

National Bee Unit - South East Region



November 2007

A brief overview of the past seasons achievements by the SE region team of bee inspectors

Inspection Programme

The season began early (March 5th), with a full team of inspectors, so we were able to get a good start on the years inspections. The early start was arranged so that we could collect the remaining 'beginning of the season' samples for the EFB research commenced in 2006 – more about that below.

As usual, a busy year in the South East with a total of 670 apiaries/3563 colonies inspected during the season. Of the 3563 colonies inspected 93 were diagnosed with EFB. AFB occurred in three locations in the SE; in London TQ39, Kent TQ66 and in Surrey SU84.

Regional inspection and foulbrood summary

County Code	Apiaries Inspected	Colonies Inspected	%EFB Apiaries	%AFB Apiaries	% EFB Colonies	% AFB Colonies
ESU	68	328	3.0%	0.0%	2.1%	0.0%
GRL	138	730	7.2%	0.7%	1.8%	0.3%
KEN	290	1539	3.8%	0.3%	2.1%	0.1%
SUR	93	497	7.5%	1.1%	3.8%	0.2%
WSU	81	469	16.0%	0.0%	4.7%	0.0%
Totals:	<u>670</u>	<u>3563</u>				

Inspections progressed with difficulty over the entire South East region with the announcement of the Foot & Mouth outbreak in August, with all inspectors being unable to visit apiaries on farms; inspection was particularly hit in Surrey with all visits being cancelled in the protection and surveillance zones. These restrictions were not lifted until after the end of the seasonal bee inspector's season and in fact we all spent some time assisting Defra officers with the crisis.

Full details of the inspections carried out in the SE are shown on the NBU website beebase.csl.gov.uk I would encourage Associations to nominate a member with Internet access to check the NBU website regularly, weekly if possible. You will then be in touch with the latest information about disease in your area, as positive foulbrood cases are posted on the website immediately they are received at the office. Cases are posted as

being in an Ordnance Survey 10Km square, (IE TQ39) so that individual beekeepers are not identified. You will need to know which squares cover your Association area. If you check the website and find disease is in your area, please inform local beekeepers, and encourage them to inspect their colonies carefully. If beekeepers check their colonies and are concerned, or wish for an inspector to visit and check their colonies, please contact me and I will make the necessary arrangements.

Exotic pest surveillance programme

We have again been checking for exotic pests, Small Hive beetle (SHB) and Tropilaelaps, in 'at risk' apiaries, and also carrying out some random inspections across the region. I would encourage you all to check your colonies carefully for these pests and contact me, or the NBU, if you find anything suspicious. Details of what SHB or Tropilaelaps look like are available by leaflet or on beebase.csl.gov.uk

Also, this season, we carried out a contingency planning exercise, in which we practiced the procedures we would use if there were to be an incursion of these pests, and found it a very useful and instructive day. We gained valuable experience about the numbers of apiaries to be inspected in an area and therefore the number of inspectors needed to check quickly. I selected several close apiaries in East Sussex, which a beekeeper was kind enough to allow us to use for the day and to whom I must express my thanks. Drawing a 10km ring on the map around these apiaries, which would be the first apiaries inspected near to a suspected outbreak, lead to the discovery that there were nearly 100 other apiary sites to be checked! Another difficulty was access to the sites. Due to the wet summer, it was not possible to get cars to the apiaries leading to long walks, with various bits of equipment, in very soggy conditions taking up valuable time.

Many lessons have been learned which will enable us to fine-tune our future contingency planning. Several beekeepers were invited to take part in the day and I hope that they found it a useful event and that I may be able to call upon them, if necessary, in the future. We will now be running these planning days on a regular basis, every other year.

European Foulbrood research – SID 3

This research programme, which began in 2006, was funded by Defra and is known as SID 3. (Science in Defra - 3) Bee inspectors were asked to collect samples of both adult bees and larvae from colonies that were either:

1. Diagnosed as having EFB
2. Not infected but in an apiary with infected colonies
3. From an apiary without any apparent infection

Colonies were visited on a regular basis for sampling with the final sample being taken in the Spring 2007.

Some of the main conclusions are:

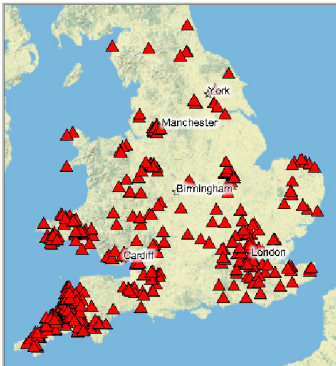
- Shook Swarm (SS) and oxytetracycline (OTC) are equally effective methods for controlling EFB. However, re-occurrence of EFB at the follow-up inspection was different:

OTC	21%
SS	4%
- Asymptomatic colonies from apiaries showing EFB symptoms frequently tested positive for *M. plutonius*.
- Both SS and OTC methods reduced the levels of *M. plutonius* to similar levels found in asymptomatic colonies from apiaries showing EFB symptoms.

- *M. plutonius* can even be present in asymptomatic colonies from apiaries NOT showing symptoms of EFB, although this was restricted to areas of high EFB incidence.
- The amount of infection on adult honeybees was surprisingly high for what is reported to be a brood disease of honeybees.
- Neither SS or OTC treatment have significant impact on colony mortality when compared to asymptomatic colonies.

This year we carried on the research with a further programme of sampling to determine if it would be better to SS all colonies in an infected apiary regardless of whether they showed clinical signs of infection or not. To this end we looked for beekeepers who had 2 apiaries with EFB infection, SS all the colonies in one apiary and only SS the infected colonies in the other, taking samples from a selection of the colonies involved. Unfortunately some sample collection was missed as a result of the Foot & Mouth outbreak. Final samples are due to be collected in the spring of 2008.

Resistant varroa



This map shows positive resistance tests that have been done up till November 2007. Please remember that we can only show results for tests that have been done and that NBU has received. This surely means that resistance is even more widespread than the map shows but that it has just not been confirmed. Varroa management is therefore critical if beekeepers are not to lose colonies and to assist with this, I am conducting several workshops on the use of Organic acids this winter.

Honey

I have had a good response to the request for honey statistics and am writing up the results separately. I would like to thank all the beekeepers that have given data about honey crops and prices. This year the average honey crop per colony looks like it will be considerably lower than previous years, mostly due to the very wet summer that was experienced across many parts of the SE. Those that had strong colonies in the spring were able to take advantage of a strong flow that happened in many areas but after that it was, for many, all downhill!

Educational events

On the events scene we have, once again, had a busy season with 76 events, which comprised apiary tours for associations, talks, apiary demonstrations, IPM days and Bee Health workshops and currently in December, Organic acid workshops. As usual I attended both Brinsbury and Plumpton bee auctions.

I am now planning events for next year so please contact me if you would like your Association to be involved in any of the above, or similar activities.

I would like to take this opportunity to thank the seasonal bee inspectors who make up the SE team for all their hard work during the season: Caroline Washington, Bob Smith, Nick Withers & David Rudland.

Thanks are also due to those of you who, facilitated events, partook in training and contacted us with your disease concerns.

Stop press – Nosema ceranae

The following statement was issued on 27th November 2007 by the NBU regarding the confirmation of *Nosema ceranae* in England and Wales:

Three hundred and nine samples have now been tested for the presence of *Nosema apis* and *Nosema ceranae* using real-time PCR. All positive results were confirmed using published assays for the detection of these pathogens using real-time PCR with SYBR green chemistry (Cox-Foster et al., 2007). Positive results have therefore been confirmed using 2 methods both based on the detection of species specific DNA. Of these samples, 45 tested positive for *Nosema* species (14%) with 31 samples testing positive for *N. apis* (10%), 14 for *N. ceranae* (4.5%) and 3 (1%) testing positive for both *Nosema* species. *N. ceranae* positives were confirmed across six counties of England (Cornwall, Essex, Lincolnshire, Hertfordshire, Greater London, North Yorkshire) and three in Wales (Glamorgan, Powys, Dyfed).

N. ceranae infections have been reported not to show typical signs of *Nosema* infection. Therefore we recommend beekeepers check their colonies for adult bee diseases. Treatment, using the usual veterinary medicine, is effective against *Nosema* infections in honeybee colonies. It is also important to treat effectively against *Varroa* mite infestations.

We will carry out a more detailed survey to estimate the prevalence and impact of both *Nosema* species across England and Wales. Samples of DNA extracts from the European foul brood study, imported bees and historical samples stored in the NBU labs will be rescreened.

If you have any questions regarding *Nosema ceranae* and how it may impinge upon the health of your colony please contact me

Alan Byham

For further information about bee disease in the South East please contact:

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