

Our first attempt at Queen rearing.

My sister and I have been keeping bees for several years, and are currently running 16 colonies. We had some colonies that were not the best to handle, and some that didn't build up well, so we decided to have a go at selectively breeding a few queens.

We keep reading about the importance of selective breeding, but have never been able to get around to doing it in a controlled manner, usually leaving it up to the bees to select their queen. Then everything seemed to drop into place, I had a nice colony that built up well, the bees were good to handle and foraged well, so we selected this colony to breed from, Jen had a large queenless colony that we could use to rear the queens.

The next problem was how to go about doing it. We wanted to use a system that we felt would guarantee a good degree of success at the first attempt, we were sure that grafting would not afford us that success at the first attempt, we haven't been able to get to any courses on grafting and it appears to be rather fiddly, and we don't really do fiddly! so, I had a look on the Internet and came across an article on cell plugging.

After reading the article I was certain that was the way forward for us, although the cell plug system suggested appeared rather complicated. We wanted a system that was simple, using everything that we already had in our possession. We could make our own wax cell cups using a simple mandrel and clean wax, we need wax cups not synthetic, as we wanted to warm the wax to push in the cut cells, we then got an empty brood frame and added a couple of horizontal bars to hold the cell cups. The next problem was how to cut out the cell, there were several suggestions including using a bullet casing, well surprisingly we didn't know where to get bullet casings from! So, I turned to my engineer husband Marcus, he managed to understand what I wanted, although he didn't understand what it was for, but that didn't matter, he came up trumps, making the stainless steel purposely engineered cutter. The diameter of the cutter is half an inch so actually only damages 13 cells, 7 on either side in the cutting process, 6 around the outside of the chosen cell, this we felt was a small price for a good selected queen.

We prepared a brood frame with the two cell bars, the first bar an inch from the top bar and the second bar two and a half inches from the first bar, these are attached with a nail at each end, this allows the bars to be rotated, a good bed of wax approximately 6mm thick is put on the cell bars, this allows the wax cell cups to be attached to them, we placed 8 cups on the bottom bar equally spaced apart, we dipped the cups into some molten wax and placed in position on the bars and then poured some more wax around the cups to secure them well.

Now we had our equipment ready, we took out a frame of young larvae from the chosen colony, we placed the frame on the tail gate of our vehicle, we gently warmed the cutter with a gas filled fire lighter (getting it too hot makes the cell plug too hot to handle!) and carefully cut out the first cell, we chose young larvae all about 4 to 5 days old. Checking we were not too near the foundation wires, we gently pulled the cell out of the cutter, we then warmed one of the wax cell cups and pushed the cell into the cup. We made sure that only the chosen cell was viable for the bees to raise. When we had the eight cells done we put the frame into the centre of the queenless colony. We closed the colony and although the colony was on a borage crop, we still gave the colony some syrup. The brood frame was returned to the parent colony, and although looks a bit holey, the bees did fill it in, and we soon couldn't tell which frame we had used.

After 48 hours, we had a look to see what the situation was with the cells, we were thrilled to see that the bees were drawing out the queen cells. Six days after the cell cups were taken we checked the cells again, 6 of the 8 cells were viable, we were really pleased with the result at that stage.

Ten days after starting the process we decided to transfer the sealed cells to nuc boxes. We made the nucs up with a frame of brood, a frame of stores, two more frames and plenty of nurse bees, we left the nucs for a couple of hours, then we gently cut the sealed Queen cells from the frame and popped them into a cell protector, and placed it between the brood frame and stores. We fed the nucs with syrup.

After 14 days from the start, we checked the queen cells, they had all hatched out and we now have 6 nice queens.

We were absolutely delighted with the outcome, to get 6 queens out of 8 cells at the first attempt was thrilling. We certainly will be doing it again, we will be considering using a rearing colony rather than just relying on a queenless colony, we hope not to have any queenless colonies, as we will have some overwintered nucs to fall back on.

We found that it was really easy to do, when you have all your equipment ready, one person could do it very quickly. We could have produced more queens using both bars, but we only wanted a few queens, so only used the bottom bar.

Care must be made to check that any brood frames that are put into the nucs are free of unwanted Queen cells, if this is not done, then all your hard work can be undone!

You can contact us at gillianthatcher@btinternet.com if you would like any more information or details about the cell cutter, we would be pleased to help.



Cutting a cell



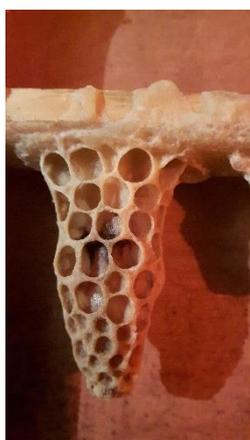
Our first cut cell



The cells in cups



Bees working the queen cells



One of the queen cells