



Scottish Government
Riaghaltas na h-Alba



Notifiable Diseases




BEEKEEPING MODULES

These presentations are funded by the Scottish Government as part of Scotland's HoneyBee Health Strategy



Aims of Module



To provide information and advice on notifiable diseases of honey bees in Scotland



Notifiable diseases



**American
Foulbrood**

**European
Foulbrood**

Notifiable Diseases and Pests

► The notifiable diseases of honeybees in Scotland are:

- European Foulbrood (EFB)
- American Foulbrood (AFB)



Legislation

The Bees Act 1980

- Empowers Ministers to make orders to control diseases and pests affecting honeybees and provides powers of entry for authorised persons **(to carry out necessary surveillance, inspection and certification requirements)**.

The Bees Diseases and Pest Control (Scotland) Order 2007 (as amended)

Requires beekeepers (and others) to notify the Scottish Ministers of the suspicion of the presence of a notifiable disease or pest, and provides powers for control such as destruction, treatment and prevention of movement of infected hives.

Healthy Brood

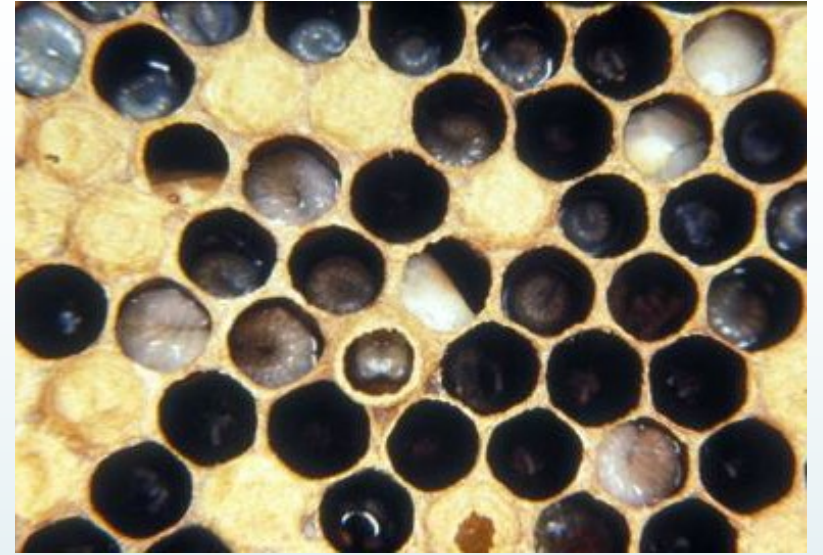


Unhealthy Brood



What Are The Foulbroods?

- Bacterial diseases affecting brood only.
- Bacterium fed to larvae with brood food.
- Highly contagious within/between colonies.
- Difficult to eradicate.



American Foulbrood – what is it?



AFB – how does it transmit?

- Beekeeper:
 - Poor biosecurity.
 - Reusing old equipment.
 - Moving frames.
- Bees:
 - Robbing.
 - Drifting.
 - Swarming



AFB Symptoms

- Sunken, greasy cappings.
- Roping.
- Scale.
- Perforations often at side of cell after cell is capped.





AFB Treatment

- ▶ There is no legally permissible treatment of AFB.
- ▶ Any items infected with or in close contact with AFB (bees, brood, frames) must be destroyed and hives sterilised



AFB Summing Up

- ▶ Will kill colonies eventually
- ▶ Not so easily spread by bees, not by swarming
- ▶ Most often spread by the beekeeper
 - ▶ Poor biosecurity
 - ▶ Reusing old equipment
 - ▶ Moving frames
 - ▶ Only option is to burn bees and frames and scorch or bleach equipment thoroughly

European Foulbrood – what is it?



EFB – how does it transmit?

- ▶ Easily spread by bees:
 - ▶ Swarming.
 - ▶ Robbing.
 - ▶ Drifting.
 - ▶ NOT by foraging in same area.
- ▶ Easily spread by beekeepers:
 - ▶ Poor biosecurity.
 - ▶ Moving frames.
 - ▶ Extraction equipment.



EFB Symptoms

- Discoloured, yellow/creamy larvae.
- Twisted in cell.
- Melted, lost segmentation.
- Uncapped larvae.
- Foul smell in later stages.



EFB Treatment

- Shook swarming
- Destruction



EFB – Summing Up



- ▶ Doesn't always kill colony.
- ▶ Stress disease:
 - ▶ Lack of stores.
 - ▶ Splits.
 - ▶ Swarming.
- ▶ Easily spread by bees:
 - ▶ Swarming.
 - ▶ Robbing.
 - ▶ Drifting.
 - ▶ NOT by foraging in same area.
- ▶ Easily spread by beekeepers:
 - ▶ Poor biosecurity .
 - ▶ Moving frames.
 - ▶ Extraction equipment.

- ▶ See BeeBase for live EFB info in Scotland



Key Preventative Measures

Strong colonies

Strong brood

Plenty food

Monitored and treated for varroa

Fertile young queens

Disease checks

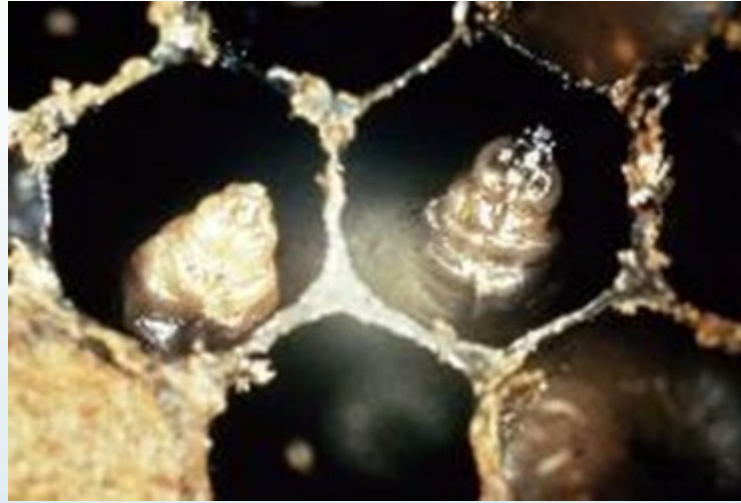
Plenty of space

Good biosecurity

Well spaced hives

Sterilise hives

Disease Recognition



Inspecting For disease

- Inspect all frames with brood (sealed and unsealed). **The bees should be shaken from the frame inside the hive.**
- Check the general aspect of the frame, brood pattern, colour and appearance.
- Check any perforated capped cells. (AFB)
- Check unsealed brood for symptoms such as discoloured, twisted larvae. (EFB)
- Be aware of other common brood disorders (chalk brood/sac brood)
- If you suspect any symptoms of EFB or AFB **you must report to the Bees Mailbox**
- Take a picture if possible

What To Do If You Suspect Notifiable Disease

Bees_mailbox@gov.scot

- Triage questions
- Inspection arranged



Keep Updated With Notifiable Disease Alerts In Your Area



The screenshot shows the BeeBase website interface. At the top left is the BeeBase logo, which consists of a cluster of yellow and white hexagons resembling a honeycomb, with the text 'BeeBase' in green and 'Resources' in smaller text below it. To the right of the logo is a navigation menu with links: [Home](#), [About Us](#), [Diseases and Pests](#), [Resources for Beekeepers](#), [Beekeeping in Scotland](#), and [Bees and the Law](#). Below this is a dark red horizontal bar containing a secondary navigation menu with links: [Foulbrood](#), [Varroa](#), [Asian Hornet](#), [Exotic pests](#), [Other bee diseases and viruses](#), and [Reports charts & maps](#). Each link in this bar has a small white downward-pointing arrow below it. Below the red bar, the main content area features a large heading 'Diseases and Pests' in a dark red font. Underneath this heading is a paragraph of text: 'These pages give details of honey bee pests and diseases that all beekeepers must be aware of to maintain productive stocks of bees. They provide details of biology, impact and management options for a range of infestations and infections and, where available, information about current incidence.' Below this paragraph is another heading 'Current Disease Incidence' in the same dark red font. Underneath this heading is another paragraph: 'The [Disease Incidence and Reports](#) pages gives live information about the location of confirmed cases of European foulbrood (EFB), American foulbrood (AFB) and Varroa in England, Wales and Scotland. It also provides information on imports of bees. Data from the inspections programme is updated daily during

- Keep your apiary locations up to date.
- Locality-based notifications through:
 - BeeBase
 - Local Associations



Biosecurity and Good Practice

- ▶ Clean and disinfected equipment
- ▶ Clean suits
- ▶ Gloves: disposable or can be cleansed and disinfected between hives
- ▶ Visitors to apiary premises
- ▶ Vigilance for diseases and pests – inspect twice per year
- ▶ Practice good swarm prevention and management

Biosecurity and Good Practice

- Register on BeeBase and keep your apiary details updated
- Source bees and equipment responsibly
- Report suspect notifiable diseases and pests immediately
- Co-operate with Bee Health Inspectors



Resources Available: Scottish Government and SRUC



gov.scot

Contact: Bees_Mailbox@gov.scot

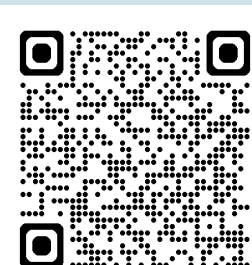
[Scottish Government Honey Bee Health Strategy 2022-2032](#)



[Scottish Government Honey Bee Implementation Plan](#)



[SRUC Bee Podcasts](#)



BeeBase

➔ [BeeBase – Information for Scottish Beekeepers](#)



➔ [Live AFB Report » APHA - National Bee Unit – BeeBase](#)



➔ [Live EFB Report » APHA - National Bee Unit - BeeBase](#)



Resources Available – Others

[Scottish Beekeepers Association](#)



[Bee Farmers Association](#)





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