

# UK bees threatened by the spread of resistant varroa

## Beekeepers urged to rotate their anti-varroa treatments

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Beekeepers in many parts of Britain have seen the emergence of a new threat to their bees this year. The varroa mite, a parasite that can kill honeybee colonies, has become resistant to pyrethroids, the class of active ingredients in the most commonly-used treatments. Resistant mites have been identified in hotspots as far apart as Cornwall, Kent, Durham and Pembrokeshire, and the widespread nature of these outbreaks suggests that resistant varroa mites will spread eventually throughout the whole country.

Beekeepers are being urged to rotate their treatments to keep the varroa mite under control and prevent a repeat of the decimation of bee populations that occurred in 1995/6.

“The situation is serious but can be kept under control by small and simple changes to beekeeping practices,” said Dr Max Watkins, Director of Vita-Europe Ltd.

“Beekeepers should start alternating their varroa control treatments. They can continue to use products containing pyrethroids such as Apistan, but should alternate these with non-pyrethroid products like Apiguard, so that the build-up of resistance is kept in check.”

The Varroa mite (*Varroa destructor*) is a parasite of the honeybee (*Apis mellifera*) and has been spreading and decimating bee colonies across the globe for the past few decades. It kills bee colonies by weakening them and making them susceptible to viruses and other infections, but it in no way affects honey quality.

In 1992, varroa was first observed in the UK and in 1995 it took a huge toll with as many as 70% of bee colonies being wiped out in the worst-hit areas. Progressive beekeepers quickly learned to apply anti-varroa treatments and the situation was largely kept under control.

Inevitably, however, natural selection enabled varroa to develop resistance to specific treatments and it was only a matter of time until the resistant mites would themselves pose a risk. Unfortunately, the population increase of resistant mites seems to have been accelerated because a few beekeepers have failed to follow instructions about the correct use of treatments. As a result resistance has become an issue much sooner than it would have normally.

“The emergence of resistant varroa in the UK differs markedly from the pattern in mainland Europe,” explained Dr Watkins. “Vita-Europe’s research shows that in Italy, for example, resistance was first identified in Sicily where some Italian beekeepers over-winter their bees. Resistance then spread the length of the country within about 18 months, following the migratory route of beekeepers. But in Britain, research by the National Bee Unit shows that resistance is appearing in apparently

unrelated hotspots across the country. Only some of the hotspots can be positively related to hive movements.”

Max Watkins continued: “There is also another significant difference: in continental Europe the resistance factor of the resistant varroa is consistently high – about 400. But in Britain, the resistance factor is constantly much lower. This adds weight to the idea that perhaps some of the UK outbreaks are spontaneous and not linked to each other. And if that is the case, we can expect to see the spread of resistant varroa mites right across the country in a relatively short time. Beekeepers should therefore not delay in alternating their anti-varroa treatments.”

## **About Vita (Europe) Ltd**

Vita (Europe) Ltd is a mite control and honeybee health specialist based in the UK and operating across the globe. Vita researches, develops, manufactures and markets acaricide products and is the world’s dominant supplier of honeybee health products to the honey and pollination industries.

In the development of new and ecologically-sensitive approaches to mite pest control, Vita collaborates with universities including Cardiff, Milan, Udine, and institutes including the *Tierhygienisches Institut* (Institute of Animal Health) in Freiburg, Germany and the UK Central Science Laboratory. Vita’s innovative research and development work has received support from the UK Government.

Vita’s products are available through a network of 40 distributors in 47 countries and have been registered by more than 60 veterinary authorities. Its product range includes anti-varroa acaricides (Apistan® and Apiguard®), wax moth controls, and foulbrood diagnostic kits. All products are designed as elements of Integrated Pest Management programmes to inhibit the build-up of resistance and wherever possible to use natural compounds and biological controls that are benign to all but the target pests.

As a result of its primary research of natural control agents, Vita is currently engaged in new projects exploring mite control in the agricultural, veterinary, and horticultural industries as well as public health and human allergen control.

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