



National Bee Unit Southern Region

Integrated Varroa Management 3.

Varroa Treatment Thresholds

Treatment thresholds are variable according to where you live in the world, climate, size of colony, the amount of brood, drone brood, number of brood cycles, etc., Collapse levels can vary considerably. Research has shown that colonies can collapse with 1,000 mites yet others survive with far greater numbers. Current understanding shows that these differences are invariably caused by the presence of other factors, often being the presence of other bee disease such as various virus conditions or acarine *acarapis woodi* a tracheal mite. These variations and associated conditions are regularly seen in Southern England.

The key to successful varroa mite control is knowing the mite population level within a colony and keeping it below the level at which damage may occur .

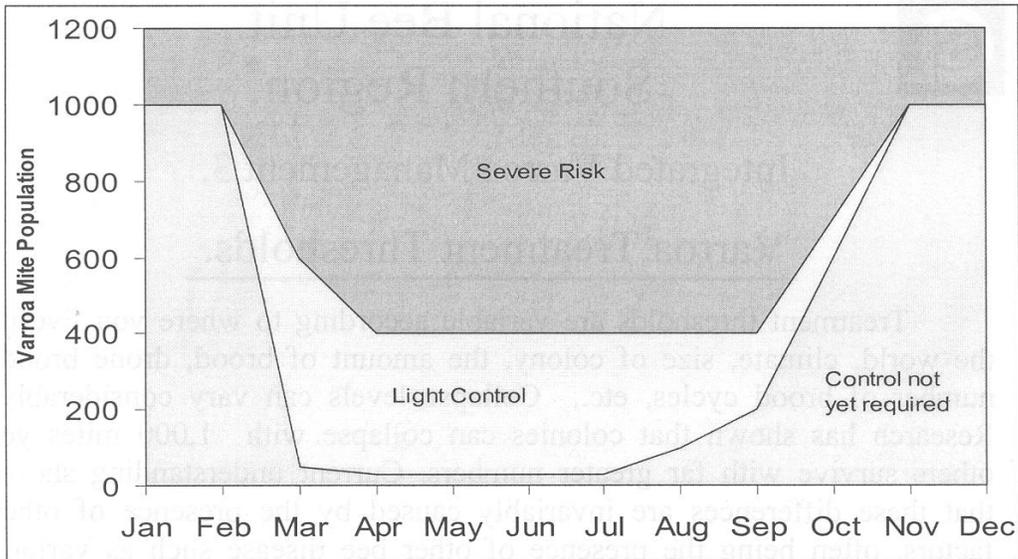
Set out overleaf are two graphs which have been drawn up to reflect a typical honey production colony in Southern England. It presumes a long period rearing brood and a drone brood level of 5%. The graphs show mite levels that are currently considered acceptable within a colony. These levels are set lower than previously as a result of further research data being available. Many beekeepers may consider the levels set are too low but they will keep colonies safe and productive.

Many beekeepers report that colonies that have given high yields of honey often succumb to varroa in the following winter. The reason for this is a rapid build up of varroa mites due to more brood being available within the colony and more brood cycles occurring.. The beekeeper fails to notice the problem and the colony collapses. It is therefore a key element in any varroa control system to be aware of mite levels in order that appropriate action can be taken at the right time.

Just because a colony appears to be healthy and strong does not mean that it is not at risk from varroa infestation.

To assist beekeepers with the timing of control for varroa mites a computer model is available for their use on the Central Science Laboratory website. There is no charge and it is easy to use. It is available at www.nationalbeeunit.com _

Graph 1



The upper band, marked 'Severe Risk' indicates where the colony could be at severe risk requiring effective varroa control.

The central band, is where a suitable non-chemical control should be taken to reduce population levels to the 'No Control' band.

The lower band, marked 'No Control' is the level of mites which, without infestation from other sources, will require no controls to be applied before the following spring.

Graph 2

