



Varroa Treatment Decision Making



TEST (before and after treatment)

↓
Alcohol wash
Sugar shake
CO2

0% >3% >5% >10%

Ideal/nil mild moderate severe

↓
Natural, organic treatment such as
formic acid dribble or mats
oxalic acid (vapour and strips)

ApiLifeVAR (18-35°C), Thymovar (12-30°C)

Brood breaks - queen cages of various designs

TREAT ANYWAY
(too cold to test, urgent)

↓
Oxalic vapour

↓
•Formic Pro (organic, short treatment time, potentially hazardous to operator and bees, may kill weak queen and bees)

•Apistan or Bayvarol (mites may be resistant, both synthetic pyrethroids so alternate with other treatment)

•Apivar (95%) or Apitraz (98%) (same active ingredient so alternate with other treatment) Apivar has longer shelf life

IGNORE OR DELAY

- ↓
- Deterioration in queen/worker bee health/hive health
 - Diseases such as DWV and PMS
 - Abandonment of hive
 - Colony collapse



Parasitic Mite Syndrome PMS - “The End is Near”

Rapid decline of the adult population

Increased supersedure

Lack of eggs and developing larvae

Unhealthy, spotty brood pattern

Visible mites, in open brood and on bees

Bees seen crawling near entrance to hive

Larvae do not rope, slumped and possibly discoloured



Deformed Wing Virus

“Most obvious effect of Varroa parasitism is a honey bee with deformed wings” (Lester)

Crippled wings mean she will never fly

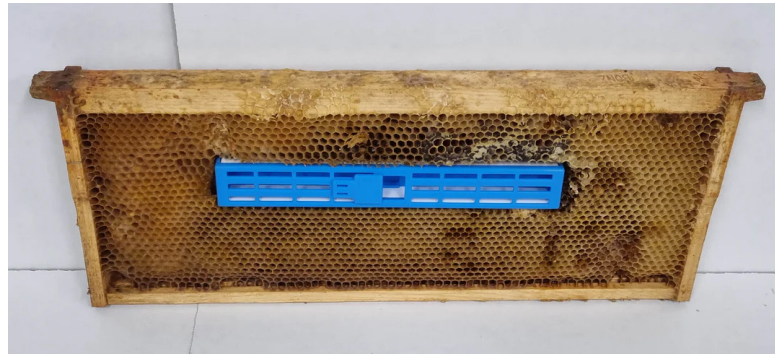
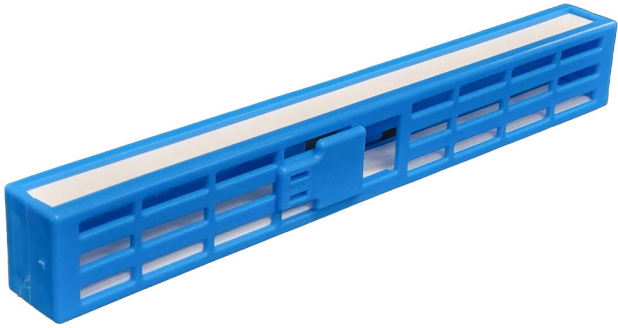
Shortened abdomen

Frequently less hairy than healthy bees

Looks sick

Mites act as a vector of the virus

Fat body feeding of the mites helps suppress the bees immune system



TEST (before and after treatment)

Best way to treat is alcohol wash. Some bees will die but most accurate. The bees would do it. Other methods are sugar shake or CO2 or count mite drop.

If mild infestation or as a preventative measure consider organic treatment, advantages for oxalic acid vapour or strips are they can be left in, don't develop resistance, can be left in brood box when honey supers are on the hive. Disadvantages are that these methods should not be relied up to treat a severe infestation, not recommended especially for new Beekeepers.

Oxalic vapour can be used in winter as you don't need to open the hive up. A bit tricky to use with plastic bases.

Queen isolation cage - plastic or stainless steel. Frame isolation cages seem to only be full depth size

Pyrethroids - similar to natural insecticide pyrethrum produced by Chrysanthemum flower

Formic Pro vs MAQS - Formic Pro has longer shelf life (24 months vs 12 months) and storage temperature (away from sunlight vs under 25 degrees). Temperature dependant - can be too cold to treat (don't want bees to be in a cluster, possibility worker bees and queen will be killed)

Can be too hot to treat (above 29.44 degrees Celcius) - “initial flash of vapours” during the first 3 days may cause excessive brood mortality and queen loss.

ApiLife Var and Thymovar both thyme based treatments