Preferences of Varroa destructor in Controlling Brood Raised on Young and Old Bee Combs

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Continuous reduction in the population of pollinators has motivated scientists and scholars to search for new research methods of effectiveness determined largely by proper selection of the material analysed. One of the most dangerous bee diseases around the world is varroosis, caused by the Varroa destructor mite. As bee families grow weaker because of this pathogen, the condition of bees deteriorates, and they become susceptible to other diseases. The aim of the work was to develop a more effective method of diagnosing varroosis, consisting of an examination of the brood, in which bees go through all of their developmental stages from an egg to an adult insect. For this purpose, in the period of two years, I examined the degree of infestation of brood in a situation, in which other parasite infestation level indicators suggested no significant threat. I conducted a thorough analysis of the total 7774 cells containing brood from selected bee families of the Apis mellifera species. It was shown that the necessity of constant monitoring of the level of family infestation with Varroa destructor may require clinical tests of brood as the only material, in which the parasite preys at the initial infestation stage. It was also noticed that among two types of brood: light and dark, Varroa destructor prefers darker and older combs with smaller cells and intensive aroma. This observation constitutes a valuable recommendation for beekeepers with regard to the type of material to be subjected to laboratory analysis in order to minimize damage to the bee family. Selection of the appropriate comb for diagnostic tests, and then combating the disease by removing selected old broom will bring ecological, as well as economic benefits.

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