

Disease Recognition

Background

There are four distinct disease categories which may affect your bees:

- Varroosis – the effects of varroa
- brood diseases which are evidenced by the appearance of the brood
- adult bee diseases which are usually identified by behavioural indications
- viruses which are difficult to identify but are usually associated with one or more of the other diseases

Learn to recognise what is normal and how normal bees behave – anything which is not normal should be investigated straight away. Refer to Fera's National Bee Unit brochure "Foul Brood Disease of Honeybees" (available at www.nationalbeeunit.com).

Varroosis

- Varroosis (the effects of varroa infestation) can have varied symptoms. Bees may have stunted abdomen or deformed wings. There may be dead imago (adult) bees, often with the proboscis extended, on the point of emergence from cells. There may be rotting pupal remains in cells (similar in some cases to EFB).

Brood Diseases

- It is important to be able to see the brood in order to inspect it properly. Either move the bees by brushing gently with your hand or a goose wing or shake them off the comb.
- Normal, healthy sealed brood has even, domed, biscuit coloured cappings with few holes in the pattern; healthy open brood has pearly white "C" shaped larvae with clearly identifiable segmentation.
- Sunken, concave or discoloured cappings are a sign of American Foul Brood disease.
- Small perforations in cappings can be a sign of American Foul Brood disease. They can also indicate other diseases such as Sacbrood (a viral infection) or Chalk Brood (a fungal infection).
- Larvae which are uncapped, discoloured (yellowish brown), and are lying in abnormal positions can be a symptom of European Foul Brood but may also result from Sacbrood or varroa infestation.
- Both European and American Foul Brood diseases are notifiable. This means that you must not move anything from the site. You should restrict the hive entrance to reduce the risk of robbing, clean your hive tool etc and bee clothing and then immediately notify your Appointed Bee Inspector.
- Uncapped larvae which, although pearly white appear to be lying in line with the cell and have a pointed appearance can be a symptom of early stages of either Chalk Brood or Sacbrood.
- Hard white, black or greyish "pellets" in cells are an indication of chalk brood.
- Uncapped cells with normal developing pupae exposed is a symptom of bald brood. This condition results from bees uncapping cells in which they apparently sense something is amiss; often the cause is wax moth larvae tunnelling under the cappings. This can sometimes show as a whitish line under the cappings.



Adult Bee Diseases

- Colonies which do not develop normally in the Spring could be suffering from either nosema spp. or from acarine.
- Signs of dysentery (faecal staining) on frame tops or faces or on the outside of the hive may also indicate nosema.
- Identification of acarine requires a hand lens or low power microscope; identification of nosema can only be achieved using a higher power (x400) microscope.

Viruses

- Deformed wing virus is associated with varroa infestation and is characterised by bees having shrivelled or deformed wings.
- Paralysis viruses are characterised by large numbers of stationary bees with a shiny-black, hairless appearance, apparently "shivering".
- Other viruses may occur, symptoms are not readily observed and laboratory analysis is the only method of making a positive identification.

Don't put your bees at risk Are you registered on BeeBase?



BeeBase is a FREE online service provided by the National Bee Unit (NBU) to help protect you and your fellow beekeepers from colony threatening pests and diseases.

If there is a disease outbreak in your area, the NBU team uses BeeBase to contact local beekeepers and arrange for precautionary inspections to check for any signs of infection, and to advise on what to do.

Register today through one of these easy methods:

w. www.nationalbeeunit.com

t. 01904 462510

This leaflet was produced as part of the Healthy Bees Plan. The Healthy Bees Plan aims to address the challenges facing beekeepers in sustaining the health of honey bees and beekeeping in England and Wales. It has been jointly developed by Governments, beekeepers, their associations and other stakeholders.

For more information on the Healthy Bees Plan visit:

<http://www.fera.defra.gov.uk//healthybeesplan>



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