

Queen Re-Caging

This is our second season re-caging queens, last year we did it to get rid of the attendants that were shipped with the queens and this year we are doing it to help mitigate any risks associated with varroa mites or hive beetles that may be in the queen battery box. The way we re-cage queens requires really no handling, i.e. 'palming or pinching', the queens and once you get good at it you can quickly do a battery in no time.

Materials Needed:

- JZ's BZ's queen cages are recommended to re-cage, since they are easy to open and quickly close, fit nicely into a compact orange plastic battery box to take to the field and you don't have to worry about recycling/freezing original cages for future use.
- Candy to fill the queen cages (see recipe below).
- Garbage pail with a garbage bag.
- Spray bottle with water.
- Hive tool.
- Insect spray (Konk Flying Insect Killer).
- Burning barrel.
- Table inside a dark room with a little source of light (we use our hotroom, which has a window in the door that is partially covered, to keep it darker with just enough light to see what we are doing).

Candy for Cages – Makes Approximately 200 Cages:

- ½ cup of honey (warmed up to liquefy the honey).
- 2 – ½ cups of icing sugar.
- Try to make the candy the day before re-caging queens, since even the perfectly mixed candy will get hard over time (don't use candy from a week ago).
- Place honey in a bowl and slowly add/mix icing sugar (just do the first 2 cups of icing sugar). Knead it into a ball like dough and if it still is a sticky consistency, just slowly add the final ½ cup of icing sugar as needed (you may not need the whole final ½ cup). The finished product should be soft and workable like 'Play Dough', so it doesn't harden too much afterwards. Too soft of product may get 'runny' afterwards. It takes a little practice to get it just perfect.
- Don't heat the honey and icing sugar together, this will result in a 'runny' finished product. Only heat the honey.
- Don't use a mixing machine, since an over worked product will get 'runny'.
- With your hand or a hive tool, you can quickly scoop up a bit of candy from the ball and work it into the extended tube portion of the JZ's BZ's cage.
- Store the prepared cages in a sealed container or 'Ziploc' bag until ready to use, to keep the candy from immediately drying out.

Re-Caging Queens:

- Open the queen battery box and take out the queen racks, inspecting the racks/cages for live, dead or even squished eggs, larvae and/or adult beetles. Report anything found to Medhat.
- Inspect the empty queen battery box for any live or dead eggs, larvae and/or adult beetles. Again, report any findings to Medhat.
- Immediately, remove the battery box from the work area and place into a burning barrel to be incinerated or place into a freezer if it will be used in the future for a 'field battery box' (must be frozen for 72 hrs. at a temp. of -18 degrees Celsius to kill everything).
- Gently spray a queen rack with water.
- Remove a cage/queen from the rack and place it on the table with the screen facing upwards.
- Give the cage/queen another quick spray with water, this will slow her down and keep her from flying.

- With a hive tool remove the staple holding the screen in place on the end opposite of the cage where the candy is.
- Have a JZ's BZ's cage open and ready in one hand, then just open and fold back the screen with the other hand. Don't be worried about opening the screen completely, if sprayed with water she usually isn't going anywhere too quickly.
- Place the JZ's BZ's cage horizontally on the top lip of the cage/queen where you removed the staple.
- Usually, the queen will be the first one out or the last one out. When she is the first one out, the queen will come onto the top of the cage, where you can use your finger and thumb on top of the cage to guide her into the new cage. You really don't have touch her at all, most of the time she will just walk into the new cage. If she is the last one out, you can put your thumb or finger into one half of the cage where she isn't, then eventually she has nowhere to go and she will eventually pop up to be guided into the new cage. Sometimes you will have some quick 'runners', whereby if they go onto the table you just have to give them a quick spray of water to slow them down and then guide them into the new cage. Even if some queens run into your hand, we just 'palm' her and give her a quick spray of water, they 'cup' our palm to guide her into the new cage.
- With the queen in the new cage, hold your thumb over the top of the cage opening, making sure that she is in the lower half of the cage and no legs or wings will be caught when the lid is closed. Sometimes a quick breath of air on her will drive her down to the lower part of the cage.
- Spray down your work area in between queens (cage and crawling attendants), then place everything into the garbage pail/bag, including attendants and old cages/screens. If your work area is just dark enough the attendants won't go anywhere, but just crawl around the cage and your immediate work area. A quick spray of water into the garbage pail/bag periodically keeps the attendants contained in the garbage bag where they belong.
- Once finished, discard everything in the garbage pail/bag, including attendant bees, old cages/screens, queen racks and of course the battery box if not already discarded. It is not recommended to re-use the original cages, since this is where eggs and larvae are commonly found under the wax paper/candy and in all the corners/grooves of the cage. Also, we don't want these cages accidentally left in facilities where missed larvae and adult beetles can crawl into neighbouring equipment. If for some circumstance, cages are to be re-used, they must be immediately removed from the work area and placed in a freezer for 72 hrs. at a temp. of -18 degrees Celsius.
- Take the sealed garbage bag outside and spray some insecticide into the bag to kill the attendants.
- After 10 mins., take the bag to the burning barrel and immediately incinerate it and the original battery box.
- The re-caged queens can be easily placed into small batteries (20 per box for the JZ's BZ's cages). These compact batteries can be then banked in a queen bank, where we usually bank about 80 queens in a 'two high' bank. These batteries can then be taken to the field with some attendants from the queen bank. If they are in the truck for a long day with us, we like to just lay a couple of small queens boxes on their side with their lids open in the original (frozen) 'Kona' queen box with a rack/egg carton of water/honey and a good shake of bees from our queen bank. They have lots of attendants, water and feed this way to keep them happy all day.

Hope this helps everyone.

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