

"THE BUZZ!"

May 2008

An electronic newsletter from the Kentucky Department of Agriculture's State Apiarist's Office

A busy beekeeping season!

Since I put out the last Buzz in December a lot has changed. We've gone from early winter to early summer, and our bees have gone from dormancy to heavy swarming. The early nectar flow has been good and has resulted in lots of swarming hives, but we're yet to find out what kind of honey crop we'll have. So far it looks like our hives are in good shape. We have a lot going on this summer, both in Kentucky and nearby. Watch this newsletter, the Kentucky State Beekeepers Association Web page (www.ksbabeekeeping.org) and my Web page (www.kyagr.com/statevet/bees/index.htm) for more updates on summer activities.

KSBA Web page updates

I recently assumed the duties of webmaster of the Kentucky State Beekeepers Association's Web page, www.ksbabeekeeping.org. I'm in the process of making some additions to the site that I hope will assist our beekeepers. One of these will be a page where KSBA members can list beekeeping equipment for sale; another page will be for the sale of nucs, queens, or excess hives with bees. There will be some restrictions on the use of this new service. First of all, you must be a member of KSBA to post equipment for sale on the site. Also, the equipment page will allow listings only by non-dealers. The purpose of the page is to give beekeepers (and former beekeepers or their family members) a way to sell their used or excess equipment, so if you sell equipment for a profit, you will not be allowed to list on this page. Queens must be produced in Kentucky, and nucs must be made up in Kentucky.

To get more information about these new pages, view listed items, or view directions on how to list items, go to www.ksbabeekeeping.org.

I have some ideas for future additions, so drop in on the Web page from time to time. If you have suggestions for changes you would like to see, please let me know.

Kentucky State Apiarist Web page

In addition to the KSBA webpage updates and changes, I have been making updates and additions to my own site at www.kyagr.com/statevet/bees/association/index.htm. Here you'll find listings for all the local associations in Kentucky, beekeeping information (including special tips and information for those interested in becoming beekeepers), back issues of this newsletter, listings of upcoming beekeeping classes, meetings and schools, and my schedule for speaking at various beekeeping meetings.

Information & tips for new beekeepers - Inspecting that new hive

You've bought your nuc or installed your package of bees; you're opening the new hive, and you wonder what you're seeing and what you should be looking out for (or what might indicate a problem). This is a question I get numerous times from new beekeepers each spring, so here are some tips.

Within a couple of days of installing the package, the bees will be drawing the wax foundation out into new beeswax comb. They must do this immediately to give them a place to store pollen and nectar (or the sugar syrup you're feeding them), and a place for the queen to begin laying eggs. The queen will emerge from the queen cage within a few days of installing the hive, so watch for her. This is much easier for the beginner if she is marked, so I suggest that beginners purchase marked queens. The queen normally starts laying eggs as soon as she is released and there are cells constructed in which she can lay (sometimes all she needs is for the cells to just be started). While you should see eggs or small larvae about a week after a new queen is placed in a hive, I have seen queens take as long as two weeks to begin egg laying, especially if they have been caged for more than a few days. So if you see the queen but do not see eggs, do not panic; give her some time. Within a week of the queen's emerging you should see eggs and larvae, and then capped brood about 10 days after the queen begins laying eggs.

Nucs

If you purchased a nuc from a beekeeper, all stages of eggs and brood should already be present. The nuc should not be sold until the new queen is out and has been laying eggs for at least a week. Since eggs hatch about three days after being laid, your new nuc should contain eggs and uncapped brood (larvae) from the queen that was introduced when the nuc was set up. It should also contain capped brood which was moved from the parent colony, thus the new nuc should contain all stages of brood. You should also see new comb being drawn out, since the new nuc may have been sold to you with at least one new frame of foundation, and you will be filling the rest of your standard deep box with more such frames. See more on nucs below.

If you are reading this in an HTML format on your computer you can click on the following links to view photos of what you should be seeing. But if you're reading this on your computer as text or a printed copy, you can type (or copy and paste) the URL into the address box of your Internet browser.

Eggs - <http://maarec.cas.psu.edu/pest&Disease/sl5.html>

Larvae - <http://maarec.cas.psu.edu/pest&Disease/SL6.html>

Capped brood (or pupae) - <http://maarec.cas.psu.edu/pest&Disease/SL7.html> and <http://maarec.cas.psu.edu/pest&Disease/SL8.html>

Pollen – For a nice photo of pollen, go to this Web page at Bee Craft (the journal of the British Beekeepers Association) and scroll down to the photo entitled “worker bee”. Note the nice photos of the queen and drone as well. The multi-colored solid material in the cells is pollen. <http://www.bee-craft.com/beekeeping-information-honey-bee.htm>

Adding a second hive body – when?

Another common question from the beginner with the new package or nuc is, “When do I add a second hive body?” Allow the bees to draw out about seven frames in the first box before adding a second box – and I do suggest adding a second deep as an additional brood box. Then if we are still in a nectar flow when the bees have drawn out about seven frames in the second box, you can add a honey super. If you're lucky (and part of this luck depends on how late into the summer our nectar flow goes), you might make honey the first year with your new hive. To assist the bees in drawing out comb you can feed them as long as they will take sugar syrup while they are drawing out the comb in the brood boxes. The bees will often stop consuming sugar syrup if there is a good nectar flow going on. Once you add a honey super, STOP feeding. Sugar syrup does not turn into honey – it is just bee-processed sugar syrup. Honey comes only from natural nectars.

How do you tell if there is still a nectar flow going on?

If you continue to see fresh nectar in the cells of the comb, there is a nectar flow. Plus, once it stops (typically in July in Kentucky, but dry weather can end it earlier), you will see decreased activity at the hive entrance. If your hive is strong (lots of bees), you likely will see bored bees hanging out on the entrance and front of the hive. You also may see a change in the bees' attitude. Bees often become more defensive during the nectar dearth. Bored bees can be mean bees.

Intermediate Beginners Beekeeping Class

There will be an intermediate beginners beekeeping class on June 7 at the Anderson County Extension Office in Lawrenceburg (1026 County Park Road – for directions go to <http://ces.ca.uky.edu/anderson/directions/>). A classroom session will begin at 10:00 a.m. and run until about 11:30 a.m. If the weather cooperates, we'll take a lunch break at a local restaurant and then do a brief beeyard session. So bring your veils and whatever protective clothing that you normally wear.

This class will focus on summer management and is designed as a follow-up to the beginners session at the winter Bluegrass Beekeeping School. Curriculum should be helpful for new beekeepers and those with limited beekeeping knowledge. There is no charge for the class, and pre-registration is not required. Kentucky State Apiarist Phil Craft will conduct the class. For more information contact Phil.

Buying nucs – some tips

A nuc (short for nucleus hive) is a new hive started with two to four frames of bees (some of which contain capped brood) and a queen. Think of a nuc as a small starter hive with a laying queen (normally young) and a small number of bees, which can grow into a strong hive in the summer. Purchasing a nuc is a great way to increase the number of your hives, or to get started in beekeeping. Unfortunately, the demand for nucs is greater than the supply here in Kentucky. Prices for nucs are typically slightly higher than for packages, but there are advantages to nucs that make this added cost worthwhile. When you buy a nuc, you are getting a queen that is established and laying. (You should see both her eggs and young larvae.) You'll also receive three or four frames covered with bees, along with a couple of frames of capped brood from which new bees are emerging. The queen, which should be a new young queen, will have already been accepted by the bees in the nuc, so there is virtually no danger of rejection, as sometimes occurs with new packages. The queen should also have been laying eggs long enough that the beekeeper that made up the nuc can be confident of her quality. Sometimes with a package (fortunately not very often), the beekeeper discovers that his new queen was insufficiently mated, the queen dies in the cage, or the bees don't accept her. These problems are avoided with a nuc. Plus the bees do not go through the stress of traveling in a package several hundred miles. Many beekeepers recommend that new beekeepers buy only nucs, though, because of the low supply, this is not always possible. Maybe that will change someday in Kentucky, but we are not there yet.

Pitfalls of buying nucs

Unfortunately, I have seen nucs purchased by beekeepers in the past that were not a good value for the purchaser. It can be difficult for beekeepers just getting started to evaluate nucs. Recommendations from experienced beekeepers whom you trust can go a long way. Here are some standards for what you should expect and questions you should ask the beekeeper from whom you are buying nucs. These questions can also help you compare nucs that are being offered for sale at different prices by different beekeepers.

- 1 When you first talk to a beekeeper selling nucs, ask how long he has been keeping bees. Occasionally beekeepers with only a couple of years of experience decide that selling nucs is a fast way to make some money. I would be concerned about buying nucs from beekeepers with less than three years of experience. Don't be shy about asking other beekeepers about the experience and skill level of the beekeeper offering the nuc. If you are looking for disease- and pest-free nucs, they need to come from skilled beekeepers who are proficient at keeping their bees alive.
- 2 Ask when the beekeeper treated his hives for varroa mites, or what his varroa levels were like this spring. If he says he does not treat for varroa, make sure he is checking the hives for varroa levels. Ask if his hives have had American Foulbrood. There have been cases of nucs being sold infected with Foulbrood. And did the brood come from his own hives? Some beekeepers buy brood and bees from other beekeepers to make nucs for sale. There is nothing wrong with this, but you should know where the brood and bees came from. Will he guarantee that the hive is disease and pest free and guarantee the queen for at least a brief period of time?
- 3 Take a veil and ask the beekeeper to open the nuc. The hive should contain at least three drawn combs and may contain one or two sheets of foundation. If the bees are drawing out the new foundation, this indicates that they have been in the nuc more than a few days – which is a positive. If they have not drawn out the new foundation, that is an indication that the nuc was made up more recently. Look at the drawn comb. Does it look fresh? While it likely will not be newly drawn comb, it should not be more than 2-3 years old. The beekeeper should not be culling his old comb to make nucs. Very old comb can harbor disease (a downside of buying nucs). If you're not sure how to evaluate what you will see in the nuc, get a more experienced beekeeper friend to go with you to check it out.
- 4 If the nuc has been made up for more than a week, you should have an opportunity to see large areas of eggs or fresh larvae, which is another plus. Look at the new eggs uncapped brood on the comb. Is the queen laying in most of the available cells? If the larvae development is further along, watch out for drone cells scattered in amongst the worker larvae. This may indicate a poorly mated queen.

- 5 Ask if this is a purchased queen and, if so, from whom was she purchased? Some beekeepers will make nucs without installing a queen but allow the nuc to raise a queen. A queen raised from a swarm cell or supersedure cell has the potential to produce a quality queen, but queens raised by the insertion of a frame of eggs into a queenless nuc result from “emergency cells”, and these cells sometimes produce poor quality queens. Watch out for stubby queens with short abdomens – this appearance is indicative of poor quality queens. If the nuc contains a queen raised from a queen cell placed into that nuc, make sure that she has had enough time since emerging to get mated, and that the nuc contains her eggs. I would never buy a nuc containing a virgin queen or a queen cell instead of a mated queen. While you can learn a lot about a queen from looking at the eggs and larvae (remember that the capped brood in the nuc is probably from the parent colony unless the nuc has been made up for more than a couple of weeks), also notice the queen herself. Her abdomen should be long in relation to her thorax and head. Ask how long she has been out and laying? As I said before, she should have been out long enough to be laying eggs and have her own larvae present (this takes only a few days after egg laying begins).

Making up your own nucs

If you are interested in making your own nucs to increase your numbers, it is not difficult. You do need to have the basics of beekeeping down, and you do need a hive or two with lots of bees and brood. It is also good to have a source for new queens. At present, queens for sale seem to be in short supply (unless you ordered early), but typically later in May the demand slows and the supply increases.

You need to have your queen in hand before making up a nuc (or, if you have queen cells available, see the section below). I do not recommend making up nucs and depending on the bees to make a new queen by inserting a frame with eggs into the nuc. It has been my experience that this method is not always successful and can result in a queen of inferior quality. When making nucs for increase, I always purchase a quality queen from a queen producer.

I prefer to make up nucs on nice warm days, when the bees are flying well. This reduces the number of bees in the hive (since the foragers are coming and going) and makes for friendlier bees. It can make finding the queen easier as well.

If you're purchasing queens for nucs, try to plan your nuc making for the day the queen arrives or the next day. Also make sure (again ahead of time), that the hive you intend to use as a source of bees and capped brood is strong enough to supply the nuc without weakening the parent hive. I never take bees and brood from a hive unless it has both brood boxes full of bees (all brood frames covered with bees) and has at least six deep frames of capped brood present. I always want to leave at least four frames of capped brood in the parent hive.

Nuc boxes

You can use either nuc boxes or standard hives for making up nucs. A nuc box is simply a smaller version of a standard hive and typically holds four or five deep frames. I prefer five-frame nuc boxes, but nuc box sizes are a matter of personal preference. You do not even need nuc boxes to make a nuc; a standard hive with a deep hive body works fine. Most beekeepers make their first nucs in them, and some continue to do so. A nuc box is just convenient because it can be more easily moved and handled.

Finding the queen in the parent hive!

When you make up a nuc, you **MUST** guarantee that you do not remove the queen from the parent hive. This normally requires the beekeeper to find the old queen in a very strong hive. Newer beekeepers often find this difficult. However, there is a simple method for making up a nuc without finding the queen. I'll talk about that later in this article. You can first go through the hive to find her, or you can search for her as you make up the nuc. If I find her first or run across her as I make up the nuc, I will normally place her, along with the frame she is on, in a separate nuc box for safe keeping. Another method is to leave her in one deep and remove the frames for the nuc from the second brood box. The system you use is up to you, but keep track of her and do not accidentally move her. The bees will not normally free your caged queen if there is a queen present. Or they may free the caged queen and then kill her. So make sure you don't remove that existing queen.

Making up the nuc

I usually just start removing frames from the parent hive, examine them and make up my nuc. I also select a frame with lots of honey and some stored pollen, and place it, along with the bees on the frame, into my nuc box. I normally do not look for the queen first but examine the frames for her as I go. If I run across her, I store that frame; if I don't, I'll look for her later to guarantee that I did not move her. I then examine and move at least two frames with lots of capped brood, along with the bees on the frames. I try to select frames that have nice big ovals of capped brood. I prefer frames from which I see new worker bees emerging. This allows my new queen to quickly lay in these cells when they are empty, and the emerging bees will reinforce the bee population in the new nuc. I try not to move uncapped brood. Uncapped brood must be fed and cared for by the bees in the nuc, and I prefer the bees in the nuc to concentrate on drawing comb and caring for the eggs the new queen will lay. Plus the older capped brood will result in additional bees sooner.

If I did not see the queen as I removed the frames to the nuc, I will look through the hive for her. While I'm pretty observant at seeing the queen, I want to make sure.

Fill out your nuc box or brood box with empty frames or frames with good quality drawn comb if you have them. You'll probably need to leave one frame out in order to install the queen cage between the frames. If you're using a nuc box, in addition to the frames of brood and a frame of honey you may wish to install a division board feeder (this type of feeder occupies the space of a frame). Or fill out the box with an additional frame with foundation or comb. If using a standard hive, you can go ahead and fill it out with additional frames of foundation or drawn comb.

Installing the queen

Now you are ready to install the queen. This is the same process we use when installing a queen in a new package. It can be done immediately, but I prefer to wait a while. I like to give the bees in the new nuc a minimum of a couple hours to realize that they are in a queenless state. I believe that I get a better rate of acceptance this way. I sometimes make up nucs and then return later in the afternoon or even the next morning to install the queen. When you're ready, place the queen cage between the frames of capped brood, candy end up, with the plug removed from the candy end. I NEVER directly release queens, nor do I remove any of the candy or punch a hole in the candy. I leave that up to the bees. I give them all the time they want to free the queen, believing that this increases the chance of her being accepted. But if you wait more than a matter of hours to install the new queen, you need to check to make sure that the bees have not started a queen cell. If they have young larvae and start an emergency queen cell, they may ignore your new queen or worse. I've never had that problem when I waited as long as 16 hours (afternoon to the next morning). If you do check back after a couple of days and find the bees are ignoring your new queen, look for a queen cell or even a queen. Sometimes in the spring, hives contain multiple queens as a result of queen production. If you have a queen, a queen cell, or even a virgin queen walking around in a nuc, the bees will probably ignore your new queen and not attempt to free her.

Moving the nuc to a different location versus leaving it in the same beeyard

Some directions for making nucs will say that you should always move the nuc to a new location, but I don't consider this necessary. If you leave the nuc in the same beeyard, older bees on the frames in the new nuc will return to the old hive after they exit the nuc to forage. I prefer this since it does not remove foragers from my parent hive and reduces any loss in honey production. It also leaves only younger bees in my nuc, which helps ensure acceptance of the new queen – younger bees more readily accept a new queen. Plus the young bees are at the proper age to make wax, care for the queen and raise new brood. These are the activities that I wish to see going on in the new nuc. Since I feed the nuc, foraging for nectar is not important initially. Later, as the nuc grows, the young bees I moved will age and begin to forage for themselves.

However, if you wish to maximize the number of bees in the nuc, you can seal it, then immediately move it to a new location at least a mile away. Then, when the foragers leave the hive, they will reorient and return to the nuc. So whether to move or not is up to you. If you wish to move them – perhaps to a location where it is more convenient to care for them – but do wish to leave the foragers behind, just move them the next day. By that time the foragers will have flown and returned to the parent hive.

Adding extra bees

I often will shake the bees off an additional frame or two (again from capped brood – that is where the young bees are) to add young bees to the nuc. If you do leave the nuc in the same beeyard where it was made up, you will most likely see a decrease in the number of bees in the nuc the day after it was made up. This is due to the field bees returning to the parent hive.

Making a stronger nuc, making more nucs, mixing frames of brood and bees

Two frames of brood is the standard for making up nucs, but you can make them stronger. Let's say you have an existing hive with 10-12 frames of capped brood. You can easily move half of those frames to make a single, stronger nuc. You could also make up two nucs, or more, from a single, strong hive. You can even mix frames of brood and bees from different parent hives to form one nuc without weakening any of the parent hives too much. Why does this not result in a lot of fighting? Most of the bees on brood frames are young bees and will not fight when combined. However, when mixing frames from different hives you have to be especially careful about accidentally moving the queen. You can imagine the problem if you accidentally moved the queens from two different hives into one nuc.

Kentucky State Beekeepers Association Education Project

One of the most popular services that the Kentucky State Apiarist offers is free apiary inspections. For those of you not familiar with these apiary visits, they can best be described as educational inspections. On these occasions, the beekeeper and I open the beekeeper's hives together looking for any disease, pest, or management problems that may be present. If problems are found, I try to give advice or offer solutions, and there is time for lots of questions, answers, and bee talk while the hives are open and before and after.

However, I have a problem. I am a one-person apiary office here at the Kentucky Department of Agriculture. I provide a variety of services to beekeepers across the entire state, and many apiary visits require more than local travel. I am hard-pressed to visit every beekeeper who would like an apiary inspection. So in 2005, the Kentucky State Beekeepers Apiarist program was developed to extend the inspection program and reach more beekeepers. This is a joint program of my office at the Kentucky Department of Agriculture and the KSBA. It provides for the appointment of qualified beekeepers as *KSBA* Apiarists to conduct apiary visits for beekeepers who request them.

Beekeepers appointed as KSBA Apiarists must be experienced Kentucky beekeepers (five years of beekeeping experience is one of the preliminary requirements), pass a written examination, and go through a training session that I conduct with them. These KSBA Apiarists conduct the same type of apiary inspections that I do and are compensated a small amount for each inspection from grant funds (no charge to the beekeeper). I continue to conduct visits myself as my schedule allows, but this program is a means of reaching and helping more beekeepers than I can do alone. We now have 15 beekeepers appointed and trained as KSBA Apiarists. They are conducting or ready to conduct visits throughout Kentucky. KSBA Apiarists are currently located in or near Bowling Green, Corbin, Elizabethtown, Frankfort, Georgetown, Lawrenceburg, Lexington, Louisville, Mayfield, Owensboro, and Scottsville.

We are very much in need of more beekeepers to assist with this program. If you think you have the beekeeping experience and proficiency to make these visits, contact me for more information. If you're interested in having someone (myself or one of the KSBA Apiarists) make an apiary visit with you, let me know. This is a free program.

Honey Cookery Judges needed for the Kentucky State Fair - a sweet job!

We are in need of several persons to help judge the honey cookery (foods such as candy, cakes, pies, jams and jelly, and bread – all made with honey as the sweetener) at the fair. No experience is needed – but a sweet tooth helps – and the only real requirement is that you be available on August 12 during the day. There is a small reimbursement for travel expenses, but your actual pay is a fun day and lots of treats! If you're interested, contact Phil Craft.

To have THE BUZZ! sent directly to you!

If someone has forwarded you this issue of THE BUZZ! and you would like to have THE BUZZ! sent directly to you via e-mail, send me an e-mail at phil.craft@ky.gov and ask to be added to my list. I organize my e-mail list by name, so make sure you sign your e-mail with first and last name. Also, if you are a Kentucky beekeeper, I'd appreciate knowing a little about you and your beekeeping activities – address, how many hives, years of beekeeping experience, and if you belong to a local beekeeping group or to the Kentucky State Beekeeping Association. I would also like your mailing address. This information helps me better serve the beekeepers of Kentucky by knowing where beekeepers are located and allows me to let you in on regional beekeeping activities or to drop you a note if I discover your e-mail address stops working. This e-mail newsletter is not restricted to Kentucky residents. Many subscribers are from our surrounding states, especially Tennessee and Indiana. If you're from out of state, I need only your full name and home state; any other information is optional.

Keep those smokers lit and your bee veils on!

Phil Craft, State Apiarist

Kentucky Department of Agriculture
100 Fair Oaks, Suite 252
Frankfort, KY 40601

E-mail Phil.Craft@ky.gov

Phone: (502) 564-3956
Cell: (502) 330-0797
FAX: (502) 564-7852

Web page: <http://www.kyagr.com/statevet/bees/index.htm>