

ADVICE FROM THE NATIONAL BEE UNIT

Oops! I Did it Again ...

Jason Learner, Technical Advisor, National Bee Unit

We all make mistakes when keeping bees. Some of these mistakes can be insignificant but quite humorous, while some can be a bit more consequential and serious. Our successes depend on what we do each season, and how attentive we are to our colonies. Often, our failures can also be the result of our actions the previous season.

Each year we promise ourselves that we will do better and we start the year with high hopes. We remain ever optimistic that the weather will stay fair, that we will keep on top of swarm management and that we will extract supers so that they can go straight back onto the colonies to be re-filled. However, despite our best efforts, one or two colonies can slip away from us, often as a result of pitfalls which could have been foreseen and avoided.

This article presents some of the most common pitfalls highlighted by the National Bee Unit inspectors and, where possible, offers advice on how to avoid them.

Can't Stand Losing You...

Losing half your colony to swarming is a bitter pill to swallow and swarm control can be a daunting task for any beginner. There is an abundance

of information on the Internet, but recognising what advice to take, and which management practices work, can be a little overwhelming. With experience, all beekeepers can learn to 'read' and sense when a colony is preparing to swarm.

Some beekeepers are told that once day-old eggs are found in queen cells, all one needs to do to prevent a colony from swarming is to knock out queen cells. As a result, beginners are mystified when a colony swarms after they've done just this.

Knocking out queen cells, along with adding supers for 'extra room', doesn't always work. This is because the colony can get so congested with adult bees and new brood that it will want to swarm, no matter how many cells you destroy. As a result, beekeepers usually need to split the colony in some form in order to prevent it from swarming – if you don't split them, the bees will split themselves for you.

There are various methods for preventing colonies from swarming, including the Pagden method (artificial swarming), making up nuclei, and more. Instructions on how to carry out such procedures can be found on the Internet, in books or through your local association.

If you catch a swarm from an unknown source, remember to place it on foundation to reduce the risk of European foul brood (EFB) becoming established in the colony.



Bee deformities and a pepper pot brood pattern are the result of a high level of varroa infestation

Photos courtesy the Animal and Plant Health Agency (APHA)

The Biggest Threat

Varroa is an endemic pest in the UK and its management has now become a routine and essential part of bee husbandry. Many beekeepers will remember the good old days before the pest's arrival, when beekeeping was easier.

Now the management of colonies is more involved and Inspectors are sometimes confronted with colonies where little or no varroa management or control has been carried out. As a result, emerging bees are malnourished, deformed and colony productivity starts to decrease. As mite populations increase, colonies start to dwindle in size and symptoms which look very similar to foul brood may be noticeable.

Despite some people's beliefs, we still need to monitor and manage varroa in colonies. Although you may not be able

to see any mites or symptoms of varroa damage in your colony, it does not mean that mites are not present. It is beneficial to treat your colonies before mite populations get out of hand. More often than not, once you start seeing symptoms of damage in your colony, especially nearing winter, it is too late as those bees which would have seen the colony through to spring are damaged and too ill to support it.

If you are ever in any doubt about how to manage your colonies, information can be found on BeeBase (www.nationalbeeunit.com) and in our advisory leaflet, *Managing Varroa*. Alternatively, you are welcome to call the office on 030 0303 0094.

Voodoo Medicines

Misusing varroa medicines or making up home-made concoctions can seriously

damage a colony or even allow the mites to develop resistance to the active ingredient. Such resistance has already occurred with Apistan and Bayvarol.

Using home-made concoctions and generic substances that are unregistered as medicines is illegal. If evidence is found of a beekeeper using such mixtures, he/she could be prosecuted and fined.

Avoid Stings

Buying a good quality suit will reduce the fear of being stung and will allow you to manipulate the hive in an assertive and confident manner. As a result, you will be less likely to crush and aggravate your bees.

Breeding or buying good colony stock is also essential. The colony is only as good as the queen which heads it. If the colony is unpleasant, then you

should consider replacing the queen. Dealing with unpleasant bees takes the pleasure out of beekeeping and should be avoided.

I'm a Fire Starter ...

It is important to be able to control and subdue a colony with the judicious use of smoke. This comes with experience. You should try to use just enough smoke to prevent the bees from flying up at you, but not so much that they start coming out of the entrance. It's annoying when a smoker goes out during an inspection, and this happens to both inexperienced and experienced beekeepers alike. There are two important elements to a well-lit smoker.

Firstly, ensure that there is a fiery foundation at the bottom of the chamber which, if left alone, is not going to go out.

Using paper to start a fire is fine, but as it smoulders it won't leave much fuel to help sustain the smoker. So start by adding lit paper and, with a few puffs of the bellow, add a bit more along with a small amount of your main fuel.

As the fuel catches, add more in increments, steadily puffing at the bellows. Keep huffing and puffing until a good amount of smoke is being produced and then fill the rest of the smoker with your chosen fuel.

One of the most useful pieces of equipment for lighting a smoker quickly is a propane torch, such as an oven lighter, which is cheap and easily obtainable.

The second important element is the fuel itself. I've seen some rum fuels being used in smokers, including firelighters, coal and old cotton tea towels.

Avoid using artificial lighters, synthetic fabrics or fossil fuels – in my experience bees don't like them. The best type of fuel creates a cool smoke – which the above do not. Examples include hay, dried dead wood or sawdust. Once you have finished using your smoker, ensure you bung up the spout entrance up for transport to the next apiary – wine bottle corks work well or a bunch of grass.

Good Clean Fun ...

Perhaps one of the most damaging, bad habits which beekeepers fall into is storing dirty equipment and not practising good hygiene. Poor hygiene not only attracts pests to the apiary or equipment store, but also spreads harmful pathogens and diseases among colonies. In order to tackle this, there are some key items

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Is your equipment stored neatly and ready for transport?

which will help improve both the hygiene of your beekeeping routine and tidiness in your apiaries and storehouse:

- a propane gas torch
- a bucket containing washing soda solution
- a wire scouring pad
- a container to hold bits of brace and burr comb
- a steamer or large cooking pot for sterilising frames and melting old wax
- disposable gloves.

At the very minimum, disposable gloves should be changed between each apiary in foul brood-clear zones. You may find it useful to wear more than one layer. This will increase the thickness of the material and offer greater confidence for those beekeepers that are new to the craft. It will also allow you to pull off the top layer if necessary.

Storing equipment responsibly is also important and you should ensure that all stored boxes are bee tight and in sound condition, especially if there are any honey stores in the combs. A queen excluder at the bottom of each stack of boxes will prevent rodents travelling up and nesting in them.

Newspaper can be placed between each box to prevent

wax moth from destroying your drawn comb. Don't worry about wax moth damage to foundation – they rarely touch it.

If the boxes are a little old and rough around the edges, duct tape can be stuck around the seams. Finally, a sound roof should be placed on top of the stack – just make sure you place a brick on top to prevent strong winds from blowing it off.

Look at Me ...

Proper brood inspections are important, especially in spring and autumn. All beekeepers should be familiar with the appearance of healthy worker brood so that they can immediately recognise the presence of foul brood or other brood diseases.

Set an inspection aside each spring and autumn in order to look specifically for abnormalities in the brood. Check that all life stages of the bee are healthy so that any early signs of disease are spotted and prevented from being spread to other colonies. Look for pearly white 'C' shapes in the larvae and a good uniform brood pattern which stretches across the frame. Any larvae which look discoloured, yellow or melted down could be the

result of foul brood or even high varroa infestations. More information about how to inspect can be found in our leaflet *Foulbrood Disease of Honey Bees and other Common Brood Disorders*.

A Space Oddity

Feral honey bee colonies space their comb at 30–35 mm. This allows the bees to work back-to-back between the combs. Beekeepers use a number of methods to maintain the same spacing in their hives, and many designs have been invented to achieve this.

Hoffman self-spacing frames are probably the most commonly used way of ensuring correctly spaced frames. However, the range of different spacers and frame types that are available leads some beekeepers to end up with a mixture of spacing in their hives. This can make routine colony inspections difficult or slow, and cause bees to get crushed or damaged unnecessarily.

Of course, there are ways of resolving this issue. Stick to one frame type and replace those that are different. In particular, stick to either top space or bottom bee space in your brood and super boxes. If you mix them up you will end up with excess brace comb or propolis in your hives.

A Taste of Honey

The experience of many beekeepers is that no matter how prepared one may be, tasks pile up and supers waiting to be extracted may get left to one side (hopefully responsibly). These should not be left exposed, even when stored in a shed. This can encourage robbing by bees that may carry harmful infections back to their colonies.

All supers should be stacked together properly, with any holes being sealed with foam. The bottom of the stack should be sealed with several sheets of newspaper and a crownboard to catch any honey. The top should be fitted with a bee-tight roof. If small hive beetle (SHB) arrives in the UK, a quick turnaround time (24–48 hr) for extracting honey supers will be required; otherwise, if supers are left with honey in, beetle and larvae populations within stored boxes could cause a great deal of damage.

Combs infested with SHB become slimy and extreme infestations have a strong odour, similar to rotten oranges. This is caused by the defecation of adult beetles and larvae, and the fermentation of the honey. ✨

Small hive beetle damage to honeycomb

