Raising Queen Bees

About five days before grafting, the farmer places an empty dark brood comb in the center of the brood nest, from which they will select the larvae of the proper age. Eggs take roughly 3 days to hatch which means the brood comb should have a mix of eggs, young larvae, and older larvae. The larvae at the right age can be found when the eggs are starting to hatch, 12-24 hours old. After grafting, the cell cups are put on the cell bars on a frame and then gently slipped onto the middle of the cell starter. Ten days after grafting, the queen cells are ripe and the queens are ready to emerge within a day or two. The day before the queen cells are ready to emerge, they are put into mating nucleus hives set out in the mating yard among the trees.

Identifying the larvae

In order to graft, the farmer needs a small shed with light – out of the wind and sun-, a magnifying lens, and a wooden rack to place the brood comb. About five days before the day scheduled for grafting, the farmer places an empty dark brood comb in the center of the brood nest, from which they will select the larvae of the proper age. For grafting, the farmer needs JZBZ queen cell cups which come in various colors and can be used to differentiate different breeder queens, and grafting tools that have a spring-loaded top with a flexible tip to place underneath the larvae and a movable plastic plunger to push it off gently.
After gently brushing the nurse bees off the brood comb, the farmer brings it to the grafting shed where the young larvae are transferred into the queen cell cups. Normally, larvae filling up the entire bottom of the queen cell cup are too mature, select one before they form the letter C. In order to obtain the larvae from the brood, push the flexible part of the grafting tool underneath the larvae and pull it out without touching the sides, accompanied by a small portion of royal jelly.

Raising the queen

About 24-48 hours before grafting day, make up a cell starter, which is a hive into which the young nurse bees are put, and where they are supposed to add the grafted queen cells. After grafting, the cell cups are put on the cell bars on a frame and then gently slipped onto the middle of the cell starter, after which the bees will go to work and begin to draw the wax on the cell cup. The day before the queen cells are ready to emerge, they are put into mating nucleus hives (mating nucs) set out in the mating yard among the trees.
Queens go under mating flights around age 7-10 and begin laying eggs three days later. Once she has laid eggs, she is marked with a paint pen with the color of the year as every year has a different color, left for around 21-28 days to ensure they are of high quality, and then they are ready for sale.