

Patterson's Pages

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To make sure you are not caught out by having insufficient boxes of good-quality comb or foundation, Roger Patterson offers some early-season advice.

We are approaching the active season when bees will need boxes of combs or foundation, but this is often left too late by the beekeeper, causing a rush to make up a super or buy foundation in a panic.

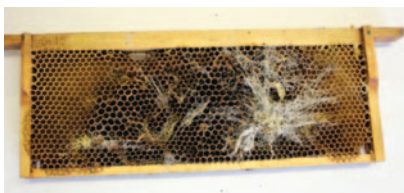
In my view there is a little skill involved in preparing supers and placing them on the hives. It is often thought of as an easy job, but if preparation is done well it can have a positive effect on the quality of comb, the management of the colony in the next few weeks, the extraction process and it can save time. I extract twice in the season, but if you do not have an early extraction, then you can modify the following guidance to suit yourself.

Uncapping and extracting

When uncapping combs for extraction I run the uncapping knife down the tops and bottoms of the frames to remove comb and propolis. This is made easier if the wire loops in the foundation are tucked inside the bottom bars. This means that the winter work is lessened and combs are ready to stack in supers for next year. If the bees have not built the combs straight, the offending parts can be cut out; it is easier to do this when they are still wet from extracting.

Wax moths can be a nuisance

I do not like having brood in shallow combs, as it attracts the greater wax moth that can quickly ruin good combs. Lesser wax moth will damage virgin combs, but it takes them a long time to do so. I rotate my supers, so those that were not used one



Mild damage caused by greater wax moth to a super comb that has had brood in it. In a short time, comb can be completely destroyed. All photos are by Roger Patterson.

year are the first to be used the next year; this tends to keep them in good condition. After extracting I put supers back on hives for the bees to clean up. I store my supers outside during the winter to reduce the possible damage from wax moth. I stack supers, about six high, with a queen excluder at the top and bottom to keep mice out, then place a roof on top. I do not treat for wax moth as I do not have a problem because frosts deal with them.

The problem with pollen

Bees do not usually put pollen in drone comb, only in worker comb. Pollen in supers is a problem, as it is a nuisance when extracting; it makes the cells difficult to uncap and throws the extractor out of balance when rotated. Also, it is wasted in supers, because the bees are reluctant to remove pollen from super combs, so it goes mouldy and is difficult for them to remove from the combs the next year. This is relevant for supers that are placed immediately above the queen excluder. In



Above top: Worker comb where the central area contains an arch of pollen; bottom: drone comb, which has no pollen, nectar or honey stored in it. These combs were placed in supers immediately above the queen excluder.

worker comb, the bees usually fill the centre frames with an arch of pollen, if drone comb they leave the arch empty, presumably expecting the queen to lay in it. I prefer drone combs in supers for that reason, although like a lot of beekeepers I have both, so I tend to put drone in the centre of supers, worker towards the outside, which reduces the problem to a minimum.

Comb spacing

If well looked after, super combs will stay in good condition for many years. I aim to get all fully-drawn combs on wide spacing if I can. If your uncapping is nice and parallel one year, it is likely to give you nice straight combs next year. This makes future uncapping easy, taking a minimal amount of honey with the cappings. Foundation or damaged combs are put on narrow spacing, so they can be drawn out well by the bees. If the combs have holes in, I place them on narrow spacing with fully drawn out comb either side. The bees will usually repair the combs well. If you put a hole against a hole the chances are the bees will build comb crossways through the holes. If there is a heavy nectar flow, bees will make a good job of repairing damaged combs.

When and how to super

I like to super early if I can, especially in the spring when we often get a spell of several days with warmer weather,



Uncapping combs in a straight, parallel manner results in straight combs being produced in future years. These are on wide spacing.



Bees will repair a comb with a large hole in its centre if placed between two drawn combs on narrow spacing.

allowing bees to collect quite large amounts of nectar and pollen. There are many trees that secrete both, such as pussy willow. If supers are not on the colonies the bees will pack nectar and pollen round the brood, so restricting the queen. This has the effect of retarding spring build-up and perhaps instigates swarming preparations. I am in an oilseed rape area, so I often place two supers on, as a strong colony can fill and



When space is limited, bees will pack nectar and pollen around the brood, thereby restricting the area available for the queen to lay in.

cap a super in a week. In beekeeping it is always useful to keep an eye on the weather forecast for the week ahead. Many of the beekeepers in the past worked on the land and were good at forecasting weather from the signs around them. A trick they used early in the season, when there may still be frosts, was to lay a couple of sheets of

newspaper over the brood box, then a queen excluder with supers on top. The newspaper kept the brood box warm and when the bees needed extra space they chewed through the newspaper, so space was added before the bees needed it.

I generally put empty supers underneath the existing ones. When lifting supers off, I make a note of the weight and the number of bees inside and add a super if I think it may be needed. Bees find it difficult to fill supers that are neatly stacked in a shed, so they are of more use on a hive! I do not remove the crown board in the summer as there is no need to.

Preparation is all-important

Bees will only build comb if they have a need for it and they have income with which to produce the wax. If you do not have at least three supers per colony, then it is a good plan to have foundation drawn early in the season. Many beekeepers make the mistake of putting comb on first, then put foundation on late in the season because they have run out. If there is no nectar flow, the bees ignore it and it goes stale, so it is less attractive for the bees next year. Get foundation on early, as comb stores better than foundation does.

I have often heard the advice to alternate super combs with foundation, but I think this is poor advice. If there is a nectar flow, the bees find it easier to extend the cells of existing comb, building it out so far they are unable to work on the foundation. If you are running short of comb, then you will have more success putting the foundation in the middle of the box on narrow spacing with the comb on the outside on wide spacing.

I like to get brood combs built above the queen excluder in a brood box that is used as a super. Many beekeepers put foundation in the brood box, but unless conditions are right, I find that you often get poor comb. If the weather is poor for a week the bees climb all over it and spoil it. After another week of bad weather the bees usually chew holes in it. Then when the weather changes, because the foundation is spoiled the bees do not build the comb well.

Early in the spring I place a brood box of foundation on a strong stock, preferably with a super or two the bees have partly filled. I put this under the existing supers, then when the bees start to draw it out, put it above the lower super. This prevents pollen being stored in it. If the forage is good I can often get a full brood box drawn and filled on oilseed rape. The combs are usually built straight, so they can be uncapped and extracted. These can be dried out by the bees and stored if needed. This provides good comb that queens can lay in almost immediately. If you have

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A sheet of foundation bees had started to draw, then stopped. It was in a brood box for a long time, so not attractive for bees to draw out. This is typical of what happens when foundation is put in a colony towards the end of the season.



Bees been unable to finish drawing this comb. They have chewed holes in it that will probably never be filled in. The area bottom right will not be drawn out properly. This comb and that to the left should be removed and melted down.



A brood comb partly drawn and filled. The bees have done well.

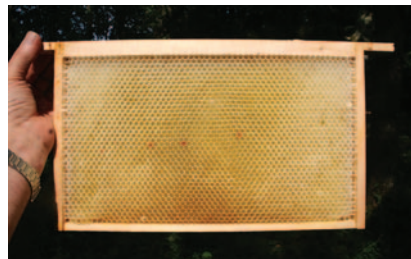
brood combs built during the summer when there is no chance of granulation you could use these for winter feed if you wish. An added advantage is that if you have a nucleus or colony that is short of food you have combs of food available immediately. There is no need to make syrup or feed in the evening.

I have used this method for over forty years and I find it a very useful way of producing good productive combs. If you wish to change combs you have them already built.

For good reason, beginners are often encouraged to have two colonies early on, but they struggle for comb in their first year or two because they have not built up stocks yet. Instead of putting a super on their first colony, I think it probably better to add a brood box, to provide combs for the second colony. You should still get some honey and a full set of good combs in your first productive season. For beginners I think it might be better to extract the first super or two and return it to the bees rather than put foundation on late and have the bees neglect it. I see a lot of beginners with poor super combs and I am sure it is because they put foundation on their colonies too late, possibly when the colony was not strong enough. Perhaps



A brood comb of capped honey. This can be extracted or used for feeding.



A fully drawn comb after extracting that can be stored or used in a brood box immediately.

another way of approaching this is to put some starter strips in frames to see if you can get some comb honey. If the starter strip goes stale it will not matter much, but you stand a chance of having some honey and it will probably taste better for not having been in a jar.

Very often there is a brood break in the summer, which is seen as a disaster by some beekeepers, but if there is a nectar flow and no loss of adult bees through swarming or colony splitting, I find the bees can often store larger quantities of nectar than if there was no brood break. I think the reason for this is that there is no brood to feed – and young brood is incredibly hungry! The younger bees that would normally feed the brood are shunted forward to do other tasks, so more bees will forage. If I know the weather is going to be warm for a week or so in advance, I will add an extra super or two and very often they will get filled. If you do not add room in advance, the bees may well run out of super room, so they store nectar/honey in the brood box. Once it is sealed, there is little room for the queen to lay in and it is often difficult to get bees to move it.

I stated earlier there is a little skill needed when preparing and adding supers. As with much of beekeeping, observing what bees will do in response to your actions is very helpful. There is nothing complicated and I hope I have given you some ideas to make life easier for you. Different beekeepers have different ways of achieving the same thing. I have told you what I do; if you think my method needs tweaking to suit you better, then please do so.

For the Merry Month of March ...

For those beekeepers' 'essentials' to help you plan for the season ahead visit the BBKA web shop



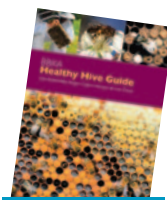
Honey bee anatomy



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