The Spring Inspections

"The only way that you can know what is happening to your colonies is by regular checks and when appropriate full inspections. As the season starts and the bees become active again it is important for beekeepers to carry out their first spring checks with the aim of seeing how the colonies have overwintered and to prepare them for the coming season."

National Bee Unit - Best Practice Guideline No. 6 - Spring Checks

Be Prepared

- Before considering the first full inspection of the year it is important to have done some thinking about what you are going to do, what you might find and to have the correct equipment ready for various eventualities.
- The winter months are a good time to stocktake and before the first inspection you should have disinfected equipment ready to use (see January's Bee Healthy newsletter) – the equivalent of a replacement hive for each of your colonies.
- You should have been monitoring food stores over the winter and be prepared to continue feeding during the spring.
- Your first inspection may take longer than you think so make sure you have set aside enough time or you may end up making several trips and exposing the bees unnecessarily.

When to Inspect

- It depends!
- There are many factors that will determine when you undertake your first inspection.

These include:

- Your previous experience – what do your notes from previous years say about when you inspected and what you found? Were your bees very active and ready to swarm when you first did a full inspection, or were they requiring to be fed for several weeks?
- The weather – you will need a fine day to complete a full inspection. In general, your hive should not be opened when the temperature is below 10C, and a full inspection not considered until the temperature has reached 14C. Between 10 – 14C it is possible to do a quick check but you need to ask yourself what a quick check will achieve? (see below)
- The month – there is no absolute rule but by the end of April many colonies will be very active and there is a risk of swarming so unless the weather precludes an inspection, it should have taken place by then.

The Practicalities

- The first spring inspection should follow the same process as for any inspection, with some additional considerations. A helpful way to consider this is with the **FEDSS** acronym along with some extra spring action.

  Remember to follow good apiary hygiene at all times, as described in the January Bee Healthy newsletter.

- **Food** – do the bees have enough food for growth of the brood? Your bees should have 4-5 combs with stores (equivalent of 2 full brood frames) per brood box. Remember that the expansion taking place in the brood means that food stores will be used up fast. If you have any doubt you should continue to feed fondant until there is clear evidence of expansion in the stores.
- **Eggs** – as a proxy for the activity of the queen. Ideally you should try and see your queen. Now is a good time to mark her if this was not possible in the previous season. Is there evidence of development of the brood with all stages visible and with a good distribution on each frame and across frames? If you have left your inspection quite late, are there any queen cells? If they are present, this will require some serious thought about the reasons and your actions. See previous comments about being prepared and having the time set aside to act on your findings.

Evidence of queen activity – single egg per cell

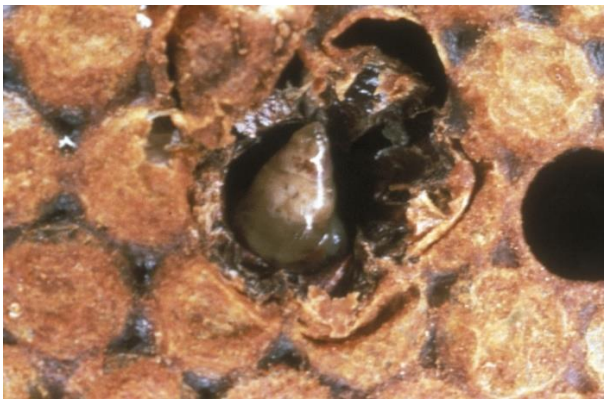
- **Disease** – the spring inspection is a good time to actively look for evidence of disease as this will impact on the strength and growth of your colony. Specifically, you should look for deformed wing disease as a proxy for varroa infection and the overall health of your bees. You may have to consider treating for varroa which can be difficult at this time of year. Further information can be found on BeeBase and will be covered in a later newsletter. If in doubt, take advice.

Deformed Wing Disease

The pattern of brood may indicate concern. Look for a pepper pot pattern suggesting disease in many cells across the brood which the workers have done their best to empty and clean. Look for cappings that are greasy or sunken as this may suggest disease within those cells. Also look for holes in the cappings. Cappings that are being sealed over will usually have a hole in the centre, whereas holes due to disease will be off centre and more irregular in shape. If in any doubt, remove the capping with a matchstick and look into the cell for evidence of disease such as Foulbrood or Sacbrood. Remember to burn your matchstick in your smoker to avoid transfer of disease. This is a good time to have a mentor help you if you are unsure what you are looking for. Remember, any suggestion of a Foulbrood disease must be reported to the bee inspectorate at bees_mailbox@gov.scot.

Healthy Brood

Foulbrood



Sacbrood

- **Space** – the bees need room for themselves, stores and to expand the brood. Once your colony begins to get too congested it will prompt the queen to swarm. This can happen early in the season especially if over wintered in a single brood box. In general, once the brood is present on 2/3 of the available frames, you should look to expand the space available. You also need to make sure there is space for the stores. Depending on local forage (e.g. oil seed rape) you may need to consider adding a super early in the season. It is important to balance the need for space for brood and stores. Have your equipment ready!
- **Swarming Signs** – you should always be on the lookout for signs of swarming, some of which have already been mentioned above in terms of space and problems with queen laying. Be prepared to see queen cells early in the season, especially if the weather has

been kind. Be ready with your plan for dealing with queen cells and have the equipment on standby.

- **Additional Actions:**

  You should have been visiting your bees over the winter to check for damage to your hive (due to weather, pests such as mice and other mammals, birds (e.g. woodpeckers), and vandalism). You should have repaired these at the time but the spring inspection is a good time to consider cleaning and replacing some parts of the hive such as the floor and some of the older brood frames. Having your equipment ready means that this can be done with minimal delay.

What is the role of a "quick inspection"?

It might be that any good weather has not coincided with the time you have available for a full inspection. If this is the case it might be necessary to simply check that the colony is queenright and has sufficient stores, leaving more detailed examination for disease to a later date. This can be done by removing a frame in the centre of the brood to check for capped worker brood and an outer frame for stores. If stores cover more than 4 frames, remove one adjacent to the broodnest and replace it with foundation from further out in the brood box.

What if one of your colonies has died?

The first question should be "why"? There are several reasons why a colony may have died over the winter months and your initial examination should attempt to differentiate isolation starvation (where the broodnest has not been able to access the required stores) and possible disease either specific or leading to a weak colony that has not been able to sustain itself over the winter. If it is not obvious isolation starvation you should consider diseases such as varroa, acarine and nosema. These will be covered in more detail in a later newsletter but it is possible to try and get an answer by sending a sample of bees for analysis through SASA – more details can be found here. As always, the mentor and Bee Healthy team are happy to help.

Bee Starvation

If you have any doubts about disease, you must destroy the brood frames and thoroughly sterilise your hive – see January's Bee Healthy newsletter.

This is a summary of information that can be read about in more detail on BeeBase where there are several helpful articles to support new and established beekeepers.

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The Bee Healthy Team
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Email the Bee Health Team. We would love to know about any topics you would like covered in future Bee Healthy bulletins.

You can read previous bulletins and find useful links on the DSBA Bee Healthy web page.

Remember the DSBA Mentoring Team can be contacted via the 'Members Only' section of the website for further advice.