

## May Checklist

### Points to ponder:

- Swarm prevention critical
- Swarm management procedures
- Varroa checks
- Comb changing
- Comb Management

May is the month when our colonies are building up rapidly. In those areas where there is a spring flow the honey should be ripening in the supers. The workers will be feeding the queen large amounts of royal jelly and her egg-laying will be at the maximum level. This is really the first time in the year that there will be more adult bees than brood. Be on 'swarm alert' This is the danger time for swarming; it is easy to become complacent and assume that the colony is thriving and all is well. Of course, all probably is well for the colony, but a swarming colony will not be so good for the beekeeper or the honey harvest. The queen produces queen substance, or pheromones, from her mandibular glands and all worker bees need to receive a minimum level. This communicates to the bees that they are 'queen-right', and it is a stimulus for foraging and other activities within the hive. If the colony is overcrowded, then not only may the queen have insufficient room to lay, but her pheromones may not reach all the bees in the required quantities.

### Tell-tale signs of swarm preparations

There will almost certainly be drones present, or at least drone brood, and the bees will build those little 'acorn-shaped' queen cups round the edges of the comb. All this is normal behaviour at this time of year and there is no need to destroy the cups. The presence of drones, however, can be a sign that the colony is preparing to re-queen itself and produce a new colony by swarming. Keep an eye on those queen cups. When they have a rim of new white wax then you know that preparations for swarming are probably taking place.

Swarming is the natural reproduction of the honey bee colony and, in the natural situation swarms replaces those colonies that have died out in the winter. Without swarming honey bees would have died out many years ago. However, our honey bees are not in their natural environment, our swarms can be a nuisance to neighbours and a swarming colony will produce little if any surplus honey. We therefore need to manage the swarming impulse if we can.

### Practice swarm management

We can manage the impulse to swarm by keeping young queens. It is thought that a young queen will produce larger amounts of queen substance than an older queen. Ideally queens in honey producing colonies should be no older than two years. Also we can ensure that the bees have enough room by supering early. Remember that nectar takes up a lot more space than honey because the bees spread it out to evaporate the water and ripen it. Put an extra super on when the last one is full of bees, not full of honey. Think of the supers as being

space for the bees rather than the honey. Make sure that the colony has plenty of ventilation as this ensures that the queen substance can be distributed easily. It also helps in the evaporation of the nectar. If your colony is making preparations for swarming then knocking down the queen cells may delay the process, but it is unlikely to prevent it. And the chances are that you will miss one or two cells because bees seem to be very good at hiding them. It is better to be ready to control the situation by carrying out an artificial swarm than to lose half of your bees and most of your honey crop. You do not have to use the standard Pagden method, use whichever method of swarm control works for you. Swarming is initiated by the young bees, so sometimes giving them some work to do may delay the swarming instinct. Removing some frames of brood, a charged queen cell and some stores, perhaps to a nucleus, and giving the bees some foundation to draw may divert them and give the queen some more room in the brood box. A swarm will leave with the incumbent queen and half of the bees, and is made up of bees of all ages. But the swarm will only depart if it can leave the colony with the means of re-queening itself. It is for this reason that the bees will not leave until the first queen cell is sealed. Once an egg is laid in a queen cell it takes three days to hatch and another five as a larva. It is during this larval period that it is given copious amounts of the rich royal jelly that determines that this larva will be a queen. So there are eight days between the egg being laid and the swarm departing. If after your inspection, the bees decide to produce a queen from a young larva that has just hatched then that cell will be sealed in about five days. When you return to inspect one week later the swarm could have already left.

Remember swarm prevention should aim to avert the swarming instinct whereas swarm control aims to deal with the situation once swarming preparations have started. Of course bees will prepare to swarm. It is what bees do and it may well be true that some bees are more 'swarmy' than others but, with careful observation and good husbandry, many swarms can be prevented. May is usually a delightful month for beekeeping. Much of the top fruit is in bloom and there are many flowers secreting nectar. To maximise our honey crop we need large, healthy, prosperous colonies, good weather and no swarming.

### **Consider Comb Management**

The aim is to remove old and dark used comb that could be harbouring disease and replace it with foundation to enable the bees to produce new comb. The long-winded way is to gradually move the old dark comb to the edge of the brood nest and then, when it has no brood in it, remove and replace with foundation in the centre of the brood nest. This can take a while, but does work. The alternative is to undertake a Bailey comb change or a shook swarm. These have the advantage of speeding up the process and bees respond really well to their 'clean sheets': but it does require some careful management to avoid stressing the bees. For either of these manipulations, you should wait until the weather conditions are favourable and there is a honey flow. Bees need warmth and food to draw comb. A honey flow can be artificially provided, but it is harder to create the warm conditions!

### **A Bailey Comb Change**

A Bailey Comb Change involves placing a brood box containing frames of foundation over the existing brood box. When the bees and queen have moved up into the new box use a queen excluder to keep her there and place a new entrance between the two brood boxes. This reduces traffic through the old comb. Once all the old brood has emerged from the bottom brood box, you can remove box and clean it up, then the hive can be reconfigured. This is an excellent way to get the bees onto new comb. It does not involve destroying brood, so there is no check to the colony development. However, it is a relatively slow method as it takes three to four weeks. Although if there are disease pathogens present they will be transferred to the new comb. So, as long as you are confident there are no disease issues this is a useful method.

### **The Shook Swarm Method**

The shook swarm method appears a little brutal, because you immediately remove all the existing brood. However, in my experience the bees respond really well to it and it has the added advantage of delaying swarm preparations in that colony.

For this method place the existing brood box to one side of its stand and, in its place, put a queen excluder on the floor and a new brood box containing frames of foundation on top of this. Remove a few frames from the centre to create a bit of space.

Look in the old brood box, find the queen and pop her in a queen cage during the following manipulation. Shake all the bees from the old comb into the gap in the new brood box. Then, run in the queen and fill the gap with the remaining frames. Add a feeder and provide the bees with some light syrup and leave for a few days. When you return you will witness one of nature's miracles: comb building. It is always amazing to see how quickly the bees can draw out comb; it looks so fresh and clean when it is first built. Once you see eggs and brood in the new comb you can remove the queen excluder that is under the brood box. This was there to prevent the colony from absconding as, in the first instance, you took them from their lovely warm brood nest and shook them into an empty box.

The BBKA has produced a laminated sheet on the shook swarm, which is useful for taking to the apiary with you.