

Beekeeping Made Easy

Working with the bees

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Basic Management techniques: If any of the following appeal to you more than another, you can go to it immediately. Our beekeeping techniques for the first eight to ten weeks from our start will vary somewhat based upon the region of the country we live in and will vary according to how we get our bees. Once bees have developed into full sized well populated hives, our techniques will become somewhat standard and universal.

[Techniques -- starting with a package of bees](#)

[Techniques -- starting with a nuc starter hive](#)

[Techniques -- starting with a full complete hive](#)

Starting with a purchased complete hive

This is the simplest way to start beekeeping. However, as with nuc's, you risk getting someone's diseased colony. Always get the hive inspected before buying it. This should be done by someone other than the person selling the hive. Many states require a transfer of ownership certificate and this certificate will provide you with disease information and the condition of the colony of bees. The hive should have a strong population of bees. If it is weak, why buy it! Bees for sale can often be found in the bee journals and local farm or state agriculture bulletins.

Advantages:

- The necessary equipment is already constructed and has bees in it.
- It will most likely be several years old and have an established queen and lots of brood.
- It will make honey the first year.
- You do not have to transfer bees into the hive equipment.
- The hive will generally not require the extensive feeding that package bees or nuc's will need.

Disadvantages:

- It may carry disease.
- The queen may be old and need to be replaced.
- It is the most expensive way to get bees.

- **The equipment may not be standard.**
- **The equipment may need maintenance.**
- **You may be required to move the hive from its present location to your location.**

Problems:

- **Disease:** You should examine the frames and bees for disease and be on a constant look for them. Most established hives of bees will have mites. In the south, some may have hive beetles. To keep the bees alive in your hive, you will need to develop a pest control program of some type. That is discussed later.
- **Queen:** The queen may be old and needs to be replaced. This is not bad in itself but finding the old queen to replace her is quite a job for a new beekeeper. Remember the number of bees in your hive depends upon a good laying queen. Older queens do not lay as many eggs and produce fewer adult bees than a new queen in a hive.
- **Condition of equipment:** You can judge equipment prior to buying. You get what you pay for. However, there are some signs you should be looking for when you get the equipment.
 - Are the frames old and dark?
 - Are there any areas of rot in the woodenware?
 - Is paint peeling from the woodenware?
- **Did you pay too much?** The price of a complete hive of bees depends on a number of things. New beekeepers tend to be eager to get a hive of bees and sometimes pay an outrageous price for the hive. No complete hive of bees should cost more than the total combined cost of new equipment and bees.
- **Do you need to move the hive yourself?**
 - **Moving a hive without prior experience with bees can be a real interesting learning experience. If you must do the job yourself, we would like to make sure you understand a few pointers:**
 - **Move the bees late in the evening or early in the morning when the bees are not flying.**
 - **Try not carrying them inside your vehicle. A trailer or truck is preferred. If you have a van or station wagon, you might want to enclose the hive in a bed sheet to prevent the bees from flying around inside your vehicle. Usually a good amount of duct tape is used to cover all cracks and opening that would allow the bees out of the hive. In addition, you would need to use wire screen over the entrance to allow the bees to get some air and prevent them from coming out. It is best to put this wire screen in place before you pick up the hive. Not after you have disturbed the bees.**
 - **A strap around the hive will help hold everything in place for the trip. One can buy hive staples for this purpose as well. Four strips of wood fastened onto the bottom board and the sides of the hive bodies as well as back with screws works**

equally well. A telescoping hive cover can be held on with just a screw or two. Portable power drills with drywall screws are great to work with in the bee yard.

- The hive must be firmly tied down to the trailer, truck body, or inside the van or station wagon. You don't want it to slide around. Ask yourself what you would do if "you were driving down the road with a hive of bees in your van, truck or trailer and someone pulled out in front of you!"
- Your new hive may swarm and most likely will if you do not manage your bees and check the bees often. See strong hive management.
- What happens if your neighbors begin to complain about your bees?
 - Do not tell them to "Go to H____!"
 - Be open and visit with them. Ask questions to determine why they object to your bees. Is it something you can change in your beekeeping methods? location of hive? or other.
 - Are their fears justified? Is a neighbor highly allergic to bee stings?
 - Give gifts of honey when you harvest your honey crop.
 - Educate your neighbors on the value of honey bees.

Managing your new hive

- What is needed?
 - Keep a watchful eye on your hive. You should inspect your hive every week or two during the spring to check on disease and crowded conditions.
 - Your hive should have a number of things going on. The following represent normal bee behavior.
 - The queen should be laying eggs. Larva and capped brood should be present.
 - The bees should have a well defined brood nest.
 - The bees should be storing pollen and nectar in cells around the brood nest.
 - The bee population should be strong. If the hive is a two deep brood chamber, both brood boxes should be full of bees. If this condition does not exist, you may need to replace the queen or the hive was weak when you bought it.
 - You will need to have honey supers to put on top of the brood chamber. This needs to be done as soon as a honey flow begins. Usually the time dandelions begin to bloom is a good time to start putting the first few supers on your hive of bees.
 - You will need to exercise good clean beekeeping practices as discussed in the previous lesson.

Back to top of page**Starting with a nuc hive**

Another common method of starting a new hive of bees is to buy a nuc (frames of bees with a queen--a small starter hive). This is usually made up of three, four, or five frames with bees and queen. Its advantages are:

- **The queen has already been accepted by the bees.**
- **The queen is already laying eggs and the nuc should have a good amount of brood.**
- **There should be no decline in bee population as there is with a package.**
- **The nuc should develop into a full honey gathering hive in one half the time it takes a package to develop to the same strength. This will depend on the strength of the nuc when you buy it.**
- **There is considerably less labor involved in starting a nuc instead of a package of bees.**

Its disadvantages are:

- **The frames the bees arrive on could contain disease such as American foulbrood spores.**
- **The beekeeper selling the nuc's could be getting rid of old frames which you will have to replace or want to replace in a year or so. Ask what the frames are like when you place your order. Nuc's with new comb are always worth just a bit more.**
- **The queen could be an old queen. Ask for new queens when you order the nuc.**
- **A nuc hive will cost more than a package of bees.**

Nuc starter hive techniques:

Check list of things to have ready

- **Order you nuc's early**
- **All hive equipment must be ready; however, you have a little more time to work because the bees will survive in the nuc for a short period of time before becoming crowded and swarm.**
- **Location of the hive must be determined before you take frames from the nuc and put into your new hive body.**
- **Protective equipment and bee tools must be available before you work with the nuc.**
- **All other equipment needs to be ready such as your feeders, cleaning equipment, and anything else you will be needing.**

If you have the following, you are ready to begin:

- **The nuc has arrived. Be sure to sit the nuc in the same location the new hive will be located.**
- **All items above are ready.**
- **You are ready to go to work.**

Steps in moving the frames from the nuc into your new hive body.

- **Transfer procedures:**
 - **Remove three, four, or five frames from your new hive body plus one. The frames removed should be from the center of the hive body. The number depends on the number of frames in your nuc.**
 - **Put on your protective equipment.**
 - **Pick up the nuc and move it a few feet to one side of the new hive body which is placed in the exact location of the nuc. Be sure to level the hive stand, blocks, or supports the new bottom board will be resting on. There should be a slight slope toward the entrance so rain water will drain out of the hive rather than into the hive.**
 - **Smoke the nuc lightly. Remove the top cover to the nuc and expose all frames. Again use light smoke to quiet the bees.**
 - **Remove each frame one at a time carefully. Check each frame for brood, and eggs. Also check for the queen. Do not be rough and roll any bees (roll bees means to pull the frame up out of the hive and by doing so, the bees on the frame are rolled off of it). This results in the killing of many bees and possibly the queen as well.**
 - **After you have examined the frame you pulled from the nuc, place it in the new hive body. We asked you to remove one extra frame. The reason for this was to provide enough room to place all the frames from the nuc into your new hive without squeezing any frames and killing any bees. The extra room allows for each frame to be placed easily into the new hive.**
 - **After all the frames from the nuc are in your new hive, you can add the extra frame we asked you to remove. This is done by taking your hive tool and gently moving the frames from the outside on one side toward the other side of the hive body. The last frame is then placed into the slot you made next to the outside of the box. When you open a hive to examine frames, you should always begin from the outside and work toward the center of the hive.**
 - **What is left for you to do is close up the hive.**
- **Problems**
 - **The major problem with a nuc is the possibility of disease. Be aware of what American foulbrood is and be on the look out for it. Get your nuc inspected as soon as you can by either a state or county bee inspector or a knowledgeable beekeeper you**

trust.

- If AFB does appear in your new hive of bees within the first year, you have every right to contact the person who sold you the bees and ask for compensation. It may consist of a refund in money for the nuc or even the equipment cost if you are required by your state dept. of agriculture to destroy the hive. It is more likely that the person who sold you the nuc may claim the AFB showed up after you purchased the bees and therefore is not responsible. If so, report this situation to your state bee inspectors. It is possible, but if many customers of this producer have the same problem -- the problem most likely originated with the producer. Some state allow you to treat with terramycin and you can do this to mask the disease. But it is a hell of a way to start beekeeping especially if you have all new equipment except for the frames that came with the nuc!
- The nuc will develop faster than a package of bees will and you need to have equipment ready to place on this hive as the population grows. Otherwise, this nuc could be crowded and the bees will swarm. Don't let anyone tell you that the bees will not swarm in their first year!
- What happens if your neighbors begin to complain about your bees?
 - Do not tell them to "Go to H___!"
 - Be open and visit with them. Ask questions to determine why they object to your bees. Is it something you can change in your beekeeping methods? location of hive? or other.
 - Are their fears justified? Is a neighbor highly allergic to bee stings?
 - Give gifts of honey when you harvest your honey crop.
 - Educate your neighbors on the value of honey bees.

Managing your new hive

- What is needed?
 - Keep a watchful eye on your new hive. New beekeepers will visit their new hive almost every day but that doesn't mean you have to open the hive on every visit. Once a week is enough.
 - Your new hive should now have 10 frames in the hive box -- the brood chamber.
 - Your new hive should have a number of things going on. The following should be normal bee activities: the blue underlined words are bookmarks to pictures on the picture gallery pages. You can check these pictures to see what things should look like.
 - The bees should be working on drawing out the foundation in your frames. The amount of foundation drawn will depend on the population of bees you have in your hive and how much you are feeding the bees sugar syrup.
 - The queen should be laying eggs. If you pull a frame of drawn foundation from the brood chamber of your hive, you should see new bee larva.
 - Many new beekeepers want to see their queen. It is not necessary if eggs are present and you see larva as shown in the picture above. She is in the hive somewhere. However, if you should be looking for her, she will be much like the queen as shown in this picture of a queen bee.
 - In about four weeks the bees in your hive should look something like this

[hive.](#)

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Starting with package bees



Getting bees for the person starting a hive from scratch is hard work. Southern package producers work from sun up to sun down during the very narrow period of time that they make up packages. This is usually from March to May. Our concern here is how you need to handle the package of bees after it arrives and you are ready to install it.

There are a number of different methods to install your package of bees. We are going to offer you only one of these techniques to avoid the confusion that often faces a new beekeeper.

Check list of things to have ready

- Order your package/packages of bees early!
- All hive equipment must be ready -- If you bought new, most likely it was knocked down. This means it must be put together before you can use it.
- Location of the hive must be determined before the package is installed. It is difficult to move a new hive after the bees have been released and have been flying for several days.
- Your protective equipment and bee tools at hand and ready to use.
- Assemble some other equipment
 - A small water spray bottle filled with sugar water (two parts water to 1 part sugar)
 - Make sure you have entrance reducers or a good clump of grass to reduce the entrance into the hive.
 - Be prepared to feed the new hive of bees for the next month. This can be done with a feeder. We would suggest a division board feeder. More on that later.

If we have the following we are ready to start:

- The package of bees has arrived. Keep the bees in the package in a cool location and out of direct sunlight. They must have circulating air to keep cool and also must be protected if the weather turns cold. Keeping the bees in a dark location helps them remain calm. Packages of bees can be kept for only a short period of time -- a day or two at most.
- All the items above are ready
- You are ready to go to work

Steps in moving the bees from the wire cage into your bee box.

- Set up your hive equipment in the location where you want the hive to remain.
- Put on your protective equipment and have your smoker lit.
- Carry the package of bees to the hive.
 - Packages of bees are usually sold by the pound. A two pound package means that you should have two pounds of bees and a queen in the package. A pound of bees has approximately 3,500 bees or more.
 - Each package has the following parts:
 - A box framework covered with wire
 - A can of sugar syrup
 - A lid keeping the sugar can in place
 - Included in the package are:
 - 3,500 bees times the number of pounds of bees
 - A queen in a separate cage
- Transfer procedures
 - First remove five frames from the center of the deep hive body which should now be sitting on the bottom board.
 - Next, spray sugar water from your water spray bottle onto the screen wire of the cage. The bees should be given plenty of sugar water. They will eagerly take it up. This has a calming effect on the bees.
 - Put on your protective equipment.
 - The next step is to remove the lid holding the syrup can in the cage. The bees should still be unable to get out because the hole the can is fitted into is designed to be bee tight. Often the can is somewhat difficult to remove. But don't worry about that yet!
 - Probably since you began, ten minutes have past. Your bees should be quiet -- not rushing around on the inside of the package. If they are rushing around, it is because they are too hot. You need to make sure they calm. If they are too hot, move them to a cool location and wait until they calm down.
 - Now it is time to remove the queen cage. This is done by carefully giving the package cage a sharp jolt. Most of the bees will drop as a group to the bottom of the cage. Grasp the can and remove it quickly. Pull the queen cage out of the package -- the queen cage is usually fastened to a wire which allows the queen cage to be pulled out. Quickly insert the can back into the package. Now you can work without a lot of bees flying around.
 - Queen cages are of three types.
 - Plastic queen cages. These cages are becoming more common among package producers. The cage has a neck which is filled with sugar candy. The sugar candy is in the cage to prevent the bees from entering the cage and possibly killing the queen. To keep the bees in the package from eating thru the candy too soon, the package producer places a plastic cap over the end of the neck. It fits easily between frames. **If your package comes with a queen confined in a plastic cage, you will need to remove the cap before placing the cage in the hive. More on that shortly.**
 - Single hole California cage. This is a wooden cage with a single compartment for the queen. It usually has a plastic tube which contains candy sugar and is the means through which the bees eat their way into the queen cage. The tube is usually plugged with a cork or plastic flap. The advantage of this wooden cage is that it is 3/4" wide and about 4" long. It will fit easily between frames. **The cork or plastic flap must be removed before you put this cage in the hive. We will explain placing the queen cage in the hive in the next section.**
 - The three hole Benton cage. This is the old stand-by. It has been used for years and many package producers are still using it, especially those in the South.

This cage is approximately 1 1/4" wide, 3/4" tall and 4 inches long. It is made of wood. What makes this cage different is that one of the three compartments is filled with sugar candy. A hole in the end of the cage allows bees to get to the sugar candy. Because there is much more candy in this cage than the others, it takes the bees longer to eat through to the queen. Many beekeepers have advised beginners to poke a hole through the candy with a nail to speed up the release of the queen. We feel it is okay for this cage but not for the two discussed above.

- **Our next job is to check the queen cage to make sure the queen is alive and active. Once we are satisfied that she is alive, we need to remove the cork or object covering the candy hole. The queen cage is then placed between two frames located near the center of the hive box. It is best to place the candy end of the queen cage facing up. In this way, any bee that might die or be trapped in the candy hole will be able to drop into the bottom of the queen cage thus leaving the opening free for the queen to leave once the candy has been eaten out by the bees. One final thought on the queen cage is: don't let it fall to the bottom board. Make sure the cage is secure between the frames. You can fasten it in place if necessary by placing a tack in one of the top bars and wiring the queen cage to it.**
- **The hive box now has the queen in place. You have space now to place the package with the bees in it within the hive box. First, jolt or shake the bees to the bottom of the cage as you did before. Remove the can and quickly place the package cage with the open hole up into the vacant area of the hive body as close to the frames holding the queen cage as possible. The bees will leave the package cage and gather around the queen.**
- **While they are coming out of the package cage, place the inner cover over the hive body and place the syrup can over the inner cover hole.**
- **Wait for 30 minutes or so.**
- **Check the bees. Have they gathered around the queen? If so all is well.**
- **If they have not, you may have to shake the bees out of the package cage.**
- **However, after two days you need to remove the package cage box from the hive body, replace the five frames you removed earlier and check to make sure the queen has been released from her cage. If she has, remove this queen cage as well. If she has not, it is time to release her manually. You can tear the wire screen off the wooden cages or unsnap the plastic cage. This releases the queen immediately. Close up the hive.**
- **Give the bees syrup in the can. When it is empty, you will need to feed every other day or so. We will discuss feeding a little later.**
- **Problems**
 - **What if the queen is dead in the cage or is not moving around in a lively fashion?**
 - **Contact the package producer immediately. The queen should be replaced immediately and there should be no charge! If you feel hassled -- you shouldn't be -- order a queen from some other source immediately. It is important that the bees get a live queen as quickly as possible. It will take two or three days for a new queen to arrive. In the meantime place the dead queen in her cage back into the hive until the new queen arrives. Once she arrives, install (put her in the hive) immediately. You really don't have the luxury of having all the time in the world. The bees in your package most likely are not going to live much more than 40 to 50 days. It will take them 21 days from the first egg laid by the queen to emerge and begin to replace the bees that die.**
 - **What if most of the bees are dead in the package when it arrives?**
 - **This is a problem in hot weather or poor handling by the shipper. If you had**

insurance on the package, file a claim immediately. Contact the package producer immediately. Often, a package producer will replace the bees and queen for shipping and handling cost. However, it is not the producers fault. When bees are delivered to a shipper, the bees are fresh and alive. There are a few rare cases in which it is the fault of the producer and these are easy to discover.

- If the syrup can has no holes punched in the lid for the bees to get syrup and they are dead -- they died of starvation. This is a mistake when the package was put together at the producers facilities. This mistake needs to be pointed out to the producer immediately.
 - If there is no queen in the package, or the queen cage has fallen to the floor of the package cage and the queen is dead, contact the producer immediately. Again this is a mistake and the producer needs to take care of the problem immediately.
 - The package is short on weight. You paid for more pounds of bees than you receive. Sometimes a producer will accidentally send a two pound package when a three pound package was ordered. Ask for a refund of the difference. This is usually a shipping error. It can happen to any producer.
- What if you pay for the package of bees and they never arrive?
 - First, contact the person you bought the bee from when the delivery date comes and goes with no bees. Often you will be given an excuse if the producer has not put them in the mail. If they have been shipped, then contact the shipper.
 - Second, No package order should be more than a week late unless there is a weather anomaly in the producers package bee producing area. Examples would be: heavy rains and tornados, a very late snow. If these conditions do not exist, then ask for an immediate refund. You can get bees from another source. "Several years ago, beekeepers faced a serious problem from a producer who advertised in national magazines package of bees with prepayment by January 1 for a discount. The problem was that the producer took the money and did not deliver the bees. To my knowledge, beekeepers never got their money back or the bees. They got excuses and then a disconnected phone. That bee business is no longer in business and the major magazines will not publish ads for this individual. I was told personally, that Bee Culture Mag. had a complete file drawer full of complaints on this producer who advertised in their magazine." Buy from a reliable producer -- if package bees are delivered into your area, buy them for pick up rather than having them put into the mail.
- What happens if the bees leave?
 - On occasion bees installed in a new hive have absconded! They leave the hive. This is not a rare thing for bees to do. It doesn't happen often but you need to be aware that it can happen and for several reasons:
 - Usually a beekeeper is using new foundation.
 - Most likely the bees are starving.
 - The bees fail to accept the queen
 - The new hive is being robbed out by bees from neighboring hives.
 - If you have a hive with no bees, you will need to order a new package of bees and start over! Beekeeping is always a challenge to experienced beekeepers as well as those just starting out. Survivors become beekeepers!
- What happens if your neighbors begin to complain about your bees?
 - Do not tell them to "Go to H____!"
 - Be open and visit with them. Ask questions to determine why they object to your

bees. Is it something you can change in your beekeeping methods? location of hive? or other.

- Are their fears justified? Is a neighbor highly allergic to bee stings?
- Give gifts of honey when you harvest your honey crop.
- Educate your neighbors on the value of honey bees.

Managing a new hive

- **What is needed?**

- Keep a watchful eye on your new hive. New beekeepers will visit their new hive almost every day but that doesn't mean you have to open the hive on every visit. Once a week is enough.
- Your new hive should now have 10 frames in the hive box -- the brood chamber.
- Your new hive should have a number of things going on. The following should be normal bee activities: the blue underlined words are bookmarks to pictures on the picture gallery pages. You can check these pictures to see what things should look like.
 - The bees should be working on drawing out the foundation in your frames. The amount of foundation drawn will depend on the population of bees you have in your hive and how much you are feeding the bees sugar syrup.
 - The queen should be laying eggs. If you pull a frame of drawn foundation from the brood chamber of your hive, you should see new bee larva.
 - Many new beekeepers want to see their queen. It is not necessary if eggs are present and you see larva as shown in the picture above. She is in the hive somewhere. However, if you should be looking for her, she will be much like the queen as shown in this picture of a queen bee.
 - In about eight weeks the new bees in your hive should have replaced the bees that were shipped with your package. It should look something like this hive.

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