

QUEEN REARING IN SMALL COLONIES

This method of raising queens can be used successfully by the small one colony beekeeper or others who run several hives. It is a way of reducing the incidence of swarming and as the queens are always under 15 months old they produce vigorous colonies leading to good honey production. Even so called 'leave alone' beekeepers can use it as it is possible to reduce manipulations to 3 or 4 inspections per season. However in the beekeeping environment we now find ourselves in; 'leave alone' is not recommended. It is therefore best to monitor colonies with periodic inspections to ensure they are in good heart and disease free.

Sometimes the process is known as the 'patch method'

In a swarm situation, colonies usually have a large number of bees causing overcrowding so they raise lots of queen cells. Similarly in queen breeding colonies there are very large numbers. So why cannot it be assumed that a small colony can raise two or three queen cells. Of course it will, as we have seen under various conditions. Think of when we have possible queen less colonies. We give them a test cell and they are on to it very quickly to raise emergency cells.

The intention is to give a small colony made up of mostly young bees of nursing age, a small piece of brood with both eggs and larvae less than 24 hours after hatching. As they are definitely queen less they will quickly raise two or sometimes three emergency queen cells. The quality of these cells is good because the bees only have about forty cells to maintain and all their energy goes into feeding those larvae. The bees will select the best larvae to raise into queen cells. Given that there are eggs as well they have a second chance to decide. In practice it is usual for the cells to be underway with 48 hours. The position of these few cells is between two frames containing an adequate amount of stored honey and pollen. It is seldom necessary to feed with sugar syrup.

The timing is important and experience has show that in the South Hampshire area the best time to start the process is between late April and early May. If it all goes reasonably well there will be a good laying queen in early June building up ready to combine/re queen in mid July. As some of my colonies go to the New Forest Heather Moors at the end of July it provides a vigorous young queen who will continue laying through September to provide plenty of bees to over winter.

The process:

At spring inspection, usually late March early April the queen is clipped and marked with last years colour. At this time some brood frames will be swapped with frames of foundation and a super is put on. If there is OSR in the area regular inspections will commence from then on.

End April, early May depending on local conditions a nucleus is made up of two frames of honey and pollen (there must be no brood) a frame of drawn comb for cell raising, a second frame of drawn comb and a frame of foundation. If there is more than one colony, the best is selected to provide the cells. In the colony to be worked the queen is found and temporally caged. Using brood frames, enough bees to cover four frames are shaken into the nucleus box. Take the first frame of drawn comb and cut a one inch square (25mm or 5 by 5 cells) hole towards the top and centre. Then cut a similar one inch square of brood containing eggs and young larvae from the frame removed from the best colony. Very carefully place this piece of brood in the hole cut in the cell raising comb. Now put the frames in to make up the nucleus in the order: Honey and pollen, cell raising frame, honey and pollen, empty drawn comb and the frame of foundation. Five frames in total. The bees will quickly run on to the frames so close up and put a twist of grass into the entrance. Place the nucleus adjacent to the parent colony or completely remove it to an apiary at least 2 miles away. Replace frames removed from the parent colony with frames of foundation. Finally release the old queen. Add supers as required.

Taking a nucleus out of a colony will usually delay the swarm instinct by relieving congestion, giving the remaining wax makers something to work on and in theory a queen raised the previous year is less likely to swarm.

About the second or third week of July the nucleus with the young queen can now be used to re queen the parent colony. There are various methods for the re queen exercise. First the old queen must be found and removed into a queen cage with at least 10 workers. Place two frames with the young queen sandwiched between them into a brood box. Spray water over the out side faces of the frame. Then place frames from the parent box and nucleus alternatively, spraying each side with water. The bees will be too busy worrying about the water to fight. Also because the boxes have been situated next to each other the flyers will quickly locate to the single box. Replace supers over a sheet of news paper with a few cuts in it. Close up the hive and leave alone until it is time to remove the honey.

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Some further thoughts.

Following some comments and feed back from other beekeepers that have used this method of queen rearing.

In one case at the time of making up the nuc a frame of sealed and emerging brood can be added. The idea being to provide more young house bees to work on the queen cells and to ensure there are plenty of feeder bees ready for when the new queen begins to lay. If this done it important to make sure that is no open brood or eggs because the bees may prefer to raise queen cells on that frame which will be different to the patches which contain eggs and/or larvae from the preferred colony.

The other case is to add a frame of sealed and emerging brood 4 to 5 days after the initial operation. The same care and reasons as above also apply.

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CLIP AND MARK ALL QUEEN BEES

