

Residues of certain varroacides in the honeybee products

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Five honey bee products (honey, beeswax, stored pollen, royal jelly and propolis) produced by the treated honeybee colonies subjected to chemical analysis for determination the residues level of the applied acaricides (Oxalic acid, Apilife var, Lactic acid, Mitac, Perizin, Apistan, Mavrik and Formic acid) with recommended dose, half and quarter recommended dose to detecting only the level of contamination. Results showed that among the different tested acaricides, fluvalinate was the highest residue recorded in the products of the treated colonies, followed by coumaphos (a.i. of Perizin), amitraz (a.i. of Mitac) and thymol (the main content of Apilife Var). While the residues of the tested organic acid were detected mostly in normal level and in one or two products of the treated colonies. The acaricides levels found in the different tested products after treatment with the applied acaricides decrease in the following order: propolis > stored pollen > beeswax! > honey. Also Results showed that with increasing the applied dosage, residues levels in the products of the treated colonies increased to some extent excess the maximum residual limits permitted internationally, therefore more attention must be paid for decreasing the contamination level in the bees' products, either through collection these products from supers only, or through looking for an alternative program for controlling Varroa mite. Also to limit contamination of bee products, the use of synthetic, lipophilic varroacides in colonies should be minimized, and the use of organic acids or essential oils increased. It is also necessary to change the practice of recycling wax into foundation. Old combs that are contaminated should not be used for the production of foundation. Instead, foundation should be made from virgin wax and wax capping. With an increased production of virgin wax in colonies, an efficient acaricide application system, and a system to separate contaminated combs from the wax recycling process.