



Animal &
Plant Health
Agency

National Bee Unit

Replacing Old Brood Comb

Why should I change old brood combs?

Combs should be changed regularly as they become damaged, contain extensive amounts or inconveniently placed drone comb, but mostly because used comb may contain the causative organism of many bee diseases, such as EFB, AFB, Nosema, etc.

How often should I change them?

There are many opinions as to this question but no brood comb should be used for more than three years. Used comb should be rendered or disposed of rather than being used in a different colony. For the small cost involved it is not worth the risk.

Is it easy?

Yes, providing you approach the change with a plan.

Are there different plans for single or double brood management?

These should be approached in different ways to gain the best results. The next Q. & A's will help you decide how to do it.

Can I just replace the odd brood comb with foundation?

This is the most common system used by beekeepers and probably creates the most problems especially in single brood chamber management systems with the smaller types of hive. Foundation placed in a bottom brood chamber is invariably spoilt unless a powerful swarm with a good honey flow is drawing it out. Foundation put into a bottom brood chamber is drawn out from the top downwards, as a result it becomes travel stained and covered in propolis. The bees then nibble the foundation away leaving holes between the comb and the bottom bars of the frame. In double brood chamber systems the foundation can be put into the upper chamber so this problem does not occur.

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What are the best systems?

There are two easy and effective systems, these are:

- A. To replace old comb with prepared drawn comb and
- B. To perform a 'Bailey Comb Change'.

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.

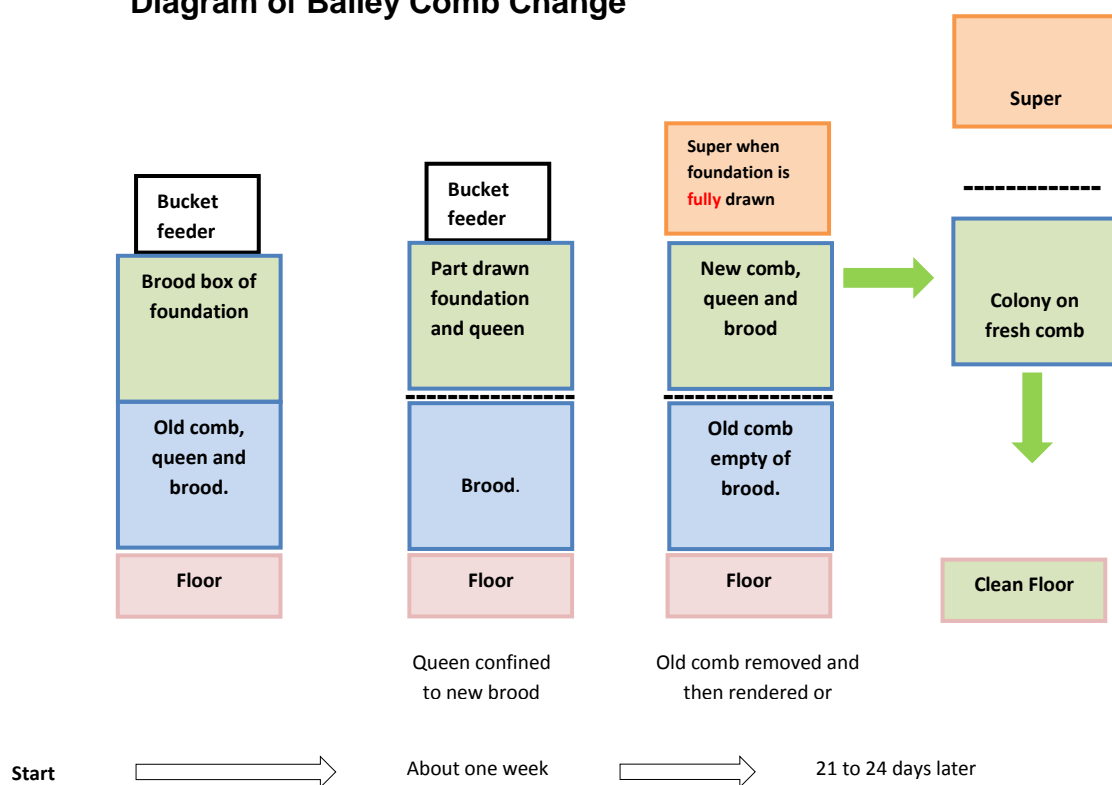
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Diagram of Bailey Comb Change



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.

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