



VERIFICATION TESTING FOR INFESTATION OF VARROA AND TRACHEAL MITES

INTRODUCTION:

• **Testing is a must! Do not rely on your neighbour, or government official to tell you what situation is or what to do. You must know what mite infestation levels you have in your hives to treat successfully and not waste money on unsuccessful treatments.**

• **Only natural drop tests before each treatment** and at the same time of the year (in moderate climate August and April) will tell you the true situation in the hive as mite levels directly effect the winter and summer brood and bee stock.

• **The results of testing at other times, by other methods, randomly and after the treatment, are irrelevant.**

• **Tests after the treatment;** in many instances, the natural drop after August treatment was higher than before the treatment. Why is this? It is because mites exposed to the acid continue to die in great numbers long after the treatment has ended. They become sick, sterile and in 80% will not reproduce; their offspring's and many adults die in cells. Also because summer mites are just dying off in late September and October? **The only true measure of August treatment success is how many mites are in the same hive the following spring.**

Testing in the spring (April) and in late August is a must when controlling mites with Formic acid and MiteGone® Method. In commercial operations, a random sampling is required to get a reasonable indication of infestation levels. The tests should be completed before the application of treatment to the entire operation.

HOW MANY HIVES TO TEST AND HOW:

In most commercial operations **where hives are mixed** during pollination or transport in the same area **any twenty hives;** randomly picked (1 or 2 from each yard) from such an area and brought into the test yard will give you a good indication of mite levels in your operation. The same hives should be tested in the late summer and the spring.

Test hives shod have approximately 30,000 bees, 10 frames of bees with 3-5 frames of brood in two standard deep boxes or the equivalent in shallow or dadant box combinations.

Where apiary populations are not mixed, test 5% of your hives, or a minimum of four hives per yard.

If you have less than 20 hives, test them all.

Varroa mites are becoming resistant to all man made pesticides; Fluvalinate, Amitras and Coumaphos. We recommend that you test for resistance. Pesticides induced drops are becoming unreliable. **The natural drop of mites for tree to five-days interpolated into 24 hours will give you a reasonable indication of the situation.**

Tracheal mites can be kept below the negligible level using one 21-day prolonged Formic acid treatment per year. We recommend taking a sample of 30 bees in April from each test hive and sending it as a bulk sample for slice testing. Ask the lab; to slice 50 randomly selected bees from the complete sample. If no Tracheal mites are found, discontinue testing. No action is necessary. If mites are found, proceed according to generally recommended test standards.

EVEN WITH A ZERO INFESTATION LEVEL, A 21-DAY TREATMENT MUST BE USED IN THE SPRING and LATE SUMMER TO ELIMINATE THE TRACHEAL MITE AND TO KEEP MITE LEVELS BELOW THE THRESHOLD OF 8 – 10 MITES NATURAL DROP PREVENTING DAMAGE TO WINTER BEES AND ENSURING SUCCESSFULL WINTERING.

CONCLUSION: After 15 years of using formic acid and testing, we found that:
It is possible to virtually eliminate the mites; (see 2010 test results.)

<http://www.mitegone.com/media.asp#2010mites>