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A Survey of SBA members for 2010

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Introduction

In May this year we were approached by Norman Carreck of Sussex University and the British Beekeepers' Association, to ask whether it would be feasible to conduct a survey of SBA members in 2010 as a follow-up to the surveys conducted in 2006 and 2008. On approaching the SBA Executive, we were given their agreement to run and fund such a survey.

This would complement information being collected through the National Bee Husbandry Survey 2010 in England and Wales, incorporating questions from the COLOSS project (<http://www.coloss.org/>). The COLOSS project aims to collect comparable data on honey bee colony losses from countries in Europe and elsewhere, to provide a wider picture of colony losses and to inform management measures intended to prevent large scale losses. A COLOSS questionnaire is available for use, comprising “essential” and “optional” questions for incorporating in national surveys.

After a long cold spring, the survey went out early in June with a return date of June 26th, determined by a deadline for returning collated data to the COLOSS co-ordinators.

Comparison with previous surveys

The surveys in 2006 and 2008 were wide ranging surveys, the results of which provided an overview of recent Scottish beekeeping experience, particularly in relation to experience of the presence of *Varroa destructor* and of its impact on colony losses. These were published in “*The Scottish Beekeeper*” and elsewhere, and on the SBA Web site (at <http://www.scottishbeekeepers.org.uk>).

The 2006 survey used a stratified approach and quota sampling. A sample of 100, approximately 10% of the membership, stratified by SBA area, was selected by SBA Area Representatives, using Local Association records and/or their own knowledge of beekeepers within their area. This achieved a high response rate of 77%, but as it was not a random sample the results might well have suffered from selection bias and therefore not have been truly representative of all Scottish beekeepers. Also, a small part of the target population could not be included using this technique, i.e., those living in the Outer Hebrides, Orkney and Shetland, where there was no Local Association by which to identify candidates to participate. The 2008 survey was designed to address these shortcomings and to collect further information which might be used to identify statistically significant risk factors for sudden colony collapse. A revised and extended questionnaire was prepared and tested by the organisers in a small-scale pilot survey, before production of the final version. This included further questions relating to unusual colony losses and also on possible environmental hazards to, and possible stressors of, honeybees. It was also then possible to use the SBA membership records for sampling purposes, as permission to use the records had by then been obtained. It was decided to use a slightly

larger sample of approximately 120 members, to include the Inner and Outer Hebrides, Orkney and Shetland. This slightly larger sample size would also allow for the fact that some SBA members who might become survey participants do not keep bees themselves. Unfortunately the response rate for the 2008 survey was disappointingly low at 42%, as only 50 completed questionnaires were received from 119 sent out.

For the 2010 survey it was decided to use a similar sampling design to that of the 2008 survey using stratified random sampling, divided by area, but to try to obtain a better response by the use of several strategies. These strategies were 1) using a larger sample size, to take some account of the poor response rate of 2008; 2) offering an incentive to complete and return the questionnaire. A £50 gift voucher was kindly supplied by Thornes' of Wragby and Newburgh, the suppliers of beekeeping equipment, for which participants in the SBA survey returning their questionnaire by the required date would be entered into a draw, the winner to be randomly selected; 3) use of a shorter and simpler questionnaire for ease and speed of response; and 4) numbering of questionnaires, so that in the event of a low response rate the SBA membership convener could issue a reminder to SBA members who had not yet returned their questionnaire. This last strategy also means that there would be no difficulty in analysing the survey responses by area, since each numbered questionnaire could be located within an area in Scotland, without the identity of the respondent being known to those analysing the data. A sample size of 200 was decided on, which is 18% of the 1111 members available for sampling after excluding bee farmers and those outside of Scotland.

Bee Farmers

It was also decided that larger scale operators should be sampled separately from the SBA members. Most but not all of these belong to the Bee Farmers Association (BFA). A list of bee farmers known to us in Scotland was constructed, with the help of Margaret Thomas of the BFA, with a view to sampling all of these. Some were also members of the SBA, and with the help of Phil McAnespie, SBA membership convener, most of these people were excluded from the list used to select the SBA sample.

A slightly shorter questionnaire and a separate covering letter were produced for the bee farmers. Both questionnaires incorporated most of the "essential" questions from the COLOSS survey in some form, and also some of the "optional" ones, as well as a few others. The focus was on losses and aspects of bee husbandry, including management of *Varroa*.

Progress so far

As at the date of writing this note (June 28th) we have received 86 responses in all, of which 80 are responses to the 200 questionnaires sent to SBA members, the remainder being from bee farmers. It is particularly important after the very tough year that beekeeping here has gone through, that we get as good evidence as possible of the health of beekeeping in Scotland, since beekeepers have had to contend with the worst weather conditions for many years, and also serious outbreaks of foul-brood disease as well as the continuing problems associated with *Varroa*. By conforming with most of the requirements of the COLOSS survey, we are also hoping that we shall now be able to make meaningful comparisons of how beekeeping in Scotland is faring relative to other countries in Europe and also worldwide.

As on previous occasions, it is planned to make the results of this survey known to members of the SBA through "*The Scottish Beekeeper*" and the SBA Web site. If interesting

conclusions emerge we shall also aim to publish these more widely in the bee research literature. Our results will also be made available to those running the COLOSS project, and will, we hope, be incorporated in their publications.