

1. Concept—introducing necessary food supplements to an existing colony of honeybees in late winter/early spring.
 - a. The process is relative to the colony's need
 1. An assessment must be made by visual observation and manual manipulation of the colony
 2. Start in winter, as soon as temperatures begin to moderate—i.e. at any time the hive can be opened without danger of freezing adult bees
 3. In fact, an assessment can be made on food (stores) by merely hefting the hive from the rear, to ascertain whether any stores exist.
 - b. When opened, noting condition and location of the cluster, as well as size of cluster area, are reliable signs as to welfare.
 1. If the cluster is at or near the top of the topmost super, with no stores immediately overhead, an adjustment should be made by rearranging the frames.
 2. Place a super, with attendant food frames, directly over the cluster, allowing movement upward into food stores.
 3. Make sure there is pollen as well as honey available.
 4. Lacking honey stores and/or pollen stores, the colony **MUST** be given emergency feed to save them from starvation.
 5. A stockpile of granulated sugar and a pollen supplement/substitute can be placed on a sheet of newspaper on top of the frame bars, over the cluster.
 2. As winter closes, colony size and brood area change drastically.
 - a. Winter bees, if healthy and well fed, should be keeping a good size brood nest, at about the same time the first dandelion blooms appear
 - b. If bees and queen are seemingly in good shape, and food stores are plentiful (at least one-half super full of honey and pollen over them) no real feeding is needed yet.
 - c. Guidelines—early spring and strong colony
 1. Bees occupying 12 to 15 frames in the brood chamber
 2. Brood in 6 to 10 frames in the brood nest
 3. At least 20 pounds (four full frames) of honey
 4. At least 2 to 3 frames pollen
- Guidelines source: *Storey's Guide to Keeping Honey Bees* Malcolm T. Sanford & Richard E. Bonney
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3. Monitoring Progress is advised through the next 6-8 weeks
 - a. Two-week intervals are probably the best, but a hive that has problems may need more intense scrutiny
 1. If the colony has a shortage of nurse bees, feed will not be used for raising brood. Adding bees from another hive, or a package, may be necessary.
 2. If the queen is not laying well, or at all, replacement is the cure. Having a nucleus hive with a young, fertile queen, can be added to this larger colony.
 3. If the colony is under pressure from disease or pests, raising brood may be too stressful.
 4. In any of the above, no feed can be utilized properly, and growth can't be realized fully.
4. Honey, made by bees, for bees, is the best food for the colony. The same is true for pollen stores.
 - a. As the colony consumes stores, they move into newly opened cells
 1. While not all stores can be directly above the colony, the best position for the food stores is as near as possible to the cluster (brood) area, with both pollen and honey being readily accessed.
 2. When short of stores in the hive, food, in the form of granulated sugar, and a patty of pollen supplement/substitute, should be placed directly over the brood area.
 3. While days with plentiful sunshine and warmth for flying are limited, it may be advantageous to supply the colony with some liquid feed, in the form of 1/1 sugar syrup.
 4. The thinner syrup is more like the nectar foraged by bees, thus is more likely to stimulate more rigorous brood rearing. Add 1 Tablespoon vinegar or lemon juice per quart sugar syrup to prevent fermentation/mold.
 5. If brood rearing becomes more vigorous, more room should be made for the expanding colony.
 6. If the colony expands too rapidly for the foraging bees and the left-over stores to supply their needs, brood chilling and/or starvation may result.
 7. Monitoring the colony at this stage is paramount to prevent colony failure.
5. Arranging the brood boxes to house the growth of the colony is common.
 - a. Lower hive bodies, if present, may be moved to the top position (reversal)
 1. Be sure not to break the brood area (cluster), as chilling and brood loss may be the result.
 2. Watch for new pollen stores as the season progresses
 3. Add new frames of foundation when the brood reaches 6 -8 frames across, moving brood up into upper hive bodies. This allows the removal of older, darker comb, or at least the increase in brood frame numbers
6. A ready patty can be made by using the following recipe:
 - 7 parts granulated table sugar
 - 4 parts Bee-Pro or Ultra-Bee, or similar dry product
 - 2/1 sugar water with ProHealth or Honey-B Healthy

Mix the dry ingredients in a bowl first, then add sufficient syrup mix to form a dough that can be made into a soft ball. Place a small (1/2 cup) ball between two sheets of WAX paper (not parchment or baking sheet paper...these cannot be chewed by bees) Roll the ball flat with a dough roller or press it flat to within 1/4 inch. These can be placed directly over the frames in the hive and the bees can consume the food at will. A small patty can be incorporated in the sugar pile early in the year, and may be fed until the bees refuse to eat it, favoring the natural pollen collected by their own foragers. Any remaining patties may be bagged and frozen for later use.

7. When foraging has begun in earnest, the bees will more likely refuse your feed. At this time, supers may be placed on the hive, but **ALL LIQUID** feed **MUST** be removed from the hive, to prevent adulteration of surplus honey stores.
 - a. A word of caution: Hive beetles find the food patty a really fine nutrient source, and will lay eggs in out-of-reach places, i.e., under the patty, between the patty and the top frame bars. To circumvent this potential problem, when feeding colonies that may be weak or newly formed, in which the bees may not be numerous enough to police the hive well, several steps may be taken.
 1. When feeding patties in weather warmer than 50 degrees nighttime temperatures, make smaller (2-3 inch diameter) patties, changing them for fresh ones every 2-3 days. Place the used patty in the freezer for at least 2 days to kill beetle eggs.
 2. Raise the patty off the top bars by means of two small blocks of wood, allowing bees to police the patty, and make use of more food as well.
 3. In warmer weather, as the hive grows, make adjustments in hive capacity (add hive bodies) only as necessary. Having too much hive to police for the number of house bees, is a sure way to attract hive beetles.
 4. Finally, be sure all food sources are kept clean and tidy in the hive, as well as in storage. Reduce entrances to the hive, be sure food sources (bottles, trays, pans, patties, etc.) are not leaking or subject to robbing by other bees or wasps. Refrigerate any food prepared for your bees.