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Cupularve No Graft Queen Kit Assembly Instructions

Assembly Components:

3 Bottom Bars

2 Side Bars

20 Yellow Cell Cup Holders

1 Top Bar

20 Brown Cell Fixtures

16 nails

Step 1: Frame Assembly

- A. Place the following pieces within easy reach: One bottom bar, the top bar, two side bars and 8 nails.



- B. Piece the frame together; it should fit snugly. Using a lightweight hammer, nail the frame together, using 2 nails on the top bar, 1 on each end bar angled up to the top bar, and 1 on each end of the bottom bar up into the end bars. Take care not to use too much force. When nailing in the sides make sure you nail them in at an angle that ensures the nail enters the top bar but not so drastic an angle that it protrudes outside the wood. Note: it is easiest to assemble the frame upside down.



Step 2: Queen Cell Set-up

- a. Affix the brown cell fixtures. Using a strong, non-toxic glue (hot glue guns work very well), apply a generous amount of glue to the bottom of the cell cup fixture. Press the fixture onto the top of the bottom bar until you see glue push up through the holes in each corner of the fixture. There should be 10 fixtures to a bar, evenly spaced, starting approximately 2 ¼ inches from each end. Once the fixtures are attached to each bottom bar and have dried, snap on the yellow cell cup holders.



- b. The finished bottom bars can now be affixed within the frame. Turn the frame upside down and place the first fitted bottom bar directly on the top bar so the cell cup holders are facing up. Take the remaining hardware and nail 2 into each end of the first bottom bar through the outside of the frame. From the top of this bottom bar measure 3 ½ inches up the frame and place a mark on the inside of the side bar. This is the placement for the second bottom bar. Turn the frame sideways and nail 2 pieces into each end of the second bottom bar. (This part can be a bit tricky. We have found that using two small pieces of wood cut to size as spacers makes it much easier). Once the second bar is in place your queen rearing kit is ready for use.



Instructions for use:

1. Take a good, preferably old, drawn brood frame and cut out an oblong in the top center the same size as the Comb Box. Secure to the underside of the top bar with small screws or tacks.
2. Fill the food chamber in the Comb Box with candy or “Ragus”.
3. Open the back of the Comb Box (plain side) and push on the Plastic Cell Cups. Replace the cover. Press on the queen excluder front plate.
4. A Colony should be prepared in advance for cell building. This should be on 2 brood chambers, extremely strong with bees, with copious brood, food and pollen. Feeding for some time previously should achieve this. Allow the queen access to both chambers.
5. Take out a frame from the top chamber, preferably the outside comb which contains little brood, and slide the frames over to make a space in the center for insertion of the frame holding the comb box.
6. Find the queen, and place her on the face of the comb box (queen excluder side) and press on the excluder. Alternatively first press on the excluder plate and insert the queen through the hole provided in the top center of the plate and replace the plastic cap. Carefully lower the frame into the center of the chamber.
7. Approximately 24 hours later, take out the comb box frame and inspect for eggs – a magnifying glass is helpful. If you consider the queen has not laid in all, or sufficient, cells, you may put the frame back into the hive for a few hours. The ideal age for the larvae is 24 to 36 hours.
8. There are two ways you may now proceed:
 - (i) Remove the queen excluder plate completely, which allows nurse bees full access to care for the eggs and the queen to go about her normal duties. The eggs take approximately 72 hours to hatch, before the larvae are of an ideal size for continuing in a cell building colony. After 3 days move the queen down to the bottom chamber and place on a queen excluder.
 - (ii) OR – Take out the comb box frame, gently brush off the bees. Catch the queen and release her in the bottom chamber, placing a good (undamaged) queen excluder between the two chambers.
9. Protect the comb box frame from cold wind and take into a warm room. Carefully remove the plastic plain back plate and take out a plastic cell base plug. Check to see that it contains a good larvae. Push the cell base plug onto a plastic support plug, which in turn fixes on to the plastic fixing blocks on the holding frame. Continue until you have filled the holding frame.
10. Again protect from the cold (inside a nucleus hive) and take the holding frame, returning it into a center space in the top brood chamber of the cell building colony, or a prepared queenless stock of your choice. Close the hive, replace the feeder. Next day, by all means have a quick peep to see if the bees have accepted the cells and are continuing to build them, and feeding the larvae. It will be beginners luck if you get 100% acceptance, an average of 70% can be hoped for, but if your labors are a complete failure, try, try again, you could have missed some small detail, and remember there is no substitute for experience.
11. Prepare mating hives. We stock a very simple 5 frame one made of polystyrene, as well as 2 and 5 frame wooden ones. It should consist of 2 to 3 combs of sealed and emerging brood to ensure that it continues to increase in strength with young bees whilst it is queenless, and have plenty of food and pollen. Use recognized methods of preventing drifting of bees returning to their original hive. Prepare 2 to 3 days before inserting the virgin queens or queen cells.

12. The queen cells are left to hatch in the building colony, but it is imperative that not one is allowed to leave her cell free to roam or she will immediately attack the other cells and with the bees 'help' they will be pulled down.

Again an alternative:

- (i) On the 11th day after step 10, when eggs have been distributed to the building colony, take out the holding frame and slip on the plastic cell protector. This allows the queens to emerge from the cells, but prevents them escaping to be attacked.
 - (ii) We recommend that the emergence of the queen from her cell should be in the mating hive. Therefore on the 10th day, approximately 2 days before the birth, take out the holder frame (protect from cold), remove each queen cell attached to the plastic cup supports, and distribute to mating hives. Slightly open the gap between two frames and gently and securely press the top of the cup support into the comb.
13. Do not disturb the nucs for 2 weeks, except to feed if necessary. Next – the difficult bit, over which you have no control – mating. Given warm, still weather conditions the queen should mate and be laying. Remember that if you are using a hive portal or disk entrance to keep the entrance wide open so the queen and drones may leave the nuc box. If after three weeks there is still no sign of her laying, continue to have patience for a little longer, but watch her progress as “older” queens do not always mate satisfactorily.

Notes:

1. Choose the right colony, ex. One that is strong in bees, preferably on two brood chambers with at least 8 combs of brood in all stages, and with plenty of food and pollen.
2. Feed the colony for at least three days before the operation, and during the egg laying period. 2 lbs. of sugar to each pint of water.
3. Bees object to odors, it is therefore an advantage when the kit components are new to let the bees clean it for a couple of days. A little honey spread over the plastic cells will encourage the bees to do this. This will also bring the comb box to hive temperature.
4. Check at all times that queen cells are not present in the nuc or cell building colony.
5. Cells are accepted better by colonies headed by an older queen, rather than a queen in her first season.
6. The comb box holds over 100 plastic cell cups, but you may use only the number you wish.
7. Make sure that bees and brood are, in all cases, taken from disease free colonies.
8. Treat completed queen cells very gently, do not expose them to cold or winds. Do not lay them on their sides for any length of time.
9. Before removing plastic cell base, check to see that the queen has deposited the egg in the base and not as they sometimes do, on the side wall.
10. To clean: spray with sugar syrup & leave it with the bees just for a day. You may wash components in hot, not boiling, water.