

Using IPM for Varroa Control

Integrated Pest Management is described as a combination of methods used at different times to control a pest or disease to a level where it does no economical harm. This sheet is to help in the creation of a programme to control varroa mite levels within a honeybee colony.

Why should I consider using this procedure?

Since the initial report of varroa mites in 1992 beekeepers have used pyrethroids such as the proprietary medicines Bayvarol and Apistan to control this pest. With the discovery of pyrethroid resistant varroa mites in various parts of the U.K. these products have become ineffective in these areas. Many treatment and control measures that are currently available are not as effective.

How does it work?

Simply mite levels are kept to a low number, where they cause no significant harm to a bee colony. Using different control measures at relevant times of the year does this.

How do I know what levels of mites cause harm?

This is a variable quantity depending on whether virus or acarine disease is present in a colony. As a safe level, for all honey producing colonies, mites should be kept below a total population of 1,000 per colony. In the case of small colonies and nuclei this figure must be set proportionately lower.

How can I check mite populations?

Either forking out drone brood or measuring natural mite drop from a colony carries this out. Details are to be found in the CSL/DEFRA leaflet '*Managing Varroa*', and the FAQ sheet 12 '*Estimating Varroa Populations*'.

How can I build a plan?

Overleaf is a suggestion. The plan shown relates to actions that are suitable depending on the daily natural mite drop and the time of year. In any integrated control plan knowing the level of mites in a colony is essential so that appropriate action can be taken. Monitoring say three or four times a year is essential. If mite levels in your area are high you should check mite levels at least four times a year. If colonies are dying or re-infestation is occurring you should check more often especially in August, September and October. If levels are low combining the check in June and August may be viable.

Though this plan appears complicated the probable course of action, unless there is infestation from another source, is highlighted in bold print. Just check mite levels and take appropriate action.

Knowledge of various control methods is essential. These are included in the Fera/NBU/Defra leaflet '*Managing Varroa*' and various FAQ sheets.

National Bee Unit
Food and Environment Research Agency
Sand Hutton, York. YO41 1 LZ
Telephone 01 904 462 510 e mail nbu@fera.gsi.gov.uk
NBU Web Site: www.nationalbeeunit.com

© Crown copyright. This sheet, excluding the logo, may be reproduced free of charge provide that it is reproduced accurately and not used in a misleading way. The material must be acknowledged.

Integrated Varroa Management Flow Chart

Illustrating different methods, dependant on mite levels and the time of year, as used in many European Countries.

Mite levels given relate to the varroa model available at the National Bee Unit.

Avoid using the same treatment twice in a season.

* Indicates products that are not approved for use in the U.K.

No mention of alternative products should be taken as an endorsement or a recommendation to treat. The method is referred to as it is commonly used in Europe.

