

Dunblane and Stirling Beekeepers Association (SCIO)

Information and Guidance to Reduce Swarming during Corona virus

This information and guidance has been written by a number of your fellow members in response to the guidance from the Scottish Lead Beekeeper that we should do all in our power to reduce swarming during these challenging times. This will reduce the need for swarms to be collected and consequently assist in the fight against Corona virus, Covid-19.

The document includes the following sections:

1. General Colony Management.
2. Colony Development - steps to look out for.
3. Additional measures to consider.

1. General Colony Management

Marking Queens:

Within 'The Basics of Beekeeping' there is a section on the 'Prevention and Control' of swarming. These procedures are much easier to undertake if the colony's Queen is well marked. The start of the season, when colonies are smaller, is an excellent time to ensure this is done. It may be your normal practice not to mark your queens but this year we would strongly suggest that you do. In addition, as the season progresses re-mark her as necessary.

Colony Inspections:

We strongly recommend that colonies are checked every 7 days during the main swarming season which in our area is from early May to the middle of July. If the weather forecast on day 7 is not suitable but day 5 or 6 is better, then that would be the day to perform your inspection. Thereafter restart the 7-day clock from the inspection date. These inspections will allow you assess colony development against the information in Section 2.

Why Colonies Swarm:

There are many factors which lead a colony to swarm but three which are within our control are the colonies (1) Genetics, (2) SPACE - Brood Nest and (3) SPACE -Super.

Genetics - Some colonies have a genetic propensity to swarm. Your colony notes may help you to identify colonies that show this trait. Two solutions we would suggest,

1. Cull the queen and unite the bees with another colony not showing this trait.
2. Ensure your 7-day check are extremely thorough and are never further apart than 7 days.

SPACE - Brood Nest Area - There is a lot going on in this area and if it becomes too congested it can force colonies through the stages of colony development quicker than they would otherwise progress. So, what does happen in this area, (1) Brood is reared, (2) Pollen and honey are stored to feed the brood, (3) nectar is 'hung out to dry' before being moved for storage either above or

to the side of the brood nest. Consequently, not enlarging the brood nest sufficiently, either horizontally and/or vertically can provoke the swarming impulse.

SPACE – Supers – One of the colony's main drivers is to store honey for winter. The colony prefers to store this above the brood nest which is where we locate our honey supers. If appropriate, ensuring supers are on early helps to reduce the congestion in the brood nest and consequently maintains a better balance across the whole colony thereby reducing the tendency to move towards swarming.

Bees are often reluctant to move stores into a super which only has foundation in it. This situation can be alleviated by putting two or three frames of drawn comb in the centre of the super with frames of foundation to either side.

It is also important to remember that if the brood nest has a complete halo of stored honey across the top, bees will be reluctant to move beyond this stored honey even if drawn comb is available in the super above. The bees appear to see the stored honey as we see the ceiling of the upper floor of our house – all that is above is the roof. Therefore it helps to ensure that the middle two frames of the brood nest, which are underneath the drawn comb in the super, have brood on them right to the top and do not have a barrier of stored honey above that.

2. Colony Development – steps to look out for.

Colony's develop at their own pace dependent on many factors and some will have a greater propensity than others to swarm. However, there are several signs that you can look out for well ahead of the production of closed Queens Cells.

We suggest that most colonies would follow this pattern during the early part of the season:

- a. Increasing production of Worker Brood across several frames.
- b. Production of Drone Brood in a significant quantity.
Swarming could be 30 to 40 days away assuming all other factors are equal.
- c. Production of Queen Cups.
This will be ongoing until other factors (which will often be SPACE issues) force the colony to prepare for swarming.
- d. Finding an egg in one or several queen cups.
This can be a very transient step and is not always seen. If the weather turns poor before the egg becomes a larva the colony can abandon the move to swarming. However if not then you are at most 4 days away from a charged queen cell.
- e. Finding a charged Queen Cell.
A one day old larva will start to be fed Royal Jelly and this will continue until day 8 when, assuming the weather is favourable, the cell will be capped and the colony will swarm. This is why we strongly suggest that inspections are no longer than 7 days apart.

3. Additional Measures to Consider.

Colony Location:

We strongly encourage you to ensure that another beekeeper or family member knows the location of **ALL** your colonies. Written description of how to access the locations would be helpful along with their longitude and latitude coordinates. Should you become ill and are unable to pass this information on, the last problem we all want as a beekeeping community are colonies that are not being cared for which can become the source of ongoing infection in an area.

Bait Hives:

The setting up of a bait hive a short distance from your apiary can be a very effective means of catching a swarm that you (or perhaps someone else!) missed during 7-day inspections. The bait hive can be your oldest equipment consisting of a floor, brood box with three frames, crown board and roof. The three frames are best to be two old drawn combs which are disease free and one frame with no wax in it at all. The empty frame should be put in the middle of the brood box with the other two frames either side of it.

If it is possible to put the bait hive in an elevated position – all the better.