bit of urgency that researchers nationwide are seeking new ways to control *Varroa*, particularly methods that will diminish reliance on the chemical controls – fluralinate and coumaphos – now used.

At the ARS Chemistry Research Unit in Gainesville, Florida, research leader Peter Teal is testing a bait-and-kill approach using sticky boards dosed with natural chemical attractants called "semiochemicals". For patenting reasons, Teal won't reveal what the specific compounds are other than to say they're naturally produced by honeybees and highly attractive to *Varroa* mites. In nature *Varroa* mites rely on the semiochemicals to locate and then feed on the bloodlike haemolymph of both adult bees and their brood, weakening or killing them. Severe infestations can decimate an affected hive within several months and rob the beekeeper of profits from honey or pollinating services. But in this case the mites encounter a more heady bouquet of honeybee odors that lure them away from their intended hosts and onto the sticky boards where they starve.

drop on bees when we present them with either of the two attractants and more than 80% of free hives are attracted to these chemicals in biological tests." Teal reports. "Moreover, it doesn't appear that the extra dose of semiochemicals wafting through the hive interferes with the honeybees' normal behavior or activity to any significant degree." Teal adds. The researchers hope that the patenting of the *Varroa* attractants will encourage an industrial partner to develop the technology further for use by beekeepers as both a monitoring tool and an alternative to chemical controls.

This research is part of Crop Protection and Quarantine, an ARS national program (#304) described on the World Wide Web at www.nps.ars.usda.gov.

Peter E.A. Teal is in the USDA-ARS Chemistry Research Unit, [Center for Medical, Agricultural, and Veterinary Entomology](#), 1600-1700 S.W. 23rd Dr., Gainesville, FL 32608; phone (352) 374-5730, fax (352) 374-5707.

I really like Peter's idea and was hoping he would have an update. I e-mailed him but have not heard from him yet. This would be great and help eliminate some chemicals. Ms Deb

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Recipe Corner

HONEY PUMPKIN PIE W/HONEY WHIPPED CREAM

Submitted by Kim Redmond

The Pie:

1-3/4 cup pumpkin puree

2 eggs, lightly beaten

1 cup whole milk

1/2 cup honey

1 teaspoon cinnamon

1/2 teaspoon ginger

1/4 teaspoon ground cloves

1/8 teaspoon nutmeg

Preheat oven to 425 F. Thoroughly mix all ingredients and pour into an unbaked pie crust.

Bake for 15 minutes then turn oven down to 350 F and bake additional 45 minutes to 1 hour (until firmly set.) Cool 10 minutes before slicing. Serve with Honey Whipped Cream.

The Cream:

1 cup heavy whipping cream

3 tablespoons honey

1 teaspoon vanilla extract

In medium bowl, beat cream with electric mixer until soft peaks form. Gently fold in honey and vanilla.

Makes 2 cups.

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CATCH THE BUZZ

USDA Annual Honey Report ELIMINATED!
NASS Reduces Agricultural Estimation Programs

Issued October 17, 2011 by the Agricultural Statistics Board of the U.S. Department of Agriculture, National Agricultural Statistics Service (NASS). For more information, contact Sue duPont, 202-690-8122.

In light of funding reductions in fiscal year (FY) 2011 and the likelihood of additional reductions in FY 2012, NASS conducted deliberate reviews of all programs against mission- and user-based criteria, aimed at finding cost savings and forward-thinking business efficiencies so that key timely, accurate and useful data remains available in service to agriculture. As a result, the agency is discontinuing or reducing a wide range of agricultural survey programs. The decision to eliminate or reduce these reports was not made lightly, but it

during the coming year, these decisions are necessary now.

Many programs are reduced or totally Eliminated and the

- Annual Bee and Honey Report - Eliminate

Recognizing the importance of NASS's data products and services to U.S. agriculture, NASS will make available similar data either less frequently or within the every 5-year Census of Agriculture. The next census will be conducted beginning January 2013 to reflect activities in the 2012 calendar year.

A Federal Register notice announcing the program changes will be forthcoming.

This ezine is also available online at http://home.ezezine.com/1636_2/1636_2-2011.10.15.06.10.archive.html



My mention of possible pesticide-autism connections last month resulted in the following: "I have recently read about the connection between pesticides, which are neurotoxins, and autism. I am not surprised that what hurts the bees nervous systems does the same to humans. I'm sharing a few links with you. If you google 'pesticides autism link' you'll find more.

<http://articles.mercola.com/sites/articles/archive/2007/08/16/80-percent-of-schools-are-applying-pesticides.aspx>

<http://www.autismtoday.com/articles/Pesticide%20link%20to%20autism%20suspected.asp>

<http://www.pesticide.org/the-buzz/autism-linked-to-maternal-exposure-to-pesticides>

Reed Johnson along with Dr. Jamie Ellis report on miticide and fungicide interactions. There are many and they can be complex. Read their tips on using chemicals in beehives and volunteer some time at <http://broodmapper.com>. Two articles on winter preparations reveal that this season is just around the corner. The first from SW Arkansas provides a good winter preparation list and the most important advice of keeping mites under control as well as looking at effects of wind and moisture.

Malcolm T. Sanford

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Q: Who writes books for little bees?



A: Bee-trix Potter!

Bee Safe and Warm this Winter!