

SUMMER TREATMENT FOR VARROA MITES DEPENDING ON THE INFESTATION – TREAT IF NECESSARY

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Abstract

In many countries in Central and Northern Europe, strategies for controlling *Varroa destructor* involve two summer treatments, mainly using formic acid. A key advantage is that the risk of re-infestation or an initial treatment with poor effectiveness is offset by the second treatment. However, some beekeepers wish to reduce the number of summer treatments. Yet, if these are simply omitted without any other measures, this leads to a high risk of colony losses. Here we propose an alternative for all beekeepers who wish to treat their bees only when necessary. Based on the number of *varroa* mites found on the hive floors, the decision to treat or not is made for each colony.

Field trials conducted over four years with several hundred colonies aimed to develop a method for reducing the number of summer treatments without the risk of increased colony losses. Between July and September, we defined three observation windows and infestation thresholds. If these thresholds were exceeded, formic acid treatments were applied. The thresholds we defined—5 *Varroa*/day in July, 2 *Varroa*/day in August and September—made it possible to dispense with nearly half of the formic acid treatments. Winter colony losses ranged from 2.7% to 8.9%, which were lower than the losses recorded during the same years in the general survey on losses conducted in Switzerland (14.9% to 18.9%).

Reducing the number of summer treatments is therefore possible, but one must nevertheless be prepared to invest more time in *Varroa* counting and to manage colonies on an individual basis. This is why this control strategy is primarily aimed at beekeepers with a small or medium-sized apiary who are equipped and experienced in measuring the natural mite fall.