

National Bee Unit Survey to assess health status of apiaries in England and Wales – 2009 and 2010 (*The Random Apiary Survey*)

Apis mellifera is affected by a variety of pests and diseases (P&Ds), and the incidence of statutory notifiable diseases such as European foul brood and American foul brood are closely monitored by the NBU. However, there is a need to establish a clearer picture of the true prevalence and distribution of the wider range of P&Ds that affect honey bee colonies in England and Wales. Only when we have these data can we make informed decisions on the future priorities for action to control P&Ds in each region. For these reasons, the NBU is undertaking a two-year survey to achieve a random, statistically robust analysis of apiary health during 2009 and 2010. The results of this *Random Apiary Survey* will provide the basis for refining statutory inspections and surveillance programmes from 2011 onwards.

The survey has been designed to detect the presence of P&Ds in a representative sample of UK apiaries. The number of apiaries that need to be in the survey to make sure that it is sufficiently thorough for our purposes has been agreed with Fera's statisticians, and will allow the detection of even very low P&D incidence with a high level of confidence (99% probability of detecting a single infected colony in every 1,000 colonies sampled). During the course of the survey, apiaries will be selected on a random basis from BeeBase, the NBU's managed online database for UK beekeepers, with stratification to ensure adequate regional coverage and to take account of apiary size. During the second year, sampling will also seek to include a random sample of new beekeepers identified and added to BeeBase during the first year.

The aim is to sample a total of 5,000 apiaries over 2 years. Twenty five thousand samples of bees will be collected and analysed at Fera, for a full range of pests and diseases affecting honey bees, with the exception of *Varroa*. This will be noted as part of the general apiary inspection to be completed in parallel and reported as part of the survey. A survey of this magnitude has not been attempted anywhere else in the world, so data handling and timely presentation of results will be a challenge. However, Fera hope to publish the full results upon completion of the analysis in Summer 2011.

A summary of the procedures involved in the Random Apiary survey

