

Ian Homer, Regional Bee Inspector – Extracts from his visit to PDBKA apiary 6/5/07.

1. Prevention

- a. **Cleanliness** is of primary importance in keeping your bees healthy.
 - i. Disinfect tools etc at least between apiaries and where disease is suspected do it between hives. Use a solution of 1kg washing soda to 1gal water. This gives pH 12+... enough to kill 'everything' and also dissolves propolis.
 - ii. Launder bee suits and veils often and add some washing soda to help get rid of propolis. Contrary to folk lore, a blackened bee suit is not a badge of honour!
 - iii. [Launder quilts.]
 - iv. Use disposable gloves (and DISPOSE). If you need the added protection of leather gloves then use disposable gloves over the top of them.
 - v. Clean and scorch boxes.
- b. Practise **good housekeeping**.
 - i. Wax from brace comb, drone brood culling and uncapping to go straight into a sealable container.
 - ii. Clean up spills.
 - iii. Don't leave old or broken bits of kit lying around the apiary.
- c. Avoid **bees spreading disease**.
 - i. Stagger hive entrances to minimise drifting.
 - ii. Avoid crushing bees (easier said than done) – it takes many bees to remove a crushed bee from the hive. Any disease will be transmitted from the crushed bee to all those others thereby spreading the disease rapidly through the colony.
 - iii. Avoid swapping frames in brood box as this increases the risk of crushing bees. The profile of brood comb matches that of the comb on neighbouring frames.

2. Detection

- a. Monitor mite levels using open mesh flooring and a tray. However, do not leave the tray in more than five days as a longer period encourages wax moth. Refer to the Defra brochure on Managing Varroa (2005) for method of calculating when control necessary.
- b. Use the uncapping fork on drone brood to estimate mite population – insert about ¼” below the cap and twist to remove the developing grubs. Mites are easily visible against the white larvae.
- c. Examine the brood of every colony at least twice a year – May and August are good times.
- d. Learn how to spot disease by knowing what healthy brood looks like.
 - i. NB. The NBU have issued a new publication on brood diseases. Sufficient copies have been left with PDBKA committee for every member to have one. **THIS IS AN EXCELLENT BROCHURE**, eminently readable and full of good illustrations. It is **FREE**.
- e. Acarine
 - i. Although the acarine mites are internal, we may see this disease increase as we stop using pyrethroids as a varroa treatment.
 - ii. Diagnostic symptom is the 'K' wing – the wings are held out from the body and become twisted.
- f. Nosema
 - i. Faeces on front of hive (spotting) particularly in early spring.
- g. Pepper-pot brood
 - i. Irregular brood pattern when empty brood cells are not re-used by the queen, rather they are used to store nectar and pollen.

3. Cure

- a. Foul Brood – these are notifiable diseases so contact the Bee Inspectors.
- b. Varroa. Unfortunately with the spread of resistant mites we must now regard the use of pyrethroids as a thing of the past. Now is the time to get your Integrated Pest Management plan in place. Here's how Ian Homer does it...
 - i. Every year he performs a 'shook swarm' on one third of his colonies (see below).
 - ii. Monitor mite levels – take action where indicated by the count, then monitor again afterwards to ensure efficacy.
 - iii. Drone brood culling.
 - iv. Oxalic acid administered in syrup.

- c. Chalk and Sac brood
 - i. Low levels of these diseases are not a problem but are a threat if they become extensive.
 - ii. If extensive, re-queen.
 - d. Bald brood
 - i. Symptom of wax moth larva.
 - ii. Rap the frame to get the moth larva to show itself, and then squash.
 - e. Acarine
 - i. The old treatment (folbex strips) is no longer available.
 - ii. Re-queening and comb replacement may offer some benefit.
 - f. Pepper-pot brood.
 - i. Indicative of problems with queen fertility.
 - ii. Possible cause is lack of varied genetic material – perhaps inbreeding at the apiary because all colonies related.
 - iii. Introduce new queen(s) from reputable sources that have no possible links with your stocks.
4. Techniques and other comments
- a. SHOOK SWARM
 - i. The bees are shaken onto foundation – not drawn comb. This ensures no transfer of disease through the wax.
 - ii. Using all foundation stimulated the wax producers.
 - iii. A ‘shook swarm’ will thrive and should be timed to take advantage of local nectar flows – i.e. Spring or Summer.
 - iv. In Southern England can be done as early as second week on March (subject to prevailing weather).
 - b. The June gap – Don’t let your bees starve
 - i. This year the season is advanced and so we can expect the June gap to start earlier – perhaps from the middle of May.
 - ii. In the hot summer of 1976 the gap lasted well beyond the end of June so ensure you leave adequate stores to get them over an extended lean period.
 - c. Bailey Exchange
 - i. This manipulation should no longer be used as it has serious drawbacks.
 - ii. The main one being that the foundation is drawn in a box above the old brood allowing any pests and diseases to migrate upwards onto the new comb.
 - d. Chilled Brood and Desiccation Problems.
 - i. It is very unlikely that brood will be chilled during a normal examination even in cold weather.
 - ii. Desiccation is a greater threat with the increase in temperatures. Larvae easily give up water in hot sunny weather leading to desiccation and death. Beekeepers should be aware of this risk and ensure frames are not overexposed to the sun.
 - e. The Use of Smoke.
 - i. In his experience, it is better not to introduce smoke into the entrance as this drives bees upwards – and as he is coming downwards this is not a good thing!
 - ii. He uses smoke along the lugs (which is the part he will be handling) and not across or down the frames. He calls this ‘herding’ the bees.
 - iii. He uses wood shavings as a fuel... hard wood for preference.
 - f. Addled brood
 - i. Reference to Bailey & Ball (Honey Bee Pathology) finds the following ‘Eggs that fail to hatch, larvae that fail to pupate and pupae that die of no apparent infection are sometimes described as "addled" and are believed to be suffering from hereditary faults.’
 - ii. Otherwise, a name used by beekeepers for any problem they cannot identify.
 - g. Ants
 - i. Ant infestation is an irritant to bees and may contribute to poor temper.
 - ii. Avoid use of ant insecticides as these may harm bees and contaminate honey.
 - iii. Use boiling water or perhaps dig out the nest and use the flame gun.
 - h. And finally...A great book to have is STORCH H, *At the Hive Entrance*, Germany, 1985
[It’s 67 pages and certainly available from Thornes.]