

Grafting Calendars for Queen Rearing Season Summer 2022

We credit Bob Binnie and his **Bob Binnie Queen Rearing YouTube**, for our planning executing and a successful queen rearing season. See a link below for the video

[How We Produce Queens - YouTube](#)

The calendars presented here will show the schedule we used for each step of the process.

Using the May calendar for explanation of the schedule events:

May 2th

In a strong 2 deep hive, find queen and place her aside in a 5 frame nuc box.

Make bottom box queenless cell starter in the strong double deep from which the queen was removed.

- Make the bottom box no eggs or open larva. This is where the grafted cells will go.
 - Feeder
 - Frame of pollen (can be frame of hatching larva)
 - Open brood frame, dummy frame (this is where the grafted cell frame will be put). All queen cells started on this frame will be destroyed and frame will be added to box with the queen.
 - Hatching brood but no open larva
 - Extra frame of drawn comb to store syrup
 - Shake in 10-11 frame of nurse bees
 - Frames nectar
 - Maybe some open frames
- You can place the queen in deep on top with just couple frames of brood above a double screenboard with entrance facing to back, above the queenless starter box.

The queen placed in the box above the bottom with a double screen board separating the 2 boxes will make the bottom box queenless. The bees and 10-11 shook frames of nurse bees are primed now to create queen cells from our grafting cups. This takes a tremendous amount of energy and large number of nurse bees are needed to feed and draw the queen cells out.

The box on the bottom, placed in the original orientation of the hive, will have all the foragers returning to this box. The original queen is above the doubles screen board that is also oriented in the opposite direction.

May 3

Pull frames from breeding queens hive with age appropriate larva, "C" shaped larva. 12-24 hr larva is best. Keep these frames moist by draping them with warm moist towels and move them to grafting area with good light. Graft the larva in to JZBZ cups placed in grafting bars. Each cup is covered with warm moist towel after placing larva in the cup on the bar.

Take the grafted cups back to starter/finisher hive. Remove top box that has the original queen in it and place the grafting bar with cups with larva in the 2nd frame from the feeder. Place the top hive body back on the bottom hive body with the double screen board separating them and orientated towards the back.

May 5

Queen Right finisher

Reverse boxes

2 Days later come back and remove top box with queen, above the double screenboard. With a queen excluder on the queen right box place on bottom and the “cell starter” on top now.

“Queen Right Finishers” continue the building process. This works best with dense population, abundant food and stimulant feeding or nectar flow. These units will finish cells better but under these conditions it is important to check for other swarm cells in bottom box, where the queen is.

May 10

Set up mating nucs.

SSA use 5 frame nuc box and will reuse these boxes of bees and resources with subsequent grafts. Initially place a frame of pollen, a frame of honey, a frame of capped brood, 2 frames of open comb. Shake 2 frames of nurse bees into nuc box. The nuc boxes are numbered and we keep track of the queen of each cup using the number and color of tack pin placed on nuc. The 1st graft of the year had a red tack pin. The color of each graft is also noted on our graft calendars.

May 11

Place queen cells from our graft into mating nucs. Record which numbered nuc contains the queen cell origin.

May 14

Queens emerge

May 21

Mating flights

June 13

Harvest queens from batch 1. Record date and nuc number on queen cage.

The subsequent grafting was timed so that the previous batch of queens are harvested and we can reuse the mating nucs. Setting up the mating nucs is time consuming and really takes a lot of resource requirements of bees and nutrition. After the 2nd batch we were able to keep reusing the nucs. and we only needed to add smaller numbers of mating nucs to our nursery. Our larger resource hives have also grown, supplying the needed resources for mating nucs.

The timing between batches needed to maximize our season's queen production. The tight scheduling also lessened the amount of queenless time for the mating nucs. We had to be diligent to cull any queen cells started by bees in nucs from open larva from previous new queen.