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Updated Feb. 2020 (A-I)
Submitted Bee Culture 1/6/2020

What your mentor forgot to tell you!

(Air Conditioning - Installing Bee Packages)

The conventional wisdom about beekeeping is that there are no pat answers. Whatever works for you is the right way for you to do something. Of course, most beekeepers are never satisfied and are sure there is always a better way of accomplishing a task or solving a problem. Consequently, if you ask five beekeepers the best way to accomplish something you get seven or more answers. None are wrong just different. It is what works for that beekeeper at that time. Here is a collection of hints that may help you in your beekeeping endeavor.

Note: This is the third revision of this article. Suggestions have been added as beekeepers tell me their favorite hints. More pictures have been added as good ones become available.
Note: See the next issue of "Bee Culture" for hints for "Marking Queens - Installing Bee Packages".
Note: See a subsequent issue of "Bee Culture" for hints for "Selling Honey – Weight of Boxes".

Air Conditioning – Hot Hives
On a hot day or when the nectar needs to be dehydrated, bees will form at the entrance to the hive and force air through the hive to cool the insides.
Note: All the bees are facing one direction.

Ants – They will find an easy meal.
Cinnamon sprinkled around the feeder rim and on the inner cover takes care of the ant problem. (Most of the time)

Attaching Wild Comb – Attaching comb to a frame.
After you have collected a wild colony and need to attach the wild comb to a frame, be sure to keep the top at the top. Comb cells have a definite slope to them. The outer edge of the cell is higher than the bottom of the cell. When you attach comb to your frame use rubber bands. They work great and will eventually be removed by the bees.

Cows/Horses – Hives make good scratching posts.
Cows are curious and like to scratch themselves. A beehive is just about the right height. Unfortunately, they are not very stable when a 1,200-pound cow has an itchy butt. Horses also like to scratch. If your hives are in a pasture or where a farmer may release cattle into the area, then string an electric fence up to keep them away from the hives. Usually the farmer will let you tap into their electric fence to power your hive fence.

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Crystallized Honey – Mix it up.
Creamed honey is honey that has been forced to crystallize in a controlled state. When starting a new batch, incorporating it into the liquid honey can be a tiring process. Instead of mixing a couple of pounds of starter culture into 40 or 50 pounds of honey, start be mixing it into a small amount of honey (4 to 5 lbs.) until it's thoroughly mixed with no lumps. Then add the small amount to the larger amount.

Crystallized Honey – Shake the bear up.
Crystalized honey in a plastic bear can be liquified in the microwave. The outside of the honey will heat faster than the inside of the honey. To stop the plastic from melting and causing the bear to nod its head, only heat the bear 20-30 seconds at a time. Between each heating shake the bear/honey up to distribute the hot honey. It may take four of five repetitions to completely liquify the honey. But it is still quicker than sitting the bear in hot water.

Entrance Reducer – Openings up.
When installing a wooden entrance reducer, make sure the opening is up. That way the entrance will be least likely to get clogged with dead bees and debris. This is very important when closing the hives up for the winter.

Entrance Reducer – They never fit correctly.
When building a wooden entrance reducer, make sure the entrance reducer is smaller than the smallest opening you have on your bottom boards. Use a wad of newspaper on one end to work as a spring and force a tight fit of the reducer.

Extraction Clean Up – Let the bees do the work.
Extraction is a sticky mess and your helpers tend to disappear when it's clean up time. Move your equipment outside of the extraction area and let it set for a couple of days. All the junk honey that you would normally wash away will be reused by your bees. Wipe up the thicker/deeper puddles of honey with a wet rag so the bees won't drown and then hang the rags up for the bees to clean the honey off. Cover the equipment so if it rains the bees can still get to it but the rain can't wash all the honey away.
The removal of honey from capping is easily accomplished by spreading the capping wax out on a cookie sheet (I use commercial cookie sheets) and letting the bees reclaim the honey. It's best to take them in at night as raccoons also like the honey. As a side note, a five-gallon bucket of moderately packed capping wax will yield about five pounds of cleaned wax.

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Feeder Jar Holes – If they are too big, they'll leak syrup.
When punching holes in a jar lid to make a jar feeder use a brad gun with 18-gauge brad. The 18-gauge brad is a nice convenient size for a feeder hole. The brad gun allows for making quick and non-finger smashing hole. Place the jar lid on a soft surface like a piece of insulating foam, so the brads won't nail the lid to the workbench. Removal of the brads is then quite easy. If the holes are to big then use a nail and hammer and put the lid on something solid so just the tip of the nail penetrates the lid.

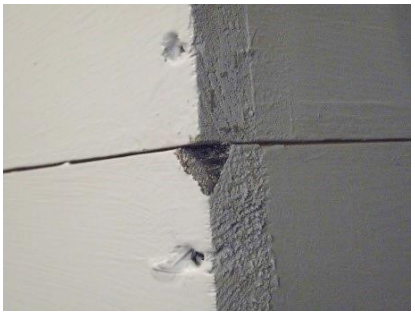
Festoons – Yep, there is a name for it.
When the bees develop a chain where one bee hangs from another bee is called a festoon. This often occurs when the heat inside the hive is too high and the workers go outside to cool off.

Frame Feeder – Bees will drown or get stuck in honey.
When using the one or two-gallon frame feeders or division feeders that sit inside a super, add straw before filling the feeder. The straw provides a foot hold for the bees. It will allow them to escape if they get stuck in the syrup. The straw needs to come to the top of the syrup.

Hand Holds – Hive body handholds need to be wide.
Double cut hand holds for your hive body when cutting with a dado blade on your table saw. Reposition the saw fence ½" further from the saw blade and recut the handhold. This will widen the hole so your fingers can curl into the hold without gouging into your fingers.

Hive Air Flow – A stick will do it.
Placing a stick or a piece of wood between the inner cover and the top cover will allow a better flow of hot air from the hive during the summer months.

Hive Body Separation – Add a gargoyle.
Most hive bodies rot at the lower and upper corners. This is where the hive tool has gouged the wood and water has collected. Use a belt sander to bevel the top corners of your boxes, this provide an easy lip for your hive tool to find to separate the boxes.



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Hive Placement 1 – Do not place your hives in straight rows.
If hives are placed in a row, the end hives will eventually have more bees. If you have your hives in a row, your bees will tend to drift to the hives at the ends. Place your hives at irregular distances and at angles to one another. This past year I was standing by the end hive in a row. Within 30 seconds there were bees returning to me - not to the hive.

Hive Placement 2 – Not in a damp valley.
Hives should not be placed in an area where there is a lot of fog or the possibility of a creek overflowing. A friend looked out his kitchen window one morning and saw the bottom brood box of one of his hives under water. Not a good thing to see first thing in the morning. It makes for a bad day.

Honey Storage – Five-gallon pails
Five-gallon pails are a very easy to use and a great way to store honey. If you fill them full, they weigh about sixty pounds. Before placing the lid on make sure the rubber gasket is in place. Then put a piece of food storage plastic (Saran Wrap) over the top before sealing the pail. This will keep the honey off the top of the pail when you move it. It is also easier to scrape clean than the lid of the pail. Sixty pounds is a lot of weight for the more mature (politically correct) person. Each pound of honey weighs about 12 pounds. Reducing the volume to four gallons can make lifting the pails a lot easier.

As was noted at a bee club meeting, when selecting pails for honey storage do not and I repeat do NOT, NOT, NOT use pails that were used to store dill pickles.

Honey Supers -1 – Pulling honey.
When pulling honey, after you eliminate the bees cover the bee-free super with a wet sheet. The wet sheet will cling to the super and is heavier so the wind will be less likely to blow the cover away.

Honey Supers 2 – Pulling honey – Excess bees
Sometimes things just don't work out. If the number of bees remaining in the supers is too great, then a blower can help solve the problem. A gas leaf blower works great.
Note: Some shop-vacs have a removable blower which makes it easier to take to the bee-yard. Obviously, you'll need electricity for this to work.

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Honey Supers – Storage Wet or Dry
After extraction you can store your supers either WET or dry. The WET means that the super has not been cleaned of all honey by the bees. The DRY description denotes that the bees have been allowed to remove all non-extracted remnants of honey from the super.

Hive Stand – Keep your stands low.
Be careful when placing your hive stands. Think about the following items. The higher your hives, the higher your supers are when you want to remove them. When full they weigh about fifty pounds each. You do not want to climb a ladder to retrieve a super.
Hive Stand – Make sure your hive stands have a solid base.
Spend the extra time to ensure your hive stands are on a solid/level base. You don't want them to tip over as you add hive bodies and supers.

Honey Wax Removal – Wax floats on honey.
After extraction is finished and your new honey has sat for a while, the wax and other debris will float to the top. To remove this scum, use a piece of plastic food wrap. Lay it on the surface of the honey and pat it down gently. When you carefully remove it, much of the wax and other debris will come off with it. I haven't tried this yet, but it sure sounds promising.

Hot hive. – This is <u>not,</u> and I repeat **<u>not</u>** swarm preparation.
On a hot day the bees will congregate on the front of the hive. They are not getting ready to swarm. It is hot inside, so they decided to cool themselves off and reduce the heat being produced inside the hive. It's like you sitting on the front porch in a cool breeze.

Inner Covers 1 – The thick and thin of it.
Some inner covers have a thick rim side and a thin rim side. The thick rim side faces the bees during the winter. This allows the bees to navigate above the frames. The thin rim side faces the bees during the summer. In theory, the thin side is small enough to the bees won't build comb between the frames and the inner cover.

Inner Covers 2 – Why use them?
Inner covers allow the top cover to remain loose. The construction of the top cover with the dropped down sides would be very difficult to remove if it was glued down with propolis or comb. By using the inner cover, you can remove the top cover with ease and the use a hive tool to un-stick the inner cover.

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Inspection 1 – Positioning hive bodies?
When removing hive bodies practice the same ritual every time for the placement of the removed boxes. For example: Place the top box furthest from the hive. Then the next box closer. Each box sitting with the front of the box up. Then when you restore the boxes you can keep the order and the orientation of the box identical to when it was removed.

Inspection 2 – Setting hive bodies?
When removing hive bodies and you set the hive bodies individually on the ground, be sure to set them so the frames are vertical. If they are horizontal, they can and probably will collapse on themselves.

Inspection 3 – Setting hive bodies?
When removing hive bodies and you set the hive bodies on an upturned telescoping cover, set them crosswise so the minimum amount of box surface is in contact with the cover rim. This minimizes the number of bees that could be crushed.

Inspection 4 - Removing Frames
When removing frames, lean them against something on the end of the frame down Place the top (other end) of the frame against something solid. When removing two or more frames lean the second against the first with only the top of the second touching the top of the first. Lean wood to wood not wood to cells.

Installing Bee Packages – They will miss the hive.
Even though you spray down the bees before shaking your new package into the hive, they seem to miss where you want them to go and spill out over the sides of the hive. To eliminate some of this, use an empty hive body and place it on top of the target hive. Then keep the shipping box inside the top hive body while shaking the bees into the bottom box. This will help channel the bees into the lower hive box. You can then use your brush to force the bees clinging to the top box down to the hive.

I hope this helps. These hints and shortcuts have been collected from experienced and neophyte beekeepers. Additional hints would be appreciated. Please send then to: SimonEdwin41@gmail.com.

Get a copy of Ed Simon's book *Bee Equipment Essentials* with detailed drawings, construction hints and how-to-use instructions for dozens of beekeeping tools and equipment from www.wicwas.com. Ed can be contacted through SimonEdwin41@gmail.com.