

# Apiculture Programme 2023 to 2025

## England

### Evaluation of the results of the previous apiculture programme

Beekeeping associations have been consulted on the apiculture programme and indicated their support for the existing support measures remains unchanged.

Across the UK the 2020-2022 National Apiculture Programme focused on: combating beehive invaders and diseases, particularly Varroosis and exotic pests; technical assistance to beekeepers, particularly training and education through the delivery of courses and on one-to-one tuition during colony inspections; and, in Scotland only measures to support the restocking of hives.

Consultation with the Bee Health Advisory Forum confirmed that beekeepers value the services provided through previous apiculture programmes. The Forum felt that the number of inspections should be maximised and favoured maintaining the current programme rather than opting for fewer more in-depth inspections. In terms of technical assistance, the Forum again preferred to keep the existing programme which focussed on face-to-face training rather than a mix of on-line and in-person training.

Associations had also previously reported that the National Apiculture Programme enabled already proficient beekeepers to keep up to date with information on bee diseases and allowed new and developing beekeepers to acquire the knowledge and skills to become competent.

#### **KPIs for the 2020-2022 programme.**

During the course of the 2020-2022 National Apiculture Programme the following KPIs were met by the programme.

| Year                    | Inspections | Training events<br>(number trained) | Spend including<br>match funding |
|-------------------------|-------------|-------------------------------------|----------------------------------|
| 19/20*                  | 5,999       | 27 (1011)                           | £1,337,028                       |
| 20/21*                  | 7,350       | 16 (546)                            | £968,596                         |
| 21/22 (England<br>only) | 3,755       | 48                                  | £613,879                         |

\*The spend focussed on the combatting hive invaders measure as COVID restrictions limited the amount of training events that could be delivered.

The UK remains free of Small hive beetle and the Tropilaelaps mite. Since 2016, 13 Asian hornet nests have been successfully destroyed (1 nest in 2020 and 2022, 2 nests in 2021).

Through the inspections and one-to-one advice, beekeepers are now more aware of exotic pests and the steps they should take to reduce the risk of pest introduction, as well as being in a better position to tackle endemic pests such as Varroa and foulbrood.

## Beehive Count Methodology

### Approach

#### 1. BeeBase and Beekeeping in the UK

UK honey bee biosecurity is supported by a voluntary register and database called [BeeBase](#) upon which records of beekeepers, their apiaries, hives and disease status for England, Scotland and Wales are secured. Beekeeper records for Northern Ireland are kept on a separate database. These records support the work of our bee inspectors who carry out surveillance and disease control activities across the UK in delivering our part in the EU's overall biosecurity programme. BeeBase is also used as a portal to provide beekeepers with a ready source of information on bee pests and diseases and their management.

In 2010, 19,000 beekeepers were registered on BeeBase. By 2012, after extensive publicity campaigns by government and the beekeeping associations, the number of registered beekeepers had climbed to 29,000. Today the number of beekeepers registered on BeeBase is 47,000. This total

is likely to reflect both an increase in the proportion of beekeepers registered but also an increase in the number of people keeping bees in the UK.

The beekeepers in the UK are predominately hobbyists with fewer than 10 hives. We have no means of compelling them to update their details on BeeBase, instead relying on their goodwill.

Northern Ireland does not use BeeBase but has its own database which collates beekeeper names, hive numbers, addresses, and contact telephone numbers. Beekeeper email addresses are now being collated. Similar to GB, Northern Ireland currently has no compulsory system of registration but collects hive numbers and contact details from beekeepers. Bee inspectors also regularly update the database to ensure data is accurate. Currently, Northern Ireland has approximately 1000 beekeepers recorded on this database.

## **2. Bee Hive Count Protocol**

In the development of the protocol we were minded to maintain a proportionate approach – providing a robust estimate without placing undue burdens on beekeepers or UK public finances. BeeBase is therefore being used as the core resource in providing this estimate for England, Scotland and Wales.

Northern Ireland relies on its own database to provide a robust and accurate bee hive count. Like the rest of the UK, Northern Ireland has used a proportionate approach which does not place undue burdens on beekeepers.

Stage one: estimate the number of overwintering hives.

1. Obtain the baseline number of beekeepers and beehives in England, Scotland and Wales that are registered on BeeBase. Northern Ireland to obtain a baseline number of beekeepers from its own database.
2. Each autumn, beekeepers will be contacted by e-mail and asked to update their records to reflect their number of hives as of 1st November. Beekeepers will be given two months to update their records. Given the voluntary nature of BeeBase registration, we expect that only a proportion of beekeepers will respond. Beekeepers can note that they have reviewed their data and the figures do not need updating.

Northern Ireland will contact 100 beekeepers each autumn and obtain up to date information on hive numbers, including email addresses.

3. Obtain from BeeBase the post-autumn survey number of beekeepers and beehives in England, Scotland and Wales that are registered and calculate the difference compared to the baseline data obtained in (1).

Northern Ireland will carry out a similar procedure – obtaining from their own database the post-autumn survey of beekeepers in Northern Ireland.

4. Obtain the number of beekeepers contacted and the number of those who opened the email.
5. The change in hive numbers in (3) is assumed to be caused by beekeepers who opened the email, saw the message in (4) and acted to check and update their records. This provides an estimate of the change in hives per beekeeper. The number of overwintering hives per keeper provided by BeeBase can then be calculated. NI will use the sample of 100 beekeepers surveyed.

Stage two: estimate the number of registered beekeepers.

6. Obtain from BeeBase the number of people who identified themselves as not belonging to a beekeeping association (i.e. they are registered to BeeBase exclusively). It is Northern Ireland's intention going forward to contact associations to ascertain estimates as their database does not hold this information at present.
7. Obtain the total number of members of the British Beekeepers Association (England only), Scottish Beekeepers Association and Welsh Beekeepers Association. Northern Ireland will follow suit.
8. Add (6) and (7) to get the total number of beekeepers registered to BeeBase and/or an association. Northern Ireland will follow suit. Note: this methodology does not account for the population of beekeepers who are unknown to BeeBase, the NI database or the beekeeping associations.

Stage three: estimate the number of overwintering hives for all registered keepers.

9. Multiply the overwintering hives per beekeeper (see 5) by the number of registered beekeepers (see 8).

### **3. Validation**

Throughout the year, the number of hives registered on BeeBase and the NI database will be checked during apiary visits and activation on the ground.

Where other relevant details from other non-government databases can be obtained, we will use this to validate the information on BeeBase and the NI database.

## **Study on the structure of the apiculture sector**

### **Methodology**

Approximately 50 Authorised Bee Inspectors (ABIs) are surveyed each year to obtain estimates of honey yields per colony and prices of mixed flower honey. ABIs are surveyed on bulk sales (bucket), whole sales (jars) and direct sales (jars) of honey. Honey sold in drums is not accounted for.

### **The number of beekeepers**

There are 47912 keepers in the UK. This is based on figures from BeeBase (22 November 2022).

### **The numbers of beekeepers managing more than 150 beehives**

There are 108 beekeepers that are registered on BeeBase who manage 150 beehives or more.

### **The total number of beehives managed by beekeepers with more than 150 beehives:**

In total these 108 beekeepers manage 42473 hives.

### **The total number of beekeepers in beekeeper's associations**

British Beekeepers Association: 30944

Bee Farmers' Association: 498

## **The annual national production of honey in kg in the last two calendar years preceding the notification of the apiculture programme**

2021 5,327,000 kg

2022 6,209,000 kg

## **The range of prices for multi-floral honey at the site of production**

In 2022, prices ranged from £24.74/kg to £14.00/kg. The average price across the UK was £17.03/kg

## **The range of prices for multi-floral honey in bulk at wholesalers**

In 2022, the range of prices for honey at wholesalers was £10.74 per kg to £16.50 per kg (average £10.21). Bulk sales ranged from £6.04 per kg to £14.68 per kg (average £8.67). The average price for bulk and wholesale honey was £10.55 per kg.

## **The estimated average yield in kg of honey per beehive and per year**

Yields vary according to the practices of the beekeeper and whether they are a hobbyist or a professional, commercial beekeeper.

Our latest figures for 2022 as reported by National Bee Unit bee inspectors show the average yield to be 25kg per hive for main-crop honey and 16kg for heather honey.

For a commercial bee farmer, the average yield was reported to be between 32 and 36kg per colony for all crops.

## **The estimated average production cost (fixed and variable) per kg of honey produced**

The cost of honey production is extremely variable due to the range of methods by which beekeepers take up beekeeping.

## **The number of beehives determined in the last two calendar years preceding the notification of the apiculture programme**

2020 – 260268

2021 - 272631

# Evaluation of the needs of the apiculture sector

## Healthy Bees Plan 2030

Defra and the Welsh Government have worked together with stakeholders to develop the Healthy Bees Plan 2030. The plan focusses on achieving four key outcomes:

- Effective biosecurity and good standards of husbandry to minimise pest and disease risks and so improve the sustainability of honey bee populations.
- Enhanced skills and production capability/capacity of beekeepers and bee farmers
- Sound science and evidence underpinning the actions taken to support bee health
- Increased opportunities for knowledge exchange and partnership working on bee health and wider pollinator needs.

An implementation plan has been published, detailing the actions for beekeepers, bee farmers, associations and government to work on together to achieve the outcomes in the Healthy Bees Plan 2030. Defra and the Welsh Government meet quarterly with beekeeping associations at the Bee Health Advisory Forum. This meeting enables the associations to raise areas of concern for the sector and highlight particular needs. Over the last year the meeting has discussed the threat, and actual incursions into the UK, of Asian hornet, forthcoming legislative changes, scientific articles on bee health and actions under the Healthy Bees Plan 2030.

The apiculture sector in the UK is comprised predominantly of amateur keepers.

## Apiculture Consultations

Consultations on the 2023-2025 Apiculture Programme for England were held with the Bee Health Advisory Forum. They continued to support a programme based on inspections and training. They did not want to use any of the other measures available to support beekeepers and bee farmers.

# Aims of the programme

## **Combating beehive invaders and diseases, particularly exotic pests**

A network of appointed bee inspectors and programme support will be used across the UK to inspect colonies of bees for signs of foulbrood disease, Varroa and exotic pests. In England and Wales, this service is provided by the Animal and Plant Health Agency's National Bee Unit. Inspectors will show beekeepers how to check for signs of foulbrood and monitor and treat for incidence of diseases associated with Varroosis. Beekeepers will also be shown how to check for signs of the exotic pests Small hive beetle and Tropilaelaps mite (which have not yet been detected in the UK), and to monitor their apiaries for Asian hornet. An annual target of 3,500 inspections will be adopted.

## **Technical assistance to beekeepers particularly training and education through the delivery of courses and in 1:1 tuition during colony inspections**

A comprehensive regional advisory and training programme for beekeepers including Bee Health days, Preliminary and Intermediate Beekeeping courses, lectures, field demonstrations, outreach at agricultural/trade shows and leaflets, provided by trained beekeeping extension workers and supported by beekeeping websites, such as BeeBase, will be performed across the UK. The programme will concentrate on bee disease recognition and control linked to good colony husbandry and apiary management, and awareness of exotic pests. This will involve training in good husbandry, minimising risks from introducing new colonies, resistance monitoring, Integrated Pest Management and identifying exotic pests, in particular the Asian hornet, Small hive beetle and Tropilaelaps mites. Integrated Pest Management has assumed greater importance since Varroa resistance to pyrethroids has been confirmed, and inspectors are working with associations and beekeepers to promote and develop IPM methods appropriate to UK conditions. The programme also includes optimising Varroa treatments and reducing the possibility of varroacides entering honey. A programme of 60 lectures and field demonstrations will be performed annually.

Posters, displays and handouts produced by the National Bee Unit and the Non-Native Species Secretariat (which is also part of APHA) will be made available for such events.



# Descriptions of the actions which will be carried out under the apiculture measures

Approximate spend per year (includes HMT funding and match funding from Defra):

|                                     |                 |
|-------------------------------------|-----------------|
| <b>Technical Assistance</b>         | <b>£200,000</b> |
| <b>Combatting disease and pests</b> | <b>£400,000</b> |
| <b>Total</b>                        | <b>£600,000</b> |

## Technical Assistance to Beekeepers and Beekeeping Associations:

60 training events: Comprehensive regional training programme. Lectures, field demonstrations of identification of pests and diseases including Varroa diagnosis and control. Training beekeepers to become trainers of others and to become self-sufficient in pest and disease control, thus enhancing the efficiency and production of apiculture products. Programme to be monitored nationally but arranged locally to suit need.

## Combatting beehive invaders and diseases, particularly varroosis

3,500 apiary visits: Regional colony inspections by bee inspectors. Each visit will be to examine colonies for condition, advise the beekeeper on varroa diagnosis and control, identification of exotic pests and good biosecurity practices and to monitor incidence of associated foul brood. This includes monitoring colonies for varroa resistance and training beekeepers to do the same.

## Criteria to avoid double funding

The Programme for England is delivered by a single agency (the National Bee Unit, Animal and Plant Health Agency) which is part of the UK government. The National Bee Unit does not receive any support under any other programme, including the rural development programme. Therefore, there is negligible risk of double funding. However, the Department for the Environment, Food and Rural Affairs will seek assurances from the National Bee Unit that the work undertaken under the programme is not subject to other grants or support.

The Animal and Plant Health Agency have their own internal management and audit systems to ensure the funds have been spent appropriately. In addition, there are a number of governance meetings and procedures between the Department for Environment, Food and Rural Affairs and Animal and Plant Health Agency (see section on monitoring delivery) to ensure that the measures are delivered.

## Key Performance Indicators

These figures are dependent upon the final support provided.

60 training courses, lectures and field demonstrations per annum will be delivered across the UK under the apiculture programme.

3,500 site visits per annum across the UK will be provided including advice to beekeepers on bee health and husbandry issues.

Training will be delivered to 2,500 beekeepers per annum.

Feedback from beekeepers as to the impact of these measures will be collated.

## Implementing arrangements

### **(i) contact point responsible for the management of the apiculture programmes;**

The Department for Environment, Food and Rural Affairs is responsible for the management of the apiculture programme in England. Their contact information is:

Bee Health Policy Team

Email: [BeeHealth.Info@defra.gov.uk](mailto:BeeHealth.Info@defra.gov.uk)

### **(ii) A description of the procedure for monitoring checks;**

In England, the programme is monitored by the Department for Environment, Food and Rural Affairs (Defra). The National Bee Unit (NBU), which is part of the Animal and Plant Health Agency (APHA), has an internal management agreement with the Department for Environment, Food and Rural Affairs (Defra) for the delivery of the apiculture programme, which includes the

requirement that they provide relevant information to Defra to support the claim and details of the money spent.

Service Level Agreements are in place between Defra and the Rural Payments Agency (which is the body responsible for claiming reimbursement of expenditure from the Treasury).

The monitoring checks will consist of both administrative and on-the-spot checks.

Full administrative checks will be performed on all aid applications and payment claims.

Regarding on-the-spot checks we will verify:

- (i) The correct implementation of the measures included in the apiculture programme;
- (ii) The expenditure actually incurred is at least equivalent to the financial support requested;
- (iii) Where relevant, the number of beehives declared is consistent with the number of beehives found to be kept by the beekeeper taking into account additional data provided by the beekeeper on activity during the apiculture year concerned;

5% of applicants for aid will be subject to on-the-spot checks. Those checked will be from a sample drawn from the entire population of applicants and shall include:

- (i) A number of applicants randomly selected in order to obtain a representative error rate;
- (ii) A number of applicants selected on the basis of a risk analysis based on the following criteria;
  - a. The amount of financing allocated to the beneficiaries;
  - b. The nature of the actions financed under the apiculture measures;
  - c. The conclusions of previous on-the-spot checks

**(iii) A description of the actions to be taken in case of undue payments to the beneficiaries, including the penalties**

Interest added to the amount of undue payments recovered in accordance shall be calculated in accordance with the relevant UK legislation. In case of fraud or serious negligence for which they are responsible, beneficiaries shall, in addition to repaying undue payments received and interest therein pay an amount equal to the difference between the amount initially paid and the amount they are entitled to.

**(iv) the provisions to ensure that the approved programme is publicised in the UK**

The programme will be notified to representative organisations via the Bee Health Advisory Forum. The publicity surrounding the annual Beehive Count will also explain the programme and how the money is used within England.

**(v) the actions taken to cooperate with representative organisations in the beekeeping field**

The following beekeeping associations in the UK were consulted on the programme - the British Beekeepers' Association (BBKA); the Bee Farmers' Association (BFA); the Welsh Beekeepers' Association (WBKA).

The Department for Environment, Food and Rural Affairs (Defra) and the Welsh Government meet with members of the British Beekeepers' Association (BBKA), the Bee Farmers' Association (BFA) and the Welsh Beekeepers' Association (WBKA), quarterly at the Bee Health Advisory Forum to discuss bee health issues and the needs of the beekeeping sector.

**(vi) a description of the method used to evaluate the results of the measures of the apiculture programme for the apiculture sector of the Member State concerned.**

The programme will be evaluated annually by the Department for Environment, Food and Rural Affairs (Defra) and the views on the effectiveness of the programme will be sought from the Bee Health Advisory Forum which comprises Government representatives and beekeeping stakeholders.

Results of the programme will be evaluated annually according to the KPIs provided.

The number of activities under the following will be collated and published on BeeBase which covers;

- Training courses, lectures and field demonstrations
- Site visits
- The number of beekeepers trained