



### **Comparison of Formic acid treatments**

The efficacy of Formic acid against Varroa mites has been known for many years. However the nature of Formic acid which is very corrosive to both metals and human skin has limited its popularity despite the fact that it is the only substance known to be effective against mites developing within sealed brood cells whilst leaving no detectable residues.

The recent introduction of MAQS (Mite Away Quick Strips) in the UK in 2013 has raised awareness amongst hobby beekeepers who continue to search for effective control products against Varroa that can be incorporated into the Integrated Control programmes.

#### **MAQS**

Gel strips which are placed on top of brood frames which release their dose over a short period of time (treatment advised for 5-7 days). Reported to give rapid knockdown of Varroa but with occasional behavioural effects on colonies during treatment and can be harmful to older Queens. Suitable for use between 10C and 30C.

Expensive - £ 5.50 per hive treated when purchased in boxes of 20 strips

Shelf-life only 12 months from production. Total Formic acid applied = 136.4g

#### **FORMUVAR**

85% concentration Formic acid for use with different evaporator systems which help avoid over-dosing and consequent damage to the colony.

##### **a) LIEBIG Dispenser**

Uses disposable paper wicks to control rate of evaporation which are adjusted in size depending upon the hive type being treated and the expected daily maximum temperature. Dispenser is placed on top of brood frames but needs an empty super to give necessary clearance. Gives flexibility to make mid-season "emergency" treatment to relieve Varroa burden with a 5 day treatment using 50ml of Formuvar for treating a National hive. A longer treatment after honey harvest may also be made using 100ml.

Cost of dispenser - £ 5.00      Cost of 1L of Formuvar – £ 10.00

Replacement paper wicks - £ 5.00 per pack of 40

Total Formic acid applied = 42.5g per 50ml (85g per 100ml)

**b) FAM Dispenser**

Use viscose sponge pads to apply Formuvar with adjustable openings depending upon type of hive and expected maximum temperature. May also be used mid-season for a 7 day treatment using 130ml of 70% formic acid (107ml Formuvar made up to 130ml with water) Dispenser placed on top of brood frames without need of an empty super or eke. A longer treatment may be made after honey harvest using further 130ml over 14 days.

Cost of dispenser - £ 8.30      Cost of 1L of Formuvar - £ 10.00

Replacement sponge pads - £ 4.00 per pack of 4

Total Formic acid applied = 91g per treatment (130ml at 70%)

**Summary of costs:**

Treatment	Cost per hive per year	Cost of Formic acid	Cost of applicator for 5 years use
MAQS	<b>£ 5.50</b>	£0	£0
LIEBIG Dispenser	<b>£ 1.50 to £ 2.00</b>	£ 0.50 to £ 1.00	£ 1.00
FAM Dispenser	<b>£ 2.73</b>	£ 1.07	£ 1.66

Prices correct as of 25<sup>th</sup> May 2014

For more information about FORMUVAR, LIEBIG or FAM Dispensers, please go to [www.thebeebusiness.co.uk](http://www.thebeebusiness.co.uk)

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