
Honey Bee Insemination: Laying Queen Introduction

The article contains instructions for introducing an instrumentally inseminated queen who has begun laying

Procedure

Instrumentally inseminated queens who have already begun laying (Figure 1) should be accepted as readily as any naturally mated queen. However, considering the expense and labor it takes to create these queens, many beekeepers prefer to take extra steps to ensure a successful introduction. Following the steps below can help assure successful introductions.



Honey bees surrounding a queen



Figure 1. Instrumentally inseminated queen laying an egg. Image Credit: Kate Anton

Create a nucleus colony (nuc) by adding 1-2 frames of mostly capped brood with at least one of the frames containing emerging brood. Add 1-2 frames of honey and pollen, and enough young bees to cover 2-3 frames. Make sure there are enough bees to cover the brood. *Only use bees and brood from healthy queenright colonies. A feeder may be added and pollen substitute may be provided as needed.

Instructions for installing an II Queen that has already started laying eggs

1. Set up a 4- or 5-frame nucleus colony (preferably with a robbing screen) one to three days before receiving/introducing your queen. See [detailed instructions on setting up a nucleus colony \(nuc\) for an II queen](#).
2. Seal any other entrances or cracks in the hive.
3. Ideally no eggs or young larvae will be present in the nuc, though this is challenging to achieve as eggs are often present on frames with emerging brood (see helpful tips below).
4. Thoroughly inspect each frame and remove any queen cells. It is normal for the workers to produce queen cells when a queen is caged.
5. Place the queen in the push-in cage with emerging bees and food (Figure 2).

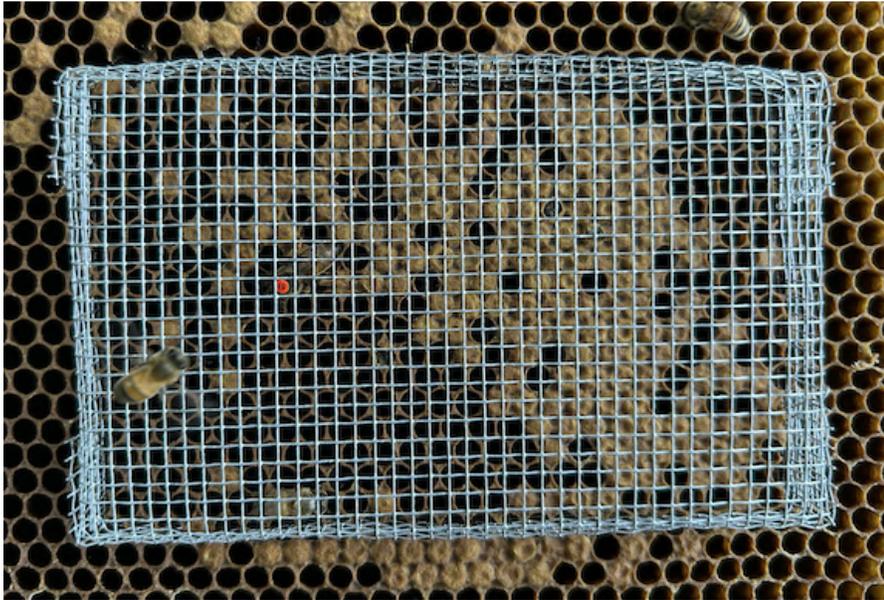


Figure 2. An instrumentally inseminated queen with a red number tag on her thorax in a push-in cage over emerging brood. Image credit Robyn Underwood

6. Continue to inspect the nuc and remove queen cells every 3-5 days until the queen begins laying in the push-in cage.
7. The queen can be released 2-5 days after she starts laying in the comb below the push-in cage if the nuc temperament is calm and accepting.
8. If the workers are runny and aggressive, do not release the queen - inspect the frames and make sure there are no queen cells and return in another 2-3 days and test the temperament again.
9. If the temperament of the colony does not improve, try moving the nuc to a new location, place another colony in the former location, and add emerging brood to the nuc.

Helpful Tips

7-10 days before receiving your queen, move several frames of brood above an excluder on a queenright colony. 3-5 brood frames for each instrumentally inseminated queen you wish to install is a good rule of thumb that will give you flexibility and extra bees in case they are needed. This time frame (7 days) allows eggs to hatch and larvae to age out of queen potential, and any queen cells that are made are easily identified and removed.

Smaller colonies with many young bees tend to accept queens more readily than larger ones or ones with older workers. Make sure the population of workers is mostly comprised of young bees. Additional frames of emerging brood can be added to bolster the population after the queen is established. Shaking nurse bees from other colonies can increase the population to maintain enough bees to cover the brood.

The day you receive your queen: Feed her and her attendants a drop of water and a small amount of honey. Make sure the queen is alive and energetic.

Before installing the queen: Check each frame to make sure no queen cells were overlooked. For safer installation, follow the [push-in cage instructions for introducing the queen](#).

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