

February (Late Winter & Early Spring) Hive Management in St. Louis

February Beekeeping means spring preparation because bees are waking up soon. Be sure you are set to help clean out the hive and feed in early spring.

Warm Day Inspections

- Inspect the hive interior briefly on a sunny day, when the temperature at the hive entrance is at least 50 degrees F. Look for frames of brood, and stores of honey and pollen. If all are present, the colony is fundamentally sound. Do not disrupt the brood sphere frames; replace the frames precisely as found to avoid chilling brood.
- Close up or bring in any "deadouts" to prevent robbing and spread of disease. Seek to determine the cause of mortality.
- Observe the hive exterior for signs of stress, such as nosema streaks and weakened bees. Dead bees below the entrance board are normal.



Winter Stores – Emergency Feeding

- Check food stores during cold weather by lifting the back of the bottom board off the stand a couple of inches. It should feel heavy.
 - Emergency feeding is needed if the colony is light on honey stores. Feed stored honey frames, sugar paste or hard candy.
 - Sugar Paste: Make a heavy paste of 8 parts sugar to 1 part water (4lbs sugar to 8 oz. water) and place it in an 1 gal. Ziplock bag. If you do not have a rim to place on the upper hive body, cut a 1" diameter access hole in the bag. Place the hole in the bag over the hole in the inner cover and place an empty super on inner cover before closing. The paste will resist freezing. If you have a rim, place the sugar bag, with the slits facing up, on the top bars of the frames (smoke the cluster down, if necessary to avoid crushing bees). Place inner cover over rim, and close hive. The bees will work into the bag.
 - Hard Candy: Heat 8 to 1 syrup to preboil and pour on baking pan or into a circular container. The syrup will harden as it cools. Break up the thin sheets and place them on the inner cover, or place the inverted container on the inner cover and surround it with an empty super and cover. The winter cluster will move up into the container, and will not starve.
-

Reducing an Over-Wintered Two-Story Colony to a Single Story before Spring

Ted Jansen developed this method, and used it for many years.

- Reinstalling the colony in a single hive body after mid-February in St. Louis will: 1) stimulate brood rearing, and 2) help prevent swarming. Perform this manipulation only on a calm, sunny day, when the temperature is above 55 degrees F at the hive entrance, and the bees are gathering pollen. Typically, you will find the cluster in the upper hive body, below the hole in the inner cover, and few or no bees in the lower hive body.
- Remove the over-wintered hive bodies from the bottom board and set them to the side on an inverted outer cover. Scrape or shake the loose debris from the bottom board. Place an empty hive body on the bottom board, using a spare, or using the lower story over-wintered hive body, after removing the empty frames.
- Remove the frames with the cluster from the over wintered upper hive body, and place them in the center of the hive body that is now on the bottom board. Do not disrupt the brood sphere. Install the brood frames in the same position, order and direction as they were in the upper hive body. Select two frames of good empty comb (usually found in the bottom hive body you removed) and place them beside the outermost brood frames on each side of the cluster. Add frames with pollen, or honey and pollen, beside each of the open frames, and frames full of honey beside the pollen. Four frames full of honey and pollen, or their equivalent, should remain in the hive.
- Remove the extra hive body and frames to a work area for inspection. Cull and replace the frames that have excess drone cells, or are damaged, and scrape off excess propolis and wax from the better frames you plan to reuse. Replace one-third of the frames annually in order to reduce chemical residues in the comb. Arrange

these frames in a 2d hive body that will be ready to place on the single hive body when the single is almost full of bees (2-4 weeks, depending on weather). Later, when the 2d hive body is also almost full, consider reversing the two hive bodies to prevent congestion, if the second deep fills before supering. Alternatively, make up a second story of open frames in the field, and place it above the inner cover above the newly made up brood chamber. The queen and cluster will not move up through the inner cover. The second story will be in place for expansion when the lower brood chamber fills out.

- This method stimulates brood production for making splits in early April, and helps prevent swarming by providing an empty hive body for brood nest expansion before the peak of the April fruit bloom nectar flow. As noted above, reversing the hive bodies will also help relieve congestion after the 2d deep is full. Be sure to place supers on early, before the bees fill the brood nest with nectar, and get swarmy.

Spring Medication and Pest Control

- If foulbrood is in the area, feed Terramycin in powdered sugar – one ounce (two rounded tablespoons) of 5:1 mixture, three times, at 4-5 day intervals.
- Determine if your hives need mite treatments by using a sticky board or powder sugar roll test. (See Univ. of Minn. Bee Lab Web Site.) We do not recommend using chemical strips. They contaminate comb with toxic chemical residue and encourage chemical resistance in mites. One exception to consider is Apivar, later in the season.
- The best spring treatment currently available against varroa and tracheal mites is Mite-Away Quick Strips, a formic acid product that is “natural,” not synthetic, safe, and effective. The mites do not develop tolerance to formic acid, and it does not leave a residue in beeswax. Daytime high temperatures should be above 50 and below 90 degrees F.
- Before adding fumagillin to syrup, consider recent studies indicating that the risk of nosema has declined below the treatment threshold.
- Employ IPM techniques.

For more information and photos on diseases, visit the [Honey Bee Issues](#) page. Scroll down to Threats to Bees section.

[HONEY BEE ISSUES →](#)

Spring Feeding

- Honey in the frame is the best food for bees.
- Use 2 to 1 or 1 to 1 syrup to stimulate brood production or if stores are low.



- Pollen substitutes are unnecessary in most parts of our area, but does not harm the bees, and may boost brood production.
- We prefer division board, inverted pail, and hivetop feeders during cold weather. Entrance feeders will not work in cold weather because the bees will not take cold syrup, and will not break cluster to reach it.



The Spring Buildup Formula: Equalizing and Requeening for Early Spring Swarm Control

- Six weeks before the peak of the main honey flow, each over-wintered colony should have four frames of bees and brood, adequate stores, and a new queen. Six weeks before the peak of the main honey flow is normally around April 15 in suburban St. Louis, a week or two earlier in the City, and somewhat later in the hilly areas to the West and South of St. Louis.
- Equalize the adult population and brood in your colonies six to eight weeks before the peak flow. If the colonies are strong, you are likely to have an excess of bees, even after equalizing. If left in the hives, this excess will increase the probability of swarming. Address this excess by either i) reversing on a warm day, and supering early; or ii) reducing the excess by making splits or nucleus colonies, and iii) requeening.
- Eight weeks before the main flow is a good time to equalize and requeen. Requeen with resistant stock.

Making Splits and Nucleus Colonies.[2]

- Dividing the Colonies to make a Split. A split is a production colony, made in early spring from surplus frames of bees, brood, honey, and pollen. These frames may be obtained from mature colonies while equalizing, and are replaced with frames of comb or foundation. The replacement frames will discourage swarming by relieving congestion in the brood nest.
- A split is meant to be a production colony, and therefore should have the same resources of bees, honey and pollen as the colonies from which its' contents are taken. The split consists initially of a single hive body holding at least two frames of brood and adhering bees in the center of the hive body, one frame of empty comb on each side of the brood, and two combs heavy with honey and pollen on either side of the empty comb. Fill out the hive body or nuc box with empty comb or foundation. Feed the split, and add a second story when there are at least seven frames of bees and stores of pollen and honey. Feed until all foundation is drawn. Give the split a new queen, or allow it to make a new queen. You may also make up the split with an overwintered queen and at least two frames of brood from her colony, in which case you would requeen her colony with a young queen, or allow it to rear one. If you want to make honey from the split, preventing its foragers from returning to the parent colony by moving the split to a new location, at least a mile away, will preserve its field force. Conversely, leaving the split in the same yard as the parent will permit the foragers to return to the parent colony, and will preserve its foraging population for the nectar flow.

- Making a Nucleus Colony. A nuc may be made up of 2-5 frames, and has many applications, all of which involve “storing” bees for future use. Most commonly, a nuc is used to store queens as replacements for early queens that do not survive. It is also the best form of queen introduction when it is placed on top of a full-sized colony. Nucs are also useful for boosting a slow growing colony.
- Making up nucs is similar to dividing colonies. Simply take frames of bees, brood, pollen, and honey from colonies that can spare them, and replace them with frames of empty cells or foundation. This will discourage swarming in the parent colony, if performed early. The nuc can survive with as few as a thousand bees and 1 frame of eggs, or with a queen, and no eggs. Most nucleus colonies are set up in a 4-5 frame nuc box, with two frames of bees. Relocate the nuc a mile away or relocate it within the yard, apart from the parent hive. Keep an eye on the nuc's stores, and feed if necessary. Maintain a reduced entrance to protect the nuc from robbing by stronger colonies.

[2] See Caron, Chapter 16.