

# National Bee Unit

## 2016 Wales Annual Report



Animal &  
Plant Health  
Agency

### The Season

#### Overwintering 2015/16

After a cool summer in 2015, drier weather took hold in September and October but it was not warm enough for colonies to make amends for a poor season and hives required a lot more feeding than in many previous years. The beginning of November was the last of the warm, dry weather, and the bees were still regularly flying, however good winter preparations all made sense in December as the wind blew, the rain fell and the year ended very wet indeed.

Overall it was a mild winter in Wales with January and February not very cold or wet and by March, despite the dry spell mid month, the weather was still cool and there were not many good bee flying or inspection days. However reports of overwintering were generally favourable and conditions improved in April.

**Winter losses:** *We surveyed 912 beekeepers during the course of our inspections this year and found that 29% of colonies were lost between 1<sup>st</sup> October 2015 and 1<sup>st</sup> April 2016.*

#### Spring into summer

After a better month the last days of April were unsettled and nectar and pollen were still scarce in the hives. It is a shame to see all the cherry, blackthorn, damson, celandine, and dandelion flowers, to name some, not being fully used. The variable season continued through May which meant forage coming in in fits and starts, steadily filling the first super and even into the second one on strong stocks. Improved temperatures resulted in plentiful pollen, brood nests building up well and, inevitably, the good conditions, interspersed with wet weather, turned the attention of the stronger colonies to building queen cells.

**Honey yield:** *The average honey crop per hive recorded by the seasonal bee inspectors in Wales from their own areas in 2016 was 27lb*

Conditions improved in late May and early June, creating good queen mating conditions for colonies split earlier in the month. However disappointing weather returned, in July the weather did not improve much until the 17th when we had 3 days of summer. Mostly we had cloudy days never reaching 20 degrees C, with intermittent rainfall and night time temperatures were cool. So for 3 days the nectar poured in the hives but otherwise conditions were modest at best. August saw some belated warm settled weather and there was honey to take off in most apiaries if not most hives, first impressions on how the amount compared with 2015 were something similar, ie disappointing!

In some areas starvation was a risk once the meagre amount of honey was removed, without prompt additional feeding of syrup. September continued the dry theme and ivy produced both nectar and pollen for a while in relatively warm weather. In a good season, you can smell the ivy being worked in the hive and it's a joy to see the late brood nest expanding to produce those winter/spring bees. On the last day of October it was so warm in the sunshine, you could smell the ivy just standing in the apiary and it was a pleasant surprise that they were still finding plenty of ivy pollen and nectar to forage on. Most hives needed feeding but held their weight once feeding was completed.

Overall I can't say that the summer was a washout, the season started well with some good weather until mid June, colonies were then generally strong and well provisioned but we didn't get enough warm, settled weather after the first week in June and before the end of July to produce a good crop of surplus honey. Nights were cool and the haymaking weather in August was too late for most forage unless your bees were on the heather, which did well.

The largely dry autumn was welcome and colonies required less feeding than 2015, it continued relatively dry but by December the temperature consistently struggled to get much above freezing, which presented the opportunity to delay oxalic acid medication until late December, early January. This was when it was least likely that there was sealed brood present after a prolonged cold spell, otherwise treatment is counterproductive as the breeding varroa mites will be protected in the brood.

## **The NBU in Wales**

### **The team**

At the end of the season we said goodbye Dinah Sweet who has been with us since June 2011 covering Mid and South Glamorgan, her wealth of knowledge and experience will be sadly missed. We have had Agency consent to recruit for the post so if you have ever considered becoming a Seasonal Bee Inspector and would like to take this forward, please do get in contact with me and I will ensure that you have the details in early January, as they become available.

This year we welcomed SBIs Dan Etheridge who moved from Berkshire to South Powys and Karen Smith who moved from Buckinghamshire to cover Ceredigion. We recruited two new SBIs, Chris Welton to Pembrokeshire and Tony Smith to Clwyd.

From April 1st 2017 you can use the post code search on the contacts page of BeeBase to check who is your local SBI, but over the winter period please direct all enquiries to me. SBIs can be contacted on the numbers below from the beginning of April until the end of September whilst the RBI is contactable year-round:

<b>Regional Bee Inspector</b>	<b>Area</b>	<b>Contact</b>
Frank Gellatly	Mid Carmarthenshire	07775 119480 01267 202732
<b>Seasonal Bee Inspectors</b>	<b>Area</b>	<b>Contact</b>
Jonathan Garratt	N Gwynedd, Anglesey, Lleyn	07775 119479
Tony Davis	Flintshire, Denbighshire, Wrexham	07900 166018
Paul Aslin	South Gwynedd, North Powys	07867 351605
Karen Smith	Ceredigion	07979 119374
Dan Etheridge	Mid & South Powys	07979 119376
Chris Welton	N Pembrokeshire, SW Ceredigion	07900 166143
Vacant	Mid & South Glamorgan	
Maggie Gill	S Pembrokeshire, W Carmarthenshire	07979 119373
Ade Bowen	West Glamorgan	07775 119489
Edmund Thomas	Monmouthshire	07901 517813

### **Beekeeper numbers**

There are currently 3,288 beekeepers in Wales registered on the NBU's online database Beebase. Between them, they have 17,857 colonies in 4,457 apiaries – an average of 5.4 colonies per beekeeper and 4 colonies per apiary. Over the past 5 years, the number of new beekeepers registering on Beebase in Wales has remained steady: in 2012 and 2013, they were 242 and 208 respectively but 2014 saw an upward trend with 332 new beekeeper registrations, followed by 349 in 2015 dropping to 246 in 2016.

### **Wales' beekeeper, apiary and colony numbers on Beebase (December 2016)**

<b>County*</b>	<b>No. Beekeepers – and as a % of the total</b>		<b>No. Apiaries – and as a % of the total</b>		<b>No. Colonies and as a % of the total</b>	
Gwynedd	497	15 %	665	15 %	2,348	13 %
Clwyd	414	13 %	571	13 %	1,879	11 %
Powys	432	13 %	562	13 %	2,288	13 %
Dyfed	970	30 %	1365	31 %	6,512	36 %
Mid Glamorgan	228	7 %	328	7 %	1,261	7 %
West Glamorgan	238	7 %	300	7 %	1,039	6 %
South Glamorgan	172	5 %	226	5 %	737	4 %
Gwent	337	10 %	440	10 %	1,793	10 %
<b>WALES totals</b>	<b>3,288</b>		<b>4,457</b>		<b>17,857</b>	
* Funding restraints mean that Beebase is still configured in the preserved counties of Wales.						

## Inspections

This year, Welsh Inspectorate visits totalled 716 beekeepers, 1105 apiaries and 4994 colonies. This represents 75 less beekeepers, 70 less apiaries and 230 fewer colonies than the previous year. The reasons for the reduction in numbers were challenging weather conditions and being three staff members down, until the new recruits completed field training in August. We also carried out 11 import inspections following up the importation of queens from other EU countries.

## Pests and diseases

### Varroa

In some areas we have seen high varroa populations later in the season, it is important to monitor and notice the signs before damage is caused by Parasitic Mite Syndrome. Authorised treatment options are increasing with the addition of Apitraz and Oxuvar and everyone should have an appropriate treatment regime in place.

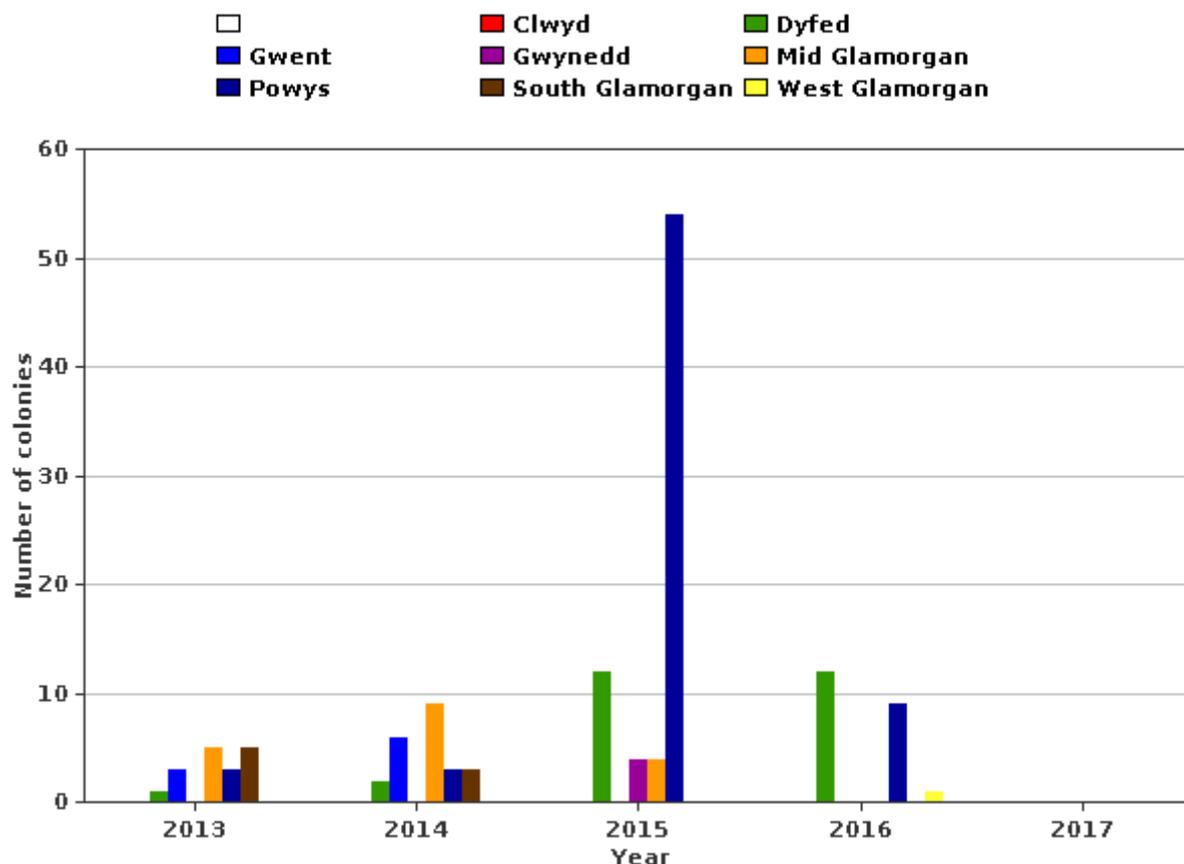
### Notifiable diseases: European Foulbrood (EFB) and American Foulbrood (AFB)

This season, we found foulbrood in 23 apiaries, affecting 31 colonies. This is a decrease on 2015 levels when 30 apiaries were found with 79 diseased colonies. It represents a 23% fall in infected apiaries and a 61% fall in infected colonies.



The fall in cases of disease is primarily attributable to the containment of the 2015 EFB outbreak on the Shropshire border and effective follow up work to the supply of some infected nucs to an association and beekeepers in the same area. The level of AFB infection remains low. Beekeepers should not drop their guard, but can take some comfort from the fact that the likelihood of their bees being affected by foulbrood remains low: 0.8% (6 in number) of beekeepers inspected were found to have AFB and 2.1% (15 in number) EFB.

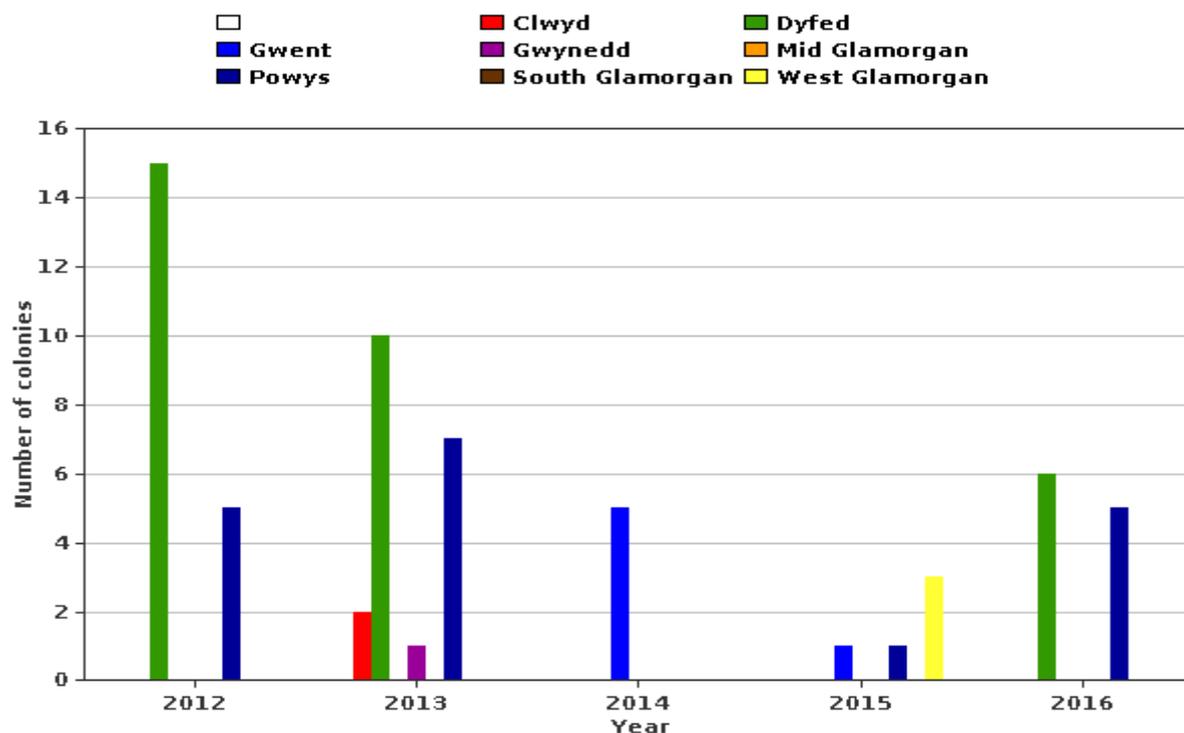
## Incidence of EFB in Wales 2013 – 2016 (per preserved county)



Location and incidence of EFB affected hives per unitary authority (colour referenced to preserved counties data above,)

Unitary Authority	Grid square	Area	Colonies infected	Month found
Ceredigion	SN77	Devils Bridge	2	September
Ceredigion	SN68	Bow Street	1	August
Ceredigion	SH70	Machynlleth	2	June
Ceredigion	SN23	Tegryn	1	September
Ceredigion	SN67	Llanilar	2	June
Ceredigion	SN57	Blaenplwyf	1	June
Pembrokeshire	SN14	Cardigan	1	June
Pembrokeshire	SM72	St Davids	2	September
Powys	SJ31	Wollaston	1	July
Powys	SO08	Llandinam	1	June
Powys	SO12	Llangorse	3	May, June
Powys	SO24	Hay on Wye	1	May
Powys	SH80	Cemmaes Rd	3	June
Neath Port Talbot	SS78	Margam	1	June

## Incidence of AFB in Wales 2012 – 2016 (per preserved county)



## Location and incidence of AFB affected hives per unitary authority (colour referenced to preserved counties data above)

Unitary Authority	Grid square	Area	Colonies infected	Month found
Pembrokeshire	SN12	Logrin	3	May, July
Pembrokeshire	SN22	Llanboidy	2	August, Sept
Carmarthenshire	SN51	Pontyberem	1	June
Powys	SO05	Builth Wells	3	August
Powys	SO15	Hundred House	2	August

## Asian Hornet incursion in neighbouring Gloucestershire

On the 17th September a hornet sample was collected by a beekeeper in Gloucestershire and reported to the local Bee Inspector, who submitted it to the FERA Science laboratory in York. The sample was confirmed as an Asian hornet by an expert entomologist. The NBU Asian Hornet Contingency Response Plan was immediately activated and a Local Disease Control Centre (LDCC) set up in Gloucester to allow us to co-ordinate the response on the ground.

Initially Bee Inspectors were deployed across a five-kilometre surveillance area around Tetbury, to inspect local apiaries and look for any of the typical hawking behaviour of the Asian hornet. However, possibly due to the abundance of forage available, and the low Asian hornet population in the area, there was little or virtually no hawking behaviour observed. To find the nest we used a range of methods from deploying traps, looking for hornets on forage, triangulation (traps and sightings were used to assist with this), leafletting members of the public, local association and public buildings, infrared imaging and triaging hundreds of calls and emails from vigilant members of the public.

The main forage available to insects at this late time of year was ivy which was in abundance and being visited by wasps, bees, hoverflies, butterflies and both European and Asian hornets. The Asian hornets were observed mainly on ivy and also preying on aphids on willow, but monitoring their lines of flight required great patience. They were on a feeding mission and were only going to return to their nest when replete. However bearings were taken from a number of different sights which, when plotted on a map, all pointed to a 500 metre zone in the built up area. This was in line with findings in France where Asian hornets show a preference for nesting in inhabited areas rather than the open countryside and are often high up in tall trees.



The mapping proved correct and the nest was spotted by an observant Bee Inspector 55 feet up a tall conifer tree at the back end of September, two weeks after the first sighting. Members of the APHA's Wildlife team, who are responsible for destruction of Asian hornet nests during an outbreak, destroyed and removed the nest that night and

it was taken to our laboratory for further analysis, which is still ongoing. We continued our surveillance in Tetbury up until the end of October but no further Asian hornet activity was observed and no further nests were found. We are still continuing surveillance right through the winter.

Painstaking analysis of the nest in the laboratory has so far failed to find any evidence of young queens, despite the nest's priorities shifting from foraging and nest expansion to producing potential queens and male hornets for mating during autumn. After this period, the fertilised queens would leave the nest to hibernate over winter, whilst all the other occupants die. Vigilance will be required next spring if any founding queens will begin building new colonies, the NBU has produced a fact sheet detailing a suitable home-made monitoring trap which can be found on BeeBase at <http://www.nationalbeeunit.com/index.cfm?pageid=167>

## **Strategic work**

### **Exotic pest surveillance**

We carried out 381 inspections specific to exotic pests this year, targeting a combination of identified risk points and random sites. The identified risk points are ports, airports, crude hive product importers, fruit and vegetable wholesale markets and landfill sites associated with imported products. Given the continued presence of Small Hive Beetle in Italy this year and the incursion of the Asian Hornet from across the channel in France, the importance of exotic pest surveillance work cannot be overstated.

We have 15 Sentinel Apiaries in Wales in order to improve our capacity to combat the arrival of pests from abroad. Sentinel apiaries are set up in areas considered 'at risk' where a volunteer beekeeper agrees to designate and monitor one of their colonies specifically for exotic pests. As well as visual inspection, floor debris from the designated hives is sampled twice a year and tested for Small Hive Beetle and Tropilaelaps. All equipment and paperwork is supplied to the beekeeper who collects samples as directed and sends them to the NBU laboratory for screening. SHB traps are provided and checked at normal colony inspections and noted on a log sheet.

### **WG Pollinator Action Taskforce**

This year saw the launch of Bee Friendly/Caru Gwenyn at the Wales Biodiversity Partnership Conference on 7th September at Bangor University, Bee Friendly is divided into four themes. The first three themes reflect what pollinators need to thrive; an environment which has varied and nutritious food sources, water, nesting sites and is free from pollution and pesticides. The fourth theme reflects the importance of community engagement and inclusion. This ties in with the aim of the taskforce: to reduce, and seek to reverse, the decline in wild and managed pollinator populations and to raise awareness and bring a new emphasis to the work of government departments, other public sector bodies and voluntary groups in order to improve habitats and opportunities for all pollinators.

## **Beekeeper Training**

A new free leaflet called 'Starting Right with Bees' is available for download from BeeBase, it is aimed at new beekeepers and is ideal for new beekeepers on beginners' courses: <http://www.nationalbeeunit.com/index.cfm?pageid=167> The Inspectors in Wales have been involved in local association beginners and improvers classes, as well as giving talks and demonstrations on topics ranging from good husbandry and exotic pest threats to varroa control and biosecurity. In total, the team has participated in 35 events.

Following the success of last year's programme, we ran another five Disease Recognition, Comb and Varroa Workshops in May, June and July. They were hosted and publicised by local beekeeper associations, open to members and non-members alike, and were attended by a wide range of beekeepers. A special licence from the Animal and Plant Health Agency (APHA) allowed us to show real examples of diseased combs collected during our inspections.

The practical and visual elements of the events, especially the chance to see and handle diseased comb 'in the flesh', is an opportunity much appreciated by participants. As well as beekeepers going away with a better understanding of biosecurity, hygiene, good husbandry and the importance of inspecting for disease, we enjoyed being able to demonstrate the work that we do to a wider audience in an informative and accessible way. More will be on offer across Wales next year.

## **Beebase**

If you keep bees please ensure you are registered on Beebase, if you have been inspected, you will be registered (it is **not** an automatic consequence of joining a local beekeeping association). There are substantial benefits in registering, including: automatic alerts in the event of foulbrood or exotic pests being found in the vicinity of your apiary; emails with timely advice on the basis of the inspectorate's findings during the season; and a facility to maintain your own beekeeping and apiary records. In addition, we can come and check your bees and give advice in person if foulbrood or exotic pests are found nearby.

I urge everyone to check that they are on Beebase and, if registered, to update any changes to their personal details and apiary information. If not, registration is free, quick and confidential, using a link on the home page. You can also request a reminder of your username and password from there (or phone the NBU office). The graphs and figures in this report are available on the public pages of Beebase, on the NBU website ([www.nationalbeeunit.com](http://www.nationalbeeunit.com)) in 'Bee Pests, Diseases and Maps'. The site also offers several pages of tips, advice and downloadable leaflets on disease control and bee husbandry.

## **A final note**

I would like to thank the team of Seasonal Bee Inspectors for all their support and hard work, and the local association secretaries/training officers who helped us to manage

the programme of bee health workshops across Wales. I anticipate recruiting another SBI in 2017 for the Bridgend, Vale and Cardiff area and would be happy to receive any expressions of interest or answer any questions from anyone suitably experienced. I'd like to wish you all a successful and trouble free season, but, if the worst happens, please remember the NBU are here to help; <http://www.nationalbeeunit.com/>

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