



### **SBA – Dundee University Research Collaboration: Overwinter Survey: April 2016**

We wish to continue the annual surveys of overwinter losses that we began in 2012 and report back to the membership when all the data for 2015-16 is analysed. In addition, an overall analysis will be performed on data produced over all 5 years (eg. geographical location, forage availability and reported Varroa load) and general regional variations and emerging trends (if any) over this period. This survey will be supplemented by a honey yield survey at the end of the season and we wish as much data from the same apiaries as possible.

Your help will be greatly appreciated as the more returns that we have the more reliable the data will be. Previous analysis by professional geographers at Dundee, using data from years 1-3, indicated that by mapping Scottish colony losses by actual geographical distribution indicated a correlation of colony losses with two stressors. The first was increased rainfall (from the average for each area) and secondly, intensive land use. We will deliver the full 5 years data to the geographers to provide a more complete assessment of these stressors of honeybees in Scotland. In addition, given the ban on the three major neonicotinoids (for use on bee visited crops) in December 2013, we will be able to compare colony overwintering loss rates before (3 years; 2011-2014) and after (2 years; 2014-2016) their restriction. Has there been any benefit to Scottish honeybees, or have their use been replaced by more toxic alternatives?

If you have failed colonies, please freeze a sample of 30 bees and indicate this on the form provided. If you have a healthy colony at the same apiary, please also freeze 30 bees from one of these colonies (to serve as a control). Once we know how many samples are available, we will collect them to screen for the presence of *Nosema ceranae*. It is not yet clear if this new parasite is a threat to honeybees in Scotland.

All data will be held in strictest confidence and no personal details released. Any use of data will not bear identification unless with your permission. We may wish to follow up some data so contact details are requested. Full postal code information is important for accurate geographical analysis of final data.

**The completed 1 page form should be returned to the address below:**

**Dr C N Connolly,  
Medical Research Institute (Division of Neuroscience,  
MAIL BOX 6,  
University of Dundee, DD1 9SY.**

**Or if electronic document to [c.n.connolly@dundee.ac.uk](mailto:c.n.connolly@dundee.ac.uk)**

**\*\* MARK AS "2016 Survey"**

<b>NAME:</b>	
<b>Contact details:</b> Email, address or tel. No.	
<b>Full apiary post code of apiary*</b>	

\*Please use your main apiary (even if taken to heather for a while)

**1. Please record the number of colonies for the apiary in the boxes below.**

Number of colonies November 2015	Number of surviving colonies April/May 2016	How many surviving colonies are very weak * April/May 2016

\*colonies that may dwindle and die or have to be united; if they survive are unlikely to be productive in the coming season.

**2. Reasons for losses (tick, and where known, state number of colonies for each):**

No queen/brood (+age of queen)	Starvation	Disease (state which)	Varroa	Unknown/Other

**Further information on losses:**

**3. Did you freeze samples of 30 bees from failed colonies: YES / NO**

\*delete or circle as required

**4. Please mark below to record Varroa mite load for apiary.**

Varroa mite load for apiary 2015	
Heavy (problem)	
Medium (controlled)	
Light (no treatment needed)	
None	
Don't know	

**5. What is the predominant habitat for your apiary? (Tick all that apply).**

Type of forage	Crop	Diversity of forage
Unmanaged, wild	OSR	Excellent
Commercial crop	Maize	Reasonable
Garden	Soft fruit	Poor
Local council verges/trees	Potatoes	Very poor
Taken to heather	Wildflower field margins	Don't know

**Comments on land use (Forage or pesticide use):**

**Further information for those interested:**

1. Please provide your full postcode as this will allow a fine scale assessment of exposure risk (to weather, disease, crops and pesticides). This post code will never be released. All data will be merged by region or similarity in landscape to help identify potential risks.
2. This is a simple measure of overall winter survival rates. Including those that would fail without your help provides additional information.

We need to know how good the forage is for your bees as this is a major risk. A poor diet can make all animals weak and vulnerable to other things, such as disease, weather or pesticides. There are reports that bees are healthier if they benefit from the diversity provided by a natural or garden habitat. Therefore, your overall assessment of the quality of forage would be very helpful. Yet large crops can provide plenty of nectar or pollen for short periods. Therefore, particular combinations may be more, or less, beneficial to bees. Varroa, and the viruses it transmits is likely to be important to the condition of colonies. Although surveys from previous years have shown that Varroa load alone did not correlate with colony losses, it may still play a role in colony losses under certain circumstances.

We have provided a word and pdf format of the form so that you can choose which is more convenient for you. Again, you may either email or post the form back. Perhaps local associations could coordinate the posting of forms to save on postage?