

## Shook Swarm

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**Trials have shown that shaking bees onto new foundation and then destroying the old combs can be beneficial when controlling European foulbrood. This procedure is known as Shook Swarming and it may also be beneficial in controlling *Nosema spp.*, chalk brood and *Varroa* mite populations. Colonies treated in this way often become the strongest and most productive in an apiary. Some beekeepers are now using this system to replace all the old brood combs in a beehive within a single procedure.**

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### 1. When can I do it?

The best time to carry out a Shook Swarm procedure is mid-March to mid-July, depending on the locality. It is usually too cool for bees to effectively draw new comb before March and the loss of brood may be detrimental at that time. If carried out later than July then brood that would take the colony into the winter is destroyed. If the colony is strong you can carry out this procedure in early March, but remember you will need to feed sugar syrup so that the bees can build comb. If this procedure is being used as a management tool then it would be best to avoid the period when eggs are laid that will develop into bees that will forage on the main honey flow. Generally this is the last two weeks in April and first week in May. If this procedure is being carried out as the result of confirmation of EFB then this would be acceptable as it is more important to effectively control the disease. In this case the procedure must be carried out with the help of an authorised Bee Inspector.

### 2. How do I carry out a shook swarm?

This technique is not particularly suitable for smaller colonies. If shaking a small colony put them into a nucleus box.

- Prepare a clean brood chamber filled with new (or sterilised) frames of foundation, a clean floor, crownboard and queen excluder;
- Move the hive that you intend to shake to one side and place the clean floor on the original hive site. Put the queen excluder over the floor and then place the clean brood box containing frames of foundation on top of the queen excluder;
- Remove the centre four frames and put them to one side. Flying bees will arrive at this new chamber;
- Examine the old brood chamber and find the queen;

#### If you are not comfortable with finding the queen

- If you are not proficient in finding the queen then place another excluder over the 'clean' brood chamber with an empty super on top. This will act as a funnel to stop bees from bearding over the side of the brood chamber;
- Shake each frame of bees onto the new supered brood chamber until all of the old combs are free from bees;
- Shake and brush bees remaining on the old equipment onto the supered brood chamber;
- Lightly smoke the bees down into the clean chamber; in most cases the bees will crawl through the excluder and should leave the queen behind for you to pick up and carry on as normal. If not, check the old chamber and floor for her.

#### If you are comfortable with finding the queen

- Once the queen is found, place her between the frames of foundation in the new box, or in a queen cage so that she can be released into the new chamber when you have completed shaking the bees;
- Shake all the bees from the old combs into the new chamber. This is done by holding a frame of bees about one third of the way into the gap left between the foundations in the clean chamber. The frame is then moved quickly downward and suddenly stopped. Avoid jarring the comb against the chamber. The bees will fall off the comb and any remaining on the comb can be brushed off;
- Shake and brush bees on the old equipment into the new chamber;
- When all the bees have been shaken into the new brood chamber replace the frames of foundation that were removed;
- Put the crown board in place;
- Unless there is a strong nectar flow feed with 'heavy' sugar syrup i.e. 60mls. of water to 1 kg. of whiteranulated sugar. It may be beneficial to delay feeding for two days. In this way any contaminated nectar carried by the bees is used in comb building;
- After about a week when brood is present remove the queen excluder and sterilise it appropriately;
- Maintain feeding until all combs are drawn out. Check carefully at this point as end combs may need to be turned around or moved one frame into the chamber. This is because bees find it hard to cluster and create wax on frames adjacent to the side of the brood box. In the case where EFB has been confirmed the old combs and frames must be destroyed.

#### How do I prepare drawn comb?

This is only practical for the smaller types of brood chamber. A clean brood chamber is filled with frames of foundation and placed over a queen excluder during a honey flow. I.e. used as a super. When the combs have been drawn and filled with honey they can be carefully extracted and stored for use as replacement combs.

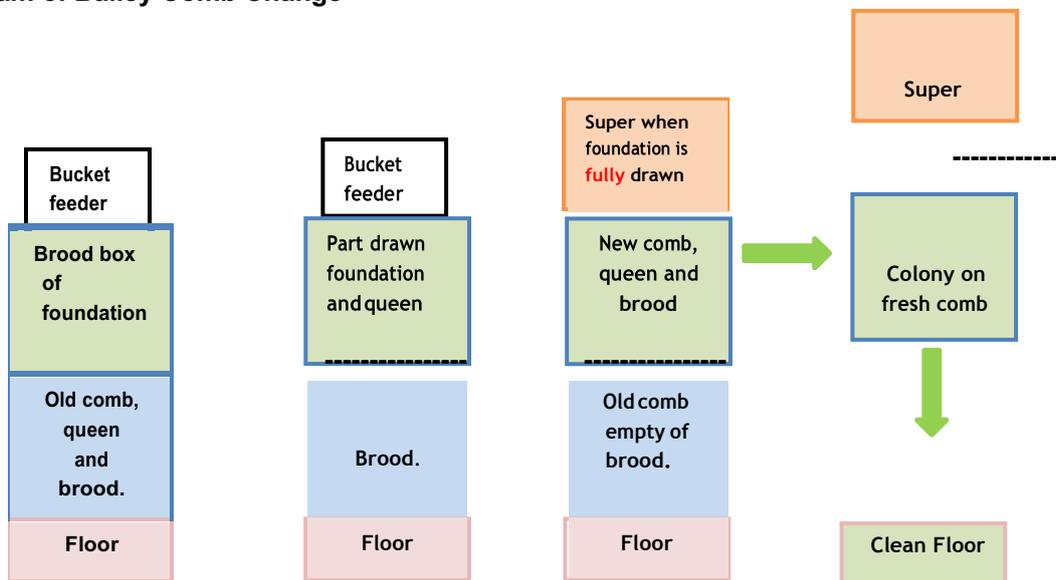
### How do I use these combs?

Towards the end of the bee keeping season frames that you wish to replace are moved to the ends of the brood chamber. During winter these frames become free of brood so in early spring, before the colony is expanding rapidly, they can be removed and replaced with drawn combs. Use of foundation at this time is not possible, as without a honey flow or extensive feeding the bees will not draw it out. This exchange can take place on a warm day in March. Ensure that sufficient stores remain, if not feed the bees.

### How do I perform a Bailey comb change?

Prepare a clean brood chamber filled with frames of foundation. Place this chamber over the existing brood chamber. Unless there is a strong nectar flow feed with winter strength sugar syrup i.e. 1 Kg of sugar to 650ml of water. When the bees have drawn out some of the foundation, find the queen and place her on this comb. Put a queen excluder over the old brood chamber and under the new, thus trapping the queen in the upper chamber. If possible arrange a new hive entrance between the two brood boxes and close off the old. This helps to reduce the amount of pollen stored in the old lower combs. After three weeks, remove the old brood chamber. The brood will have hatched and the comb can then be rendered to recover the beeswax. This system is ideal for replacing all the combs at once and is best performed in early spring often, with clement weather, March is suitable, but remember to keep feeding so the bees can build comb.

### Diagram of Bailey Comb Change



Queen confined to new brood

Old comb removed and then rendered or

Start → About one week → 21 to 24 days later

### Where do bees find it easiest to draw comb?

The high temperatures needed for bees to secrete wax are governed by many factors such as colony strength, weather etc. The area above the brood nest tends to be the best place.

### What if my foundation is old?

Old foundation tends to become hard and brittle so bees tend to chew it into holes. It can be restored by carefully warming it, which releases the oils and makes it usable again.

### Is there anything else I should be aware of?

Make sure that you only use 'narrow' spacing between the frames. Combs at the end of the box tend not to be drawn on the outer face. This is because the bees find it hard to cluster there and generate wax. Turn the frame around or move it further into the box so that they can draw it out.