

Improving Honey Bee Health: Responses to the Bee Health Policy Review

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The bee health review and consultation

In 2011 on behalf of Defra and the Welsh Government (WG), the Food and Environment Research Agency (Fera) bee health policy team undertook a review of current Bee Health Policy. The review sought to decide how best to manage pests and diseases in the future so that: the optimum policies and interventions are in place; priorities for future collective action (partnership working) by government and beekeepers are clear; and we are making the best use of current public funding/resources for this programme in order to sustain a healthy honey bee population for pollination. The review, which took a year to complete, was carried out by a diverse team with representatives from Defra and WG Bee Health Policy, the National Bee Unit (NBU), hobbyist beekeeper associations (BKAs), the Bee Farmers' Association (BFA) and an independent scientist. In January last year, a range of proposed policy changes were presented for public consultation, with final responses being collated after its close in March 2013. If you would like to read more about these processes, please visit: <https://www.gov.uk/government/consultations/improving-honey-bee-health>.

Proposed policy options

In brief, the review set out three options for future policies, the recommended and chosen option being 'to refine and build on current policies with a renewed commitment to collective action by government, beekeepers and BKAs'. A prioritisation exercise undertaken by the review team highlighted the substantial costs, e.g. colony losses, to beekeepers and pollination services that are due to endemic pests and diseases and which would result if exotics become established in the UK.

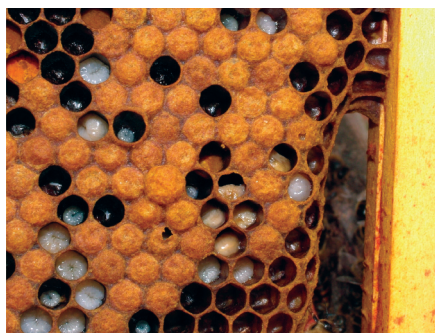
Objectives of the revised policy

The future shifts in direction for Bee Health Policies, which will therefore guide the activities of the NBU when working in partnership with beekeepers, are covered by the following themes:



Training beekeepers at the home apiary. Unless indicated, all photos are Courtesy of The Food and Environment Research Agency (Fera), Crown Copyright; images supplied by the National Bee Unit at Fera.

- **Enabling beekeepers and improving their self-reliance** by, for example, sharing data and analyses on pest and disease risks with beekeepers; and by planning, coordination and delivery of education and training.



EFB, photo by Frank Gellatly.

- **Tackling causes of problems and not just symptoms**, e.g. improving the response by government, supported by BKAs, to recurrent outbreaks of serious diseases such as European foulbrood (EFB).



AFB infection; using a match stick to test for rosin in the cell.

- **Formalising and extending better regulation approaches for the control of American foulbrood (AFB) and EFB**, specifically by recognising and rewarding good practice, by reducing inspection burdens, which the NBU already has in place for some commercial and semi-commercial beekeepers. This is known as the Disease Accreditation Scheme for Honey Bees (DASH).

Managing emerging threats

- **Broadening the focus of government's role to cover other pests and diseases**, (not just notifiable foulbroods), including re-focusing on varroa management with campaigns and training to reduce colony losses;
- **The refocus on surveillance and early detection**, and expanding management options for exotic pests, examples of which are given later on in the article.

Defra's recommended policy changes for each pest and disease under consideration are laid out, more specifically, below.

Intended outcomes from updated policy on varroa

- **To renew the commitment by government**, working with beekeeping associations, to improve beekeepers' management of varroa.
- **To reduce colony losses and associated costs to beekeepers.**
- **To ensure the effective use of authorised treatments.**
- **No veterinary medicines or illegal residues found in honey.**



Varroa mites on a larva.

Intended outcomes from updated policy on AFB and EFB

- To lower the incidence of AFB and EFB.
- To avoid losses by beekeepers and, as a result, reduce costs to them from having to replace colonies lost from disease.
- In the longer term, reduce costs to tax payers for AFB and EFB surveillance and control with opportunities to reallocate resources to other bee health priorities; increased appreciation, value and use of disease prevention (i.e., biosecurity and barrier management) by beekeepers.
- To increase appreciation by beekeepers of the importance of AFB and EFB and their role in effective control of these diseases.
- In the long term, if in-field diagnostics can be developed, particularly for

confirming the presence of the pathogen *Melissococcus plutonius* (EFB), have evidence of beekeepers using these tools and taking action to reduce risk of symptoms/outbreak.

- No outbreaks of AFB or EFB associated with the sale of bees, particularly starter and nucleus colonies.
- No outbreaks of AFB associated with honey packing plants, where AFB risks may be present due to spores in imported honey.

Intended outcomes for updated policy on the exotic pests, Small Hive Beetle, *Tropilaelaps* and Asian hornet

- To optimise the chances of early detection.
- In the event of arrival, an effective

implementation of the contingency plan to eradicate and prevent establishment, if possible.

- To outline a clear rationale for moving from an eradication policy to a containment policy, including informing beekeepers.



Adult Small Hive Beetle.

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- If any of these pests become established, educating beekeepers on how to manage this/these pest/s effectively to minimise impacts on their colonies. This would be subject to ensuring practical advice was available to beekeepers on treatments and husbandry methods.
- If established, beekeepers manage this/these pest/s effectively to minimise impacts on their colonies.



Dorsal view of *Tropilaelaps*.

More specifically, building on current policy, government and beekeepers working together on a package of additional measures to increase the chances of early detection and eradication of exotic pests and, if unsuccessful in preventing their establishment, to provide robust advice to beekeepers on effective management. The following are examples of measures that may be taken to ensure this:

- Step up raising awareness so that beekeepers and others are able to identify and detect exotic pests leading to early notification of arrival.
- Expand network of sentinel apiaries at risk points and at other sites to increase likelihood of detecting introductions at non-risk sites.

- Expand exotic pest surveys.
- Raise beekeepers' awareness of number of incursions/ outbreaks (trigger points or thresholds) which are likely to guide decisions about moving from an eradication policy to longer term management/containment.
- Exercises to test contingency and response plans including training of beekeepers who would assist the response (disease liaison contacts).
- Develop and/or clarify additional treatment and management options for eradication and containment.
- Provide robust advice to beekeepers on how to manage this/these pest/s if it/they become established, taking into account evidence on how best to influence beekeepers' behaviour.

The Implementation Plan

In order to realise the intended outcomes of the policy review, as outlined above, an *Implementation Plan* is being drawn up for 2014. This important document sets out the specific objectives of the review, describing how and when these will be met and clarifying how all the partners will work together. The plan will be presented and agreed at the Bee Health Advisory Forum.

The objectives of the *Implementation Plan* fall under five broad categories, namely Communications, Training, Foulbrood Detection and Control, Biosecurity and Contingency Planning, and Evidence and Analysis. The plan has yet to be finalised, however, some of the objectives have already been contributed to, others are underway and others are yet to be implemented.

One of the objectives already contributed to under the *Implementation Plan* ('the plan') is the update of the following advisory leaflets:

Managing Varroa.

Foulbrood Disease of Honey Bees and Other Common Brood Disorders.

The Small Hive Beetle, a Serious Threat to European Apiculture.

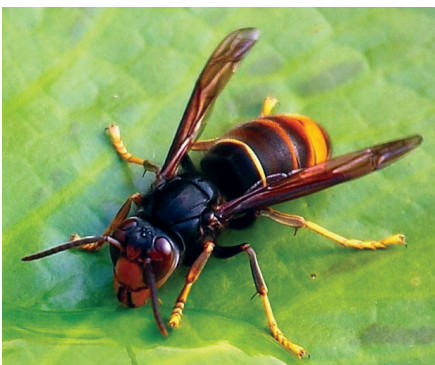
Common Pests, Diseases and Disorders of the Adult Honey Bee.

Tropilaelaps, a Parasitic Mite of Honey Bees.

These leaflets are available as pdfs on BeeBase at: <https://secure.fera.defra.gov.uk/beebase/index.cfm?pageid=167>.

DASH

One of the plan's major objectives is the Disease Accreditation Scheme for Honey Bees (DASH). The details are published on Defra's website: <https://www.gov.uk/govern>



Vespa velutina, the Asian hornet.

ment/consultations/improving-honey-bee-health and further information about the DASH scheme will be provided in a follow-up article in *BBKA News*.

Sentinel Apiary Networks

Finally, underpinning research is an important element of the bee health work, and the NBU have recently secured a new grant to 'stress test' Sentinel Apiary Networks. The objective is to find out how robust the current network is, and how increasing or restructuring the Sentinel Apiary Network would increase the likelihood of the NBU detecting a pest sooner, to improve our chances of successfully eradicating any incursion.

Sentinel Apiaries are apiaries across England and Wales where beekeepers have agreed to monitor for certain exotic pests such as the Small Hive Beetle, *Tropilaelaps* mites and the Asian hornet, using traps provided by the NBU. More information about the exotic threats we face are available on BeeBase. The Asian hornet pages are full of information on *Vespa velutina*, including details of the design of traps and the Sentinel Apiaries. Additional information can be found in the exotic pest advisory leaflets and in previous articles on the publications pages of BeeBase: <https://secure.fera.defra.gov.uk/beebase/index.cfm?pageid=166>.

Further information

If beekeepers wish to import honey bee queens or packages, they are now able to submit an import notification electronically via their BeeBase login. To do this log into BeeBase and on the left hand side of the screen, click on 'Import Notifications' from the index. Then click on 'Add New Import Notification' and submit your details. Please be aware that you will still need to notify the Animal Health Veterinary Laboratory Agency of your import. ✚

High Varroa Populations

Many of our Bee Inspectors have reported a high population of varroa mites in colonies across England and Wales. We believe these high levels are largely due to many colonies continually rearing brood throughout the mild winter. Continuous brood rearing dramatically reduces the efficacy of winter varroa treatments such as oxalic acid, which do not kill mites sealed in brood cells.

We urge beekeepers to monitor colonies and check either the natural mite drop from a sticky insert/ open mesh floor or by uncapping drone brood. From May to August, a natural mite drop should be monitored over a week. The number of mites then counted over this week should be multiplied by thirty to give you a rough population of varroa in your colonies. A figure of one thousand mites or more is considered to be a high infestation. If uncapping drone brood, then only five varroa mites out of 100 uncapped pupae need to be found to be considered a high infestation.

Should you discover that your colonies have a high amount of varroa then a range of options are available from biotechnical methods such as drone brood removal, to authorised varroacides. Any varroacides used will be weather and temperature dependant. If you have supers on your colonies then thymol treatments should not be used due to tainting of the honey. More information is available in the National Bee Unit (NBU) leaflet *Managing Varroa*, available from <https://secure.fera.defra.gov.uk/beebase/index.cfm?pageid=167> or alternatively, a hard copy can be obtained by phoning the NBU office on 01904 462510.

National Bee Unit



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