



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. The following are a few pointers to help improve beekeeper practice.

Cleanliness.

Replacing Old Combs.

Old brood combs carry disease pathogen loads, invariably increasing with age and use, so exchanging old for new has a significant impact on disease incidence. Super comb also carries a pathogen load though not to the same degree. As a result they should be exchanged regularly but not necessarily to 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; beginner beekeepers often winning prizes at honey shows because they are only extracting from new combs. Details of exchanging combs can be found in textbooks and **FAQ 5 'Replacing Comb'**, along with any other fact sheet at:

<https://secure.fera.defra.gov.uk/beebase/index.cfm?pageid=167>

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 caustic or washing soda to clean boxes or a solution of hypochlorite solution for polystyrene boxes. See **FAQ 3 'Second-hand Equipment'** and **FAQ 'Hive Cleaning and Sterilisation'**.

Siting of bees.

To reduce the spread of disease between bee colonies they should be situated to reduce drifting to a minimum and measures taken to control robbing.

Gloves.

If you wear gloves to examine bees avoid those made of leather and use washing up gloves or similar. They are easy to wash off between colony examinations and are a cheap to replace when the time comes. Also they give better 'feel' and make jarring 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 in 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.

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. Also you look business like.

Contamination.

When using medicaments in bee colonies it is preferable to only use approved products. As a general rule 'good practice' should be followed in that treatments should not be applied if supers are on the colony, there is a nectar flow or feeding is being carried out. Comply with the manufacturer's directions and maintain a full written record. These actions will ensure that you can show a duty of care to your bees.

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Quarantine Practices.

Equipment.

When disease is a problem or the apiary is at high risk then keeping equipment such as hives, queen excluders, hive tool, smoker etc. for specific use at one apiary only has a significant benefit.

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 disease signs. 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 is a very high-risk procedure.

Super comb.

Restrict movement. Super comb carries a risk of spreading disease. Ideally comb should be specifically used on one colony only. It is simple to mark a super and the top-bars of the frames with the colony number. 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.

Isolation apiaries.

Collected swarms can be taken to a separate isolation apiary, hived on foundation and allowed to progress through two brood cycles, i.e. six weeks. Check the bees and brood, to ensure no disease signs are present, before being 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 the infected colonies into one of the diseased apiary sites thus reducing the risk of spreading disease into the other apparently healthy colonies. In the case of the reportable diseases, currently American Foul Brood, European Foul Brood, Small Hive Beetle and *Tropilaelaps* a movement licence would be required. The authorised bee inspector dealing with your case will help you with this procedure.

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