

## Warnings !!!

1. Lots of terminology ...
2. Lots of opinions (#12<sup>1</sup>)
3. Beekeeping is TERRIBLY TERRIBLY \_\_\_\_\_ (#1)

## Two Things, Two Weeks Before

1. Prepare site (assumes equipment is ready)
  - Elevate hive 1-2 feet (concrete blocks, positioning)
  - Room to work
  - Placement correct?
  - Weed barrier?
  - Air out equipment
2. Practice – suiting up, where you'll place things, in and out of hive, reassembling hive

“As to methods there may be a million and then some, but principles are few. The man who grasps principles can successfully select his own methods. The man who tries methods, ignoring principles, is sure to have trouble”

*Ralph Waldo Emerson*

## About the smoker ...

1. Yes, you need one
2. No, you don't need one for install or likely even the first month
3. PRACTICE before you need it ...

## Installing a nuc

1. Make sure your supplier has same-sized frames
2. Reduce entrance (covered below as part of package installation)
3. Ensure queenright after a few days (covered below as part of packages)

## Three things within a few days of arrival

1. Prepare sugar syrup
2. Assemble install equipment (bee bucket):
  - Hive tool
  - Needle nose pliers (or hive tool)
  - Cage “stuff”:
    - Marshmallow and screw unless 3-day direct releasing
    - Tape / pushpin / rubber bands / bread bag ties for hanging queen cage

### Spring Sugar Syrup

(Spring mix different from fall mix)

1. Pour 5 pounds of WHITE sugar into an empty gallon container
2. Add hot tap water and shake, add water as needed to get to a full gallon
3. And shake and shake and shake ...

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<sup>1</sup> Based on my survey of over 1500 beekeepers about what they wished they'd known in the “bee-ginning”.

- Spray bottle containing spring sugar syrup
- Bee brush
- NOT smoker (?)

3. Check your schedule and the weather, and figure out how you will release the queen.

*What do you mean, “cage stuff?”*

- Probably won’t know cage type until package opened
- What you need for releasing depends upon cage type & condition

#### **Why is the queen in a cage?**

- She’s not their Mom
- They need time to get to know her
- They might have already had time. But ... probably shouldn’t release her now.

### **Two major release methods**

“Eat the candy”:

- Candy is needed! (usually there, but sometimes not provided or already eaten)
- Acceptable method but generally not preferred

3-day direct release:

- You know she’s in your hive because you released her
- Can assess how she’s accepted
- Requires you to be around to do it!
- Generally preferred method

Which method to use?

- Your schedule doesn’t allow you to let her out in 3-ish days or the weather is horrific: use “eat the candy” release. Add to your bee bucket wood screw and marshmallow.
- You should be around and the weather looks decent: Plan on 3-day direct release.

### **Obtaining your package(s) ...**

How to receive them:

- Via mail or pick-up? Pick-up best ...
- Pick-up carefully—hitchhikers!

Once you get them home:

- Cool (50-60° F?)
- Dark
- Spritz twice daily with sugar syrup
- On newspaper

When install?

- ASAP, weather permitting
  - 50 degrees F. or warmer
  - Light breeze
  - (same guidelines for checking bees)
- Early evening with an hour of daylight (for newbees)

How long can they hang out if you can't install them?

- Preferably no more than 2-3 days
- Inclement weather – install in a garage or have an experienced beek help
- Unexpectedly out of town? Use bee club resources

## **Installing package bees**

Which method?

- Shake method – practically all of the billion videos on You Tube. However ...
- “Put the package in the box” method:
  - Easier
  - Less freaking out of bees
  - Less freaking out of beekeepers
  - Used by Dr. Walter Rothenbuhler at OSU in his beekeeping classes, Dr. Larry Connor taught it throughout Ohio during the 1970s and still recommends it

Some great references – BUT they shake, not “put the package in the box”

- VIDEOS
  - <https://www.youtube.com/watch?v=31TcM7J-SU>
  - <http://www.brushymountainbeefarm.com/Resources/Videos.asp#packageinstall> (same video as above, but a different way to get to it)
- TEXT: <http://basicbeekeeping.blogspot.com/2007/10/how-to-install-new-package-of-bees.html>

### **“Put the package in the box” installation procedure**

Yes, this is perhaps a ridiculous amount of detail. But it can be a stressful situation for you and the bees, so I wanted to answer the questions that newbees have asked in the 100+ installs I've been privy to ...

1. Get bees next to the hive – hour or so before, weather permitting
2. Prepare hive:
  - All frames in top box
  - Set aside top box
3. Fill and install feeder if appropriate (you might have drawn comb with resources. If you have a top feeder, fill it later.)
4. Reduce entrance:
  - Smallest opening on reducer
  - And / or bricks to reduce to 1-inch
  - Grass stuffed in the gap

5. Gear up:
  - Wear socks
  - Tuck in socks
  - Check for holes
  - Take pictures
  - Get your bee bucket and great attitude!
6. Loosen cover board on top of shipping box
7. Squirt cage (weather usually permitting)
8. Smack it down
9. Pry off cover board enough to pull queen cage (maybe a feeder can?)
10. Remove queen cage
11. Recover shipping package with board while you examine queen:
  - Is she alive? (Dead? Call supplier, call mentor)
  - Notice how she is different
  - Dead attendants OK
12. Figure out cage, queen release and hanging. Rules:
  - Workers need access to her
  - Dead / dying worker bees can't impede
  - Hang securely
  - Hang in top box between middle frames; DO NOT remove the cork, plastic lid — whatever is blocking stays for 3 days UNLESS doing the “eat the candy release”.  
If so:
    1. Make sure there's candy, otherwise, standby with marshmallow. Swiftly insert chunk of marshmallow when you remove the cap / cork / whatever.
    2. Start hole in marshmallow with wood screw
  - If going FOUNDATIONLESS – release queen immediately or they'll enshrine the cage in comb
13. Place inner cover over queen hive body (help keep her calmer)
14. Spritz (temperature permitting) and smack shipping box to get bees back to bottom
15. Place shipping box in middle of bottom hive body (below where queen will be when you put top box on)
 

*Take a deep breath and ...*
16. Quickly remove cover board (feeder can if present)
17. Place “queen hive body” on box with package in it  
(Add feeder if internal or top feeder...)
18. Replace top cover
19. Weigh down top cover (?)
20. Look around before you leave (all tools? Cover on straight? Cover on?)
21. Write it down!!!! (When installed, source of bees, how much paid, weather conditions, etc.)

### **When / how do you remove the shipping box?**

WHEN: One day later (weather / time permitting), *likely* when most of bees have crawled out and are working upper hive body around queen cage

1. Remove top cover
2. Remove inner cover, squirting merrily (weather permitting)

3. Queen check:
  - If doing eat the candy release of queen, check that she's still in the cage. If cage is empty, make sure you don't remove her also!
  - If doing a 3-day direct release (later), there should be bees all over the cage. Could check to assure she's alive ...
4. Set queen's hive body diagonally on top cover or other elevated surface
5. Remove shipping box
6. Evaluate contents:
  - If some bees still inside, set box outside by entrance; they'll gradually go in.
  - There will likely be dead bees. Up to an inch is normal.
  - If practically ALL bees still inside ... potentially issues
7. Remove lower hive body. You'll add it to the top in about a month.
8. Keep entrance reduced to about an inch, but not blocked (grass will have wilted.)

### **Releasing the queen**

3-day direct release:

- Depending upon travel time, 3 days may be plenty
- Remove blockage directly over / near top of frames as she will want to scurry in there
- If they attack her vs love her, might be an issue. Difficult for a newbie to determine; discuss with your mentor.
- **Then leave them alone!**

Eat the candy release:

- Will take 1-5 days, depending upon weather
- After 3-5 days, check that cage is empty, remove cage
- If desired, find her, weather permitting
- **Then leave them alone!**

### **Feeding: Keep feeding!**

- They may / not take feed, depends on type of bee, weather, available forage, etc.
- Keep feeding as long as they take it.
- "Scum" OK (IMHO)

### **Inspecting a hive**

*BEFORE* you open it:

- Have an objective
- Listen & observe (weather, demeanor)
- Minimize time

As inspecting:

- Don't stand in front of the entrance
- Always watch for queen
- Minimize pinch points
- Pull minimal-bee frames first
- Never move faster than a bee can move

Afterward:

- Before leave apiary and shed suit, look around
- Document observations / status

## CRITICAL initial checks

### 1. Queenright--egg Check:

- WHEN to begin looking:
  - Packages: 3+ days after queen release if on drawn comb or warm; 10-ish days later if cold and / or no drawn comb; earlier if on drawn comb or warm
  - Nucs: within about a week
- Example of a package installed May 10:
  - Direct-released queen May 13; look for eggs starting May 16
  - Slow-released queen: verified that queen cage empty May 14; start looking for eggs May 17
  - No single-egg-per-cell by May 26 either method? Likely problems.
- WHAT are you looking for? **ONE** egg per cell, at the bottom of it (back of comb)

POSSIBILITIES you could find:

1. 1 egg-per-cell, content bees — the way it should be!!
2. More than 1 egg in practically every cell? **LAYING WORKER**
3. No eggs? Look for queen
  1. No queen? Problems!
  2. Found queen? Check again in a day or two for eggs, be in contact with your mentor

### 2. Brood check: Within first month (nucs come with brood, but ...)

- Brood pattern:
  - Should be fairly solid --Spotty pattern warrants keeping an eye on
  - Be growing each check
  - Honey vs brood
- Need predominantly worker brood; 90%+ drone brood is likely a problem
- Queen cells
  - Queen caps vs queen cells
  - “Peanuts” – hang down vs parallel
  - Determine why:
    - Queen replacement (supercedure) – typically mid-frame
    - Swarmed, or about to – typically edge
  - Queen cells may be great things:
    - Better queen
    - Make a nuc
    - Strong colony & they swarmed

## Routine checks

- Frequency in early season: about weekly if desired, no more than twice a week unless problems
  - Maintain bee space
1. Queenright – EVERY time
    - Don't need to see queen, just need to see eggs (one / cell)
    - Don't see eggs? Need to see larva (had a queen within 3 days)
    - No larva but capped brood? (had a queen within 11-20 days, so evaluate)
  2. Brood (check for things described above)
  3. Watch for other things:
    - Mold
    - Critters:
      - Small hive beetles
      - Varroa mites
      - Mice
      - Ants (cinnamon natural barrier)
    - Other weird stuff

## Early milestones

Things to remove:

- Debris board (if added)
- Entrance reducer—gradually

Adding the next box(es)

## When do I add the next box?

If about time for next box, you should find:

- Queenright
- Good brood pattern
- Predominantly worker brood on 3-5 frames (both sides) in various stages of development (eggs, larva, capped with a light color (newer) through practically chocolate-colored caps). That much brood means the population is going to at least double within a few weeks.
- On a by-frame basis—bees on 90% of frames:
  - At least 50% of the frames are nearly all drawn (and most of those are nearly full with brood or resources)
  - Work on another 20-30% is well underway, complete with more bees than you can easily count on them, and bees loosely covering most of the surface area
  - Any remaining frames, while foundation appears relatively untouched, have several dozen bees patrolling/working them.

## **Encourage working the next box**

1. Pull a frame or two of brood from the bottom box
2. Carefully push the bottom's remaining frames together and add more to the sides to get back to your 10 (or 8)
3. Add the next box
4. Position the frames (from the bottom) in the top box over where the brood nest is in the bottom. This gets them "working up" and keeps the brood nest together for warmth and efficiency.
5. Add the remaining frames to get to 10 (or 8)

## **Best way to keep bees**

- Get a mentor (#3) – [www.northernbeenetwork.com](http://www.northernbeenetwork.com)
- Keep records
- Join a club
- Continuing education
- Keep getting back on the horse

## **Questions? Concerns?**

- [www.hubbardhive.com](http://www.hubbardhive.com) – blog with package progress and what to do when, called "Honey Bear in Mind"
- Email: [Queenbeecharlotte@gmail.com](mailto:Queenbeecharlotte@gmail.com); Cell: 269-910-0962
- On FB as "Charlotte Hubbard, Beekeeper and ..."