National Bee Unit

Animal & Plant Health Agency

Apiary Hygiene and Quarantine

Attention to good apiary hygiene practices and the use of quarantine for both bees and equipment can have a significant impact on reducing infection levels and recurrence of disease. They should be practised routinely by all beekeepers.

Apiary hygiene

Bees are a food producing animal so all beekeepers should maintain simple hygienic practices to prevent contamination of honey and the spread of disease between colonies. Presented, are some key points to consider that will improve your beekeeping practices.

Cleanliness

Replacing old combs

Old brood combs carry pathogen loads, invariably increasing with age and use. Exchanging old comb for new foundation has a significant impact on disease incidence. Super comb also carries a pathogen load, though not at the same degree. As a result they should be exchanged regularly but not necessarily at the same frequency as brood comb, unless they have contained brood or there is a significant disease problem. New super comb improves the quality and clarity of extracted honey. Details of exchanging combs can be found in textbooks and Fact Sheet 'Replacing Comb', at:
https://secure.fera.defra.gov.uk/beebase/index.cfm?pageid=167

National Bee Unit
Food and Environment Research Agency
Sand Hutton, York. YO41 1LZ
Telephone 01904 462510 email nbu@fera.gsi.gov.uk Web: www.nationalbeeunit.com
March 2017

UKAS INSPECTION

Hive boxes

Brood boxes and supers should be cleaned annually. Propolis and wax should be scraped off the surfaces and the interior lightly scorched using a blow-lamp. Some beekeepers use washing soda to clean boxes or a solution of hypochlorite solution for polystyrene boxes. See Fact Sheet 'Hive Cleaning and Sterilisation'.

Siting of bees

To reduce the spread of disease between colonies, hives should be situated to reduce drifting and measures taken to control robbing.

Gloves

If you wear gloves to examine bees avoid those made of leather as they can become tough and make it difficult to pick up frames with precision, often leading to the jolting of frames and squashing of bees. Instead, use washing or disposable surgical gloves (or a similar alternative). They are easy to change between colony examinations and so act as a good tool for barrier management. Also they give better 'feel' and make jarring of the bees less of a problem.

Hive tool

Wash your hive tool off between examinations. Use a solution of washing soda.
It is cheap, dissolves propolis and also has anti-bacterial properties.

Smoker

These are difficult to clean. However the barrel is not a problem as it gets hot enough to kill disease pathogens. The bellows can be scrubbed off using a washing soda solution or can be covered using disposable shower caps.

Bee suit

Though the risk of disease spread by a dirty bee suit is low they should be washed regularly. If nothing else it removes the pheromone left after a bee has stung the material thus reducing the risk of encouraging stings.

Contamination of honey

When using medicines in bee colonies, only use approved products. To avoid contamination and injury to a colony or the beekeeper, the label should always be followed. As a general rule, treatments should not be applied if supers are on the colony, (though there are exceptions e.g. Mite Away Quick Strips (MAQS)). This also applies if there is a nectar flow or feeding is being carried out. Always ensure that a full written record is kept, for example on a medicines record card. These actions will ensure that you can show a duty of care to your bees.

Quarantine practices.

Equipment

National Bee Unit
Food and Environment Research Agency
Sand Hutton, York. YO41 1LZ
Telephone 01904 462510 email nbu@fera.gsi.gov.uk Web: www.nationalbeeunit.com
March 2017

UKAS INSPECTION

When disease is a problem or the apiary is at high risk then keeping equipment such as queen excluders, supers, brood boxes and frames/combs etc. for the sole use of a colony has significant benefits. It is a good tool for barrier management in that it helps prevent the introduction and spread of disease

Brood comb

Restrict movement. Moving brood combs between colonies carries a high risk of spreading disease. It is a major spreader of disease when the beekeeper fails to recognize the early signs of disease. Many beekeepers move frames of eggs to confirm if a colony is queen right, if so it is best to maintain a written record, or only exchange brood with the adjacent hive. Exchanging comb between apiary sites holds a high risk of spreading disease from one area to the next.

Super comb

Restrict movement. Super comb carries a risk of spreading disease. Ideally comb should be specifically used on one colony only. It is easy to mark a super and the top-bars of the frames with the colony number or a chalk pen (similar to those used in queen marking). This ensures that the beekeeper can maintain colony quarantine for supers. A less effective system is to ensure that supers and combs are restricted to use in one apiary, known as 'apiary quarantine'. It has been shown both in the U.K. and abroad that these measures significantly reduce the occurrence of disease.

Quarantine apiaries

Collected swarms can be taken to a separate 'quarantine' apiary, hived on foundation and allowed to progress through two brood cycles, i.e. six weeks. Check the brood to ensure no disease signs are present, before introducing the colony to an established apiary.

Hospital apiaries

If a beekeeper should have outbreaks of disease in several apiaries then it may be beneficial to put all infected colonies onto one diseased apiary site to reduce the risk of spreading disease into the other apparently healthy colonies. In the case of statutory diseases, currently American foulbrood, European foulbrood, Small hive beetle and *Tropilaelaps spp.,* a movement licence would be required. The authorised Bee Inspector dealing with your case will help you with this procedure.

National Bee Unit
Food and Environment Research Agency
Sand Hutton, York. YO41 1LZ
Telephone 01904 462510 email nbu@fera.gsi.gov.uk Web: www.nationalbeeunit.com
March 2017

UKAS INSPECTION