

# Packaged Bees

## Handling

### Hiving & Spring Management

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Packaged bees are used to establish new colonies and replace winter losses. Most USA packages are produced in southern states; Fl., Ga. And La. other countries allowed to imported packages in to the USA are Australia. All bee imports into USA require a federal import permit.

#### Florida beekeepers

When you are thinking about ordering packages it is a good idea to take inconsideration that when you need bees to start a new hive or build up hives for spring the packages you will be getting will be coming from southern states and it will be to late for **SPRING BUILD UP**.

#### The Package of Bees

A package of bees usually weighs 3 or 5 lbs (1.5 or 2.2 kg). The 3 lbs package contains approximately 8,000 to 10,000 bees; the 5 lbs package has about 12,000 to 15,000 bees. The bees are shipped in a box (package) with four wooden sides and screened material in the front and back. It is 8.5" (22 cm) high, 16" (40 cm) wide and 5.5" (14 cm) deep. An inverted can or plastic bottle filled with sugar syrup and placed inside the box provides feed for the bees during transit. Some Australian packages are shipped in tubular containers with a gelled feeding source.

The package contains a young queen that had started laying prior to being caged and shipped. The queen is kept in a small plastic or wooden cage with screened sides. The caged queen is well-protected during transit and fed through the screen. This contact with the bees improves her acceptance when the package is hived.

#### 1. Ordering Packages

Packages should be ordered early. Orders can be placed with US producer or some local bee equipment supplier. Some local beekeeper clubs combine orders and place a large single order to economize on price, permits and shipping.

When ordering from overseas sources, valid federal import permits must accompany shipment.

Packages should arrive approximately 10 to 12 weeks prior to the main nectar flow. This allows the hive to establish before the nectar flow.

#### Southern areas

The nectar flow start in January and continues till June; use nucs or ordered packages from Australia, it is too early to get packages from US producers. US packages would not arrive until late March which will allow the hive to build up but it may not get established for summer.

#### Northern areas

The nectar flow starts in late February and continues through July; US packages would arrive in late March which will allow the hive to build up and should be established good for summer. Packages ordered from Australia with a delivery in January would need feeding this allows the hive to get a head start on spring build up and to develop into a strong hive for honey production.

## 2. Getting Equipment and supplies ready for arrival of Package

Equipment and supplies must be ready before packages arrive; bottom board, hive body, frames, entrance reducers, feeder with feed and hive cover (lid) should be ready to use.

### Preparation of the brood chamber

#### Hive body:

**Old:** It is a good idea to scorch the inside of the hive body killing any disease. Clean hive body paying special attention to frame rest and make any repairs or painting that are needed. The bottom board should be cleaned and attached after all repairs are made to hive body.

**New:** Make sure the hive body is assembled, bottom board attached and painted; this should be done far enough in advance to allow the paint to cure. \*It is not a good idea to use 9 frame spacers in the hive body when installing packages on foundation, this create too much bee space, causing the bees to bridge between combs.

#### Frames:

**Frames with foundation,** nine or ten frames can be used in the brood chamber. It is best to start with nine frames when installing the package then add the tenth frame a week later.

**Drawn Combs:** clean top, bottom and end bars, inspect combs making sure they are disease free. If you find Wax Moth damage, it's a good idea to freeze the combs for a few days and then use the frames. The bees will quickly clean out the dead moth larva and repair damaged comb. Use frames with honey and pollen stores when available. If the frames are numbered 1 to 9, then frames 1, 2, 8, and 9 should contain honey, while 3 and 7 should have pollen. The middle frames 4, 5, and 6 should be open comb free of honey and pollen to provide room for the queen to lay and brood development.

#### Entrance reducer:

Install an entrance reducer for the colony to conserve energy and prevent robbing. If you are using an entrance feeder (Boardman Feeder) you will have to make adjustment in the entrance reducer.

If you're making up more than 4 or 5 colonies from packages, entrances must be blocked off completely, stuffing grass or paper in the entrance to prevent robbing. The paper or grass can be replaced with an entrance reducer after the bees have settled.

#### Apiary Site:

**Apiary;** Select a sunny, wind-protected and well drained location. Sunlight will warm the colony and stimulate foraging. Place or build stands so that the hive entrance slope downward slightly,

this will not allow water to go in the hive. Arrange stands so that you have plenty of work space between them and easy access to the back of the hive, face the entrance towards the out side of the yard. If you have ants in the area you will need to place ant moats or treat around the legs of the stands. If you are in a bear prone area you will need to install a bear fence.

## Feed:

**Sugar Syrup;** Prepare a sugar syrup solution of 1:1 sugar-water using warm water to dissolve the sugar. Antibiotics may be added for foulbrood disease control. Read the label for rate of application. Add the antibiotic only after syrup has cool down, just before using. Note: When introducing bees from outside sources, it is recommended to apply antibiotics. **For normal beekeeping management practices, it is no longer a recommendation to use antibiotics for a preventative treatment. Use drugs only when needed.**

## 3. Arrival of package

### Handling Packages:

**Care on Arrival.** When transporting packages from the pick up point to the apiary, it is important to prevent chilling, overheating or knocking the cluster down. If packages are transported in an open truck or trailer in colder weather, a blanket or cover should be used. Make sure it is not treated with a pesticide or petroleum oil. Check for overheating especially during frequent or longer stops. You may have to water the bees if they get hot, use a hose to **lightly** spray directly on packages or sprinkle water from a bucket.

### Holding:

Packages should be kept at a temperature not exceeding 70° (21°C). Sprinkle the screen sides with warm sugar syrup or use a handheld spray bottle that has not previously used for pesticide applications. **DO NOT** use a brush in applying syrup onto the screens, as this may injure the feet and tongues of the bees. After the bees have filled themselves with syrup, they will remain quiet until the package is hived. If the package is going to be held longer than a day, it should be kept at about 64° (18°C) and preferably in a dark storage area. Packaged bees should not be kept for longer than 7 days.

## 4. Installing Packages

### Getting ready:

Make sure all needed equipment is in the apiary; **Hammer, spray bottle, sugar syrup, pliers, hive tools, small nails and complete hives.** Place empty hives on stands before bringing the package to the apiary. Take off the lid and inner cover; remove three or four frames from the brood chamber. These frames may be from the centre, right or left side of the brood chamber. Place entrance block or reducer in.

### Installing Bees:

\*Before installing your packages you might want to check for mites; place a serving tray down on the ground, turn package screen side up on the tray, sprinkle a ¼ to ½ cup of powdered sugar through the screen allowing it to cover the bees. The mites will release and fall through the screen on to the tray along with the powdered sugar. Pour contents from the tray in to a bowl of

water to see what you find. The sugar will wash off the mites making them appear in the water. If the mite count is high (20 to 35) you may want to treat all your packages for mite using this same method.

**To install the bees;** first take the cover plate off the package, this will allow you to grasp the feeder can. If the weather is warm you can spray the bees through the screen with a weak solution of sugar water, this will give you more time to remove the queen cage. With one hand lift the can up about one inch, then while holding the feeding can, give the package a bump on the ground, this will knock the bees onto the bottom of the cage, allowing for quick removal of the can with only a few clinging bees. Quickly remove the queen cage being held by a metal wire or strip in a slit next to the can opening, while the bees are still on the bottom. **Keep the queen cage separate. \*Do not place the queen cage on the bottom of the hive or in direct sunlight.**

Take the package, insert upside down into the hive and shake the bees through the hole. Continue to shake until all the bees have been dislodged from the package. Once in the hive, bees may be lightly sprayed with sugar syrup or clean water to reduce flying and drifting. This should not be done in cold weather.

After the bees have been installed into the hive, gently re-install the frames making sure not to squeeze the bees on the bottom board.

## Queen:

**Releasing the Queen;** check the condition of the queen. If the queen is dead, contact your shipper or dealer for replacement. If the queen has been with the bees in the package for more than 3 days you can use the direct release method. Very lightly sprinkle some sugar syrup through the screen to dampen the queen's wings; this will prevent her from flying. Carefully open the queen cage; hold the opening down in the hive where the bees are, allowing the queen to walk out onto the combs.

If the queen and bees have not been together for 3 days, do not release the queen. Place the cage vertically between 2 centre frames, so that the bees can feed the queen through the screen. If one end of the cages is plugged with candy, make sure the candy is pointed down; the bees will eat the candy releasing the queen in a few days. If there is no candy in the cage; place it between 2 frames in the middle of the hive. In 2 or 3 days you will have to come back to remove the cork to release the queen.

## 5. Feeding

### Sugar syrup:

Feeding syrup helps the colony to settle down and establish itself. **Jar or Can:** If an inner cover is used, the feeding can or jar is inverted and placed over the hole. Make sure the lid of the feeder jar or can has very small holes (3/32 to 1/16) to prevent leakage of sugar syrup. After the inverted can or jar has been installed, place an empty super rim on the inner cover and close the hive with the lid. This will protect the syrup from cooling down rapidly as well as prevent robbing. Some hive lids have a hole cut in them which allows a 5lb honey or a Mason jar lid to fit in to, this is a good way to feed from the top, without having to go in the hive. **1gal. Ziploc bag:** fill the bag with syrup, lay on top of the frames, make small holes in the top of the bag, then place an empty super rim and close the hive with the lid. **Frame feeder:** can be used inside the hive. It holds 1 gal. of syrup. \*The holes in the jar lid can be prepared using a small nail. Make sure the sharp edges point inward to prevent bee injury while feeding on the syrup.

## 6. Management of Packaged Bees

Bee colonies continuously lose bees during normal beekeeping season which are replaced by new emerging bees. In a package there is no brood and consequently no newly emerging young bees to replace the ones that go missing. After installation, the population of bees will continue to decline for several weeks. The queen will start laying 2 or 3 days after installation, but it will take another 21 days before the first replacement bees emerge. To assist in colony establishment and maximize brood development, keep the hive entrance small, and ensure ample pollen and sugar or honey reserves.

Feed is most important. Prepare a heavy syrup mix of 2 parts sugar to 1 part of water and feed the bees whenever weather prevents foraging and nectar secretion. You may have to supplement the pollen income by feeding brood food (artificial pollen). This is particularly important during the spring dearth period; after Maple, Willow and fruit bloom.

Second most important is the presence and performance of the queen; in 2 to 3 week you should see eggs and capped brood. If the brood is patchy or the capped brood is raised, the queen may be poorly mated and need prompt replacement.

### **When & What to Check:**

On day 4 or 5 after package installation, check for eggs to confirm that the queen is laying. Select a comb in the centre of the cluster by first removing outer frames. Carefully lift the frame and look for eggs. Eggs are small, white and stand right up in the bottom of the cell. If eggs are present, place the frame back into the hive. It is not necessary to continue inspecting frames and search for the queen.

After 10 – 14 days, check again for brood and brood pattern. Solid capped brood pattern should be present. If the queen is absent or the brood is unsatisfactory, a new queen should be introduced. (Do NOT use the direct release method).

If brood appears spotty and irregular, closely examine for brood diseases. If a suspect cell is found, check to see if it is AFB or EFB. If you are not comfortable in diagnosing the symptoms your self, you need to contact you inspector or call the Florida Department of Agriculture and Consumer Services, Plant and Apiary inspection office for identification.

### **Use of Foundation**

Straight beeswax foundation can be used instead of drawn combs. It is recommended to provide the package colony with at least two frames of drawn comb so the queen can start laying as soon as she can. When new foundation is used, it is imperative to offer the bees plenty of syrup (2 parts sugar to 1 part water). To draw all 10 combs; it will take about 5 gallons (20 liters). (Note: for every lbs of wax it takes at least seven lbs of syrup).