

European co-operation on varroa

EUROPEAN CO-OPERATION ON VARROA

ON THE EUROPEAN PLANE WORK IS ONGOING IN THE SEARCH FOR IMPROVED VARROA TREATMENT

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The use of pesticides for varroa treatment in Europe creates great problems. A European network has therefore been formed, to support efforts for an intergrated pesticide-free approach to treatment.

PROBLEMS OF RESISTANCE

Varroa treatment using pesticides has, in the latter years, brought increasing problems in Europe. There is, as a result, a very great risk of residual traces being present in beekeeping products.

The varroa mite has, in several locations, developed a resistance towards the pyrethroid fluvinat, which is an ingredient of the product Apistan. Resistance has developed in Spain, Italy, France, Austria, Switzerland, Slovakia and Belgium. In the Autumn of 1998 the presence of resistant mites in Finland was registered. Seppo Korpela from Finland has received test material from many beekeepers and at present mites from three apiaries have been found that are much less sensitive towards fluvinat than normal. Accounts from the three apiaries in question could indicate that the resistant mites were imported with queens from Italy. These mites can already now have spread to many apiaries in Finland. Since the use of Apistan is widespread in Finland, it can easily result in the effectiveness of this form of treatment being reduced drastically. Laboratory tests have also shown that mites that are resistant towards fluvinat can, at the same time, develop a resistance towards other pyretroids which are used in varroa treatment. A cross resistance towards flu-methrin, which is the active compound in Bavoral, has been demonstrated. Flumethrin is also the active compound in Bayticol. Bayticol is used, surprisingly, by a number of Danish beekeepers, although it is difficult to dose correctly. Due especially to resistance problems the pyretroids are not expected to have any future in treating varroa in Europe.

THE EUROPEAN NETWORK

Interest in varroa treatment without the use of pesticides in Europe is, therefore, on the increase. The EU supports a joint project to coordinate an intergrated varroa treatment approach, without the use of pesticides. An intergrated treatment means a treatment which combines different methods, and in this case also pesticide free methods. Within this network are researchers from Denmark, England, Finland, France, Holland, Italy, Switzerland, Spain, Sweden and Germany. Ingemar Fries from Sweden is the group coordinator.

The network's task is to exchange experience and results in treatment methods, and to concentrate on the research areas to be developed, in order to improve beekeepers opportunities for carrying out a pesticide free range of treatments. They shall also work out guidelines for a harmonisation of research, so that the results can easily be interpreted and tested by others. In the Nordic region a network has also been set up, which also includes Norway and Lithuania (as well as Denmark, Sweden and Finland) and the delegates are both researchers and consultants. Ingemar Fries is also the coordinator for this group.

OXALIC ACID

It is widely known that oxalic acid is toxic. This toxicity is the reason that the acid is not at present on the "positive list". It is also known that there are not problematic traces of the acid in honey after an Autumn spraying. Delegates in the European Network are in agreement that they will seek to have oxalic acid put on the positive list, quickly. Before this can happen further honey analysis shall take place to find traces of residue, as well as furthest examining its toxicity towards humans.

ESSENTIAL OILS

A number of essential oils are on "the positive list" and may, therefore, be used in varroa treatment. In Switzerland, for example, treatment strategies are worked out in which such oils are used. The evaporation of essential oils often call for a prolonged period of warm weather, in the region of three weeks warmth, (which pretty much rules out its use in Ireland)

TECHNICAL BEEKEEPING TREATMENTS

Research is ongoing, in Germany and elsewhere, in further developing various forms of queen caging. Apart from the traditional forms work is ongoing on a second variant whereby all brood frames are removed, and the queen and bees are moved to brood-free frames plus a frame with drone brood. When the last mentioned form has been used, which is still undergoing trials, there have been several cases of problems relating to the occurrence of chalk brood in the drone frames.

HARMONISATION

A working group within the EU network has completed a draft suggesting ground rules for the evaluation of treatment programmes. It stresses that it is very important that it is, of course, that it only concerns treatment forms that will have an influence on mite mortality. The wax frames that the bees are on should not be infected with pesticides. Wax, therefore, should not originate from colonies which have earlier been treated with pesticides, nor should it originate from an unknown wax source. Furthermore, these trials should be carried out in several localities, and should be tested over two years. It is important that the results from research and testing reach the beekeeper quickly. However, there are several instances where results have been published, before a final conclusion on their effectiveness and possible side effects have been reached. There is therefore, a broad agreement amongst the European Network that a thorough verification of results be carried out before publication and its use in advisory work.