Mite-Away Quick Strips (MAQS)

Formic acid (46.7%)

Recommended dose: **2 strips per treatment**

Treatment period: **7 days**

Temperature range: **50-92ºF**

Excessive temperatures (>95ºF can cause excessive brood mortality and absconding)

**Kills male and female mites in capped cells**

(advantage: mite reproduction is restricted)
Dead newly emerging bees on the frames closer to the formic acid strips
Preliminary Results

- Efficacy of MAQS: 95 %

- Brood loss: Expect some brood damage especially on the frames closer to where the formic acid strips are placed.

- No significant queen loss due to MAQS.
Some important tips when using MAQS

- Works well to reduce mite loads (kills mites in capped cells).

- Larger colonies appear to aerate the fumes well hence less problems in larger hives.

- Better ventilation helps reduce significant brood loss and chances of queen loss.

- Smaller colonies may need smaller dose.

- Please use this product at appropriate time, temperatures and colony nutritional environment.
Evaluation of Apiguard

- Thymol
- Formulation: slow release gel
- Dose: 50 gm
- Number of applications: 2
Two different doses: 25 and 50 gms
Two positions: Top and middle
Spacers: With and without
<table>
<thead>
<tr>
<th>Treatment</th>
<th>% age decrease in brood (uncapped + capped)</th>
<th>Mite mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 gm on top with spacer</td>
<td>18</td>
<td>77</td>
</tr>
<tr>
<td>50 gm in middle with spacer</td>
<td>26</td>
<td>86</td>
</tr>
<tr>
<td>50 gm on top without spacer</td>
<td>26</td>
<td>73</td>
</tr>
<tr>
<td>50 gm in middle without spacer</td>
<td>39</td>
<td>80</td>
</tr>
<tr>
<td>25 gm on top with spacer</td>
<td>26</td>
<td>75</td>
</tr>
<tr>
<td>25 gm in middle with spacer</td>
<td>22</td>
<td>84</td>
</tr>
<tr>
<td>25 gm on top without spacer</td>
<td>26</td>
<td>71</td>
</tr>
<tr>
<td>25 gm in middle without spacer</td>
<td>37</td>
<td>82</td>
</tr>
</tbody>
</table>

No Queen loss observed in any of the experimental hives
Efficacy of MAQS, Apiguard and Hopguard

MAQS provides the best *Varroa* control among the three products compared.
Amitraz (Apivar)

- Contact miticide (3.33% Amitraz)
- 2 strips per brood chamber
- Recommended treatment: One Treatment in spring and or one treatment in Fall
Evaluating Apivar Efficacy

- Start date: 8-22-13
- 6 weeks (42 day) treatment
- 2 strips per brood chamber
- Mite populations monitored by using mite boards and alcohol wash methods.
Percent Control Obtained by Apivar

87 %
Percentage of mites recorded 6 weeks after initiation of Apivar treatment

(P < 0.05)
Mite counts 8 weeks after initiation of Apivar treatment

(P < 0.05)
Average mite drop temporal pattern after initiation of Apivar treatment

<table>
<thead>
<tr>
<th></th>
<th>First 3 days</th>
<th>One week later</th>
<th>Two weeks later</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of mites</td>
<td>372</td>
<td>259</td>
<td>252</td>
</tr>
<tr>
<td>observed on mite boards</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Average mite drop temporal pattern in control hives

<table>
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<th>Two weeks later</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average number of mites</td>
<td>32</td>
<td>65</td>
<td>61</td>
</tr>
<tr>
<td>observed on mite boards</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Some important considerations when using Apivar

- Results can be variable depending on factors such as: Dose and placement of strips.
- Appears to decrease mite populations gradually.
- Using in spring may be the best option.
- Risk of resistance development....resistance development can be delayed following removal directions and rotating with other available options.