



Apiculture Factsheet

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Factsheet #301

PACKAGED BEES – HANDLING, HIVING & SPRING MANAGEMENT

Packaged bees are used to establish new colonies and replace winter losses. Packages may come from British Columbia, Australia, New Zealand and Chile. Honey bee queens may be imported from New Zealand, Australia, Hawaii, and approved Californian breeders. Imported queens are often placed in bee packages produced in British Columbia.

A. The Bee Package

A package of bees usually weighs 1 or 1.5 kg (2 or 3 lbs). The 2 lbs package contains approximately 8,000 bees. The bees are shipped in a small wooden box with screened on to sides. An inverted can filled with sugar syrup suspended inside the box provides feed during transit. Some New Zealand packages are shipped in tubular containers with screened material at both ends.

The package normally includes a young queen that had started laying prior to the shipment. She is kept in a wooden or plastic cage with a screened side. The worker bees will feed her through the screen. This contact will improve her acceptance when the package is hived.

B. Ordering Packages

Most imported bee packages are delivered from March until May. Locally produced bees become available in May and June. Imported packages should be ordered in the fall-early winter. Packages can also be ordered through a Canadian supplier who imports and resells packages to other beekeepers.

When ordering from overseas sources, valid federal import permits must accompany shipment. For details, visit the Canadian Food Inspection Agency (CFIA) at <http://www.inspection.gc.ca>.

Packages should arrive approximately 10 to 12 weeks prior to the main nectar flow so that the colony can increase its population. In northern areas, the nectar flow does not start until July which allows packages to arrive in April. For southern areas where the nectar flow starts in mid June, an earlier delivery date is needed. Few beekeepers of southern areas rely on package imports because wintering is easier and cheaper.

C. Getting Ready for Package Arrival

Beehive equipment should be ready before packages arrive. Basic hive equipment includes a bottom board, boxes, inner cover and hive lid.

Preparation of the brood chamber. Nine or ten frames are used in the brood chamber. When using ten, start with nine frames when the package is installed, and add the tenth frame one week later. 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 central frames 4, 5, and 6 should be about 75% free of honey and pollen to provide room for brood development. Some dead brood from the previous year is not a concern because the bees will quickly clean them out.

Install an entrance reducer to conserve heat and prevent robbing. When many colonies are being established from packages, hives should be temporarily closed by stuffing grass in the entrance to prevent robbing. The grass can be replaced with an entrance reducer after the bees have settled.

Apiary Site Selection. A sunny, wind-protected and well drained location should be selected. Sunlight will warm the colony and stimulate foraging.

Sugar Syrup. Prepare a sugar syrup solution of 1:1 sugar-water before the package is installed. When introducing bees from outside sources, antibiotics may be added as a precaution. Follow label instructions for correct dosage and application.

Note: For normal beekeeping management practices, BC Ministry of Agriculture no longer recommends the preventative use of antibiotics. Use drugs only when needed.

D. Handling Packages on Arrival

Care on Arrival. When transporting packages from the pick up point to the apiary, prevent chilling or overheating. When packages are transported in an open truck or trailer in colder weather, a tarpaulin should be used. Check for overheating, especially during frequent or longer stops. (Carry water hose or plastic bucket for emergency. In case of longer stops in warm weather, hose packages directly or sprinkle water from bucket).

After arrival, bees should be kept at room temperature. Sprinkle the screen of the package container with warm sugar syrup or use a handheld spray bottle not previously used for pesticide applications. **DO NOT** use a brush to apply syrup onto the screens as it 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. Keep the packages at about 18°C and preferably in a dark storage area. Package bees cannot be kept for longer than 7 days.

E. Installing Packages

Timing. Have the hive equipment in position before bringing the package to the apiary. Take off the lid and inner cover, and temporarily remove three or four adjacent frames from the brood chamber. These frames may be from the centre, right or left side of the brood chamber.

To install the bees, first take the package, grasp the feeding can with one hand, and lift it up about one inch. Then, while holding the feeding can, give the package a sharp shock by hitting the ground. This will shake the bees onto the bottom of the cage, allowing for the prompt removal of the can without clinging bees. While the bees are still at the bottom, quickly remove the queen cage being held by a metal strip in a slit next to the can opening.

Keep the queen cage separate. Take the package, turn upside down into the hive and shake the bees through the hole. Continue to shake until all the bees have been dislodged from the cage. 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 when the weather is cold. After the bees have been hived, gently suspend the queen cage between two central frames. Orient the queen cage such that the screened side is not blocked by the frame. Close-off the hive and allow the bees to settle overnight.

Releasing the Queen. Before release, check on 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 3 days or longer, use the direct release method. Lightly sprinkle some sugar syrup through the screen to dampen the queen's wings, as this will prevent flight. Carefully remove one of the staples of the queen cage without allowing the screen to open. Hold the queen cage down in the hive where the bees are, partially remove the screen and allow the queen to walk out onto the combs.

If the queen has been with the bees for less than 3 days, do not release the queen but wait for a day or two.

F. Feeding

Feeding syrup helps the colony to settle down and establish itself. If an inner cover is used, the feeding can or jar is inverted and placed over the hole. Make sure the lid of the feeding jar or can has very small holes to prevent leakage of sugar syrup. (Note: The holes in the lid can be prepared using a nail. Make sure the sharp edges point **inward** to prevent bee injury while feeding on the syrup). After the inverted can or jar has been installed, place an empty super on the inner cover and close the hive with the lid. This will protect the syrup from cooling down too quickly and prevents robbing. Alternatively, a frame feeder can be used inside the hive.

G. Management of Package Bees

Bees are perishable and colonies continuously lose bees, which are normally replaced by new bees during the beekeeping season. In a package, there is no brood and consequently no replacement. 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 there is ample pollen and food reserves.

During spring season, periods of poor weather conditions frequently occur which prevent bees to forage for nectar and pollen. It is important to provide ample feed to the small colony especially during the spring dearth period after dandelion and fruit bloom.

During the colony build up it is important to check the queen's performance regularly. Look for 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 brood to confirm that the queen is laying. Select a comb in the center of the cluster by first removing outer frames. Carefully lift the frame and look for eggs. If eggs are present, place the frame back and close the hive. It is not necessary to continue inspecting frames and search for the queen.

After **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. (When introducing a replacement queen, Do NOT use the direct release method).

If brood appears spotty and irregular, closely examine for brood diseases. When suspect cells are found, collect sample(s) and mail to the BC Ministry of Agriculture-Apiculture office for identification. Also refer to [Bulletin #204 - Antibiotics for Bee Disease Control](#).

H. 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.

When foundation frames are used, it is imperative to offer the bees plenty of syrup (2 parts sugar- 1 part water). One should plan for about 20 liters (5 gallons) per hive. With ample syrup, about 25% of the comb will be drawn in 8 days, 45% in 12 days and 80% in 21 days. (Note that for each kilogram of wax, at least five kilograms of syrup is needed).

Summary

For the successful development of a package colony, the following should be provided:

- sunny, well drained, wind protected site
- entrance reducer
- plenty of sugar syrup and pollen
- regular checks for queen performance

For further information about spring management, refer to **Bulletin #401**.