WUR

Bees@wur is going to test varroa-gate together with Dutch beekeepers

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Together with Dutch beekeepers Bees@wur of Wageningen UR are starting research on the efficacy and safety of a new application for the control of varroa mites in honeybee colonies. With this research we contribute to the health of bee colonies in Europe. The research is aiming to test the "varroa-gate" of Bayer HealthCare Animal Health, the company that developed the gate and is intending to register it as a veterinary medicine in Europe. The research is part of the legally required research for the registration of a veterinary medicine in Europe and financed by Bayer.

For registration in Europe field studies are needed

Before a chemical or product can be registered as a veterinary medicine in Europe or member states, an extensive study file with several studies has to be provided, containing studies that show that the product is effective, that it is safe and does not cause harmful residues (for instance in honey). These field tests are simultaneously performed at different apiaries in a number of European countries. Bees@wur is going to perform the Dutch share in the field testing together with a number of Dutch beekeepers.

And after that?

Depending on how fast all necessary data in the dossier are available the registration in Europe or in member states can be requested. The demands for a registration dossier are however extensive and very rigorous, so before the gate will be available for beekeepers still a few years may pass by.

Aim and mode of action of varroa-gate

During a workshop on Bee Health organized by the European Commission on 7th of April 2014 in Brussels, it was clearly stated that one of the weaknesses of European Beekeeping was the lack of proper effective and registered medicines, especially against varroosis. Several medicines from the past have lost their effectiveness, and although varroa control is possible with 'soft' acaricides as oxalic acid, formic acid and thymol, this often fails to be effective. In cases in which the 'soft' medicine does not control varroa effectively, remaining mites can build up a population quickly in the colony, and even re-infest colonies that were effectively treated.

This re-infestation was the reason for Bayer HealthCare Animal Health to start some years ago with the development and testing of 'Varroa-gate': a gate in the hive entrance that allows bees to enter and leave the hive, but that would eliminate a mite entering or leaving

on the back of a bee due to a low dose of an acaricide.

The aim is to prevent mites re-entering clean colonies as well as to prevent mites leaving alive from infested hives. About earlier testing of prototypes of the Varroa-gate I reported in the former issue of Bijennieuws.

The idea of the Varroa-gate is to continue working as much as possible with these 'soft' acaricides, but to avoid and compensate their weaknesses by applying in addition a tiny amount of a chemical acaricide in the Varroa-gate, and avoiding the development of resistance.

Through the low dosage in the gate and the fact that only the forager bees are in contact with it, residues in the hive are expected to be negligible. Moreover, by using a different chemical in consecutive years resistance development will be avoided. The development of the varroa-gate is a follow-up of a range of in-hive applications that have been developed by Bayer HealthCare Animal Health since the varroa mite entered Europe (c.f. Perizin, Bayvarol, Apistan).