

Follow-up to reports from beekeeper's using MAQS. August 31, 2011.

Beekeepers run various hive configurations, management programs and work under a variety of environmental conditions. We have worked with many beekeepers to help them become aware of the principles of using MAQS. Regarding queens we have had a wide range of comments from beekeepers since MAQS went into the marketplace on the US mainland. We have reviewed the reports and comments to see if we can identify trends to figure out why some beekeepers had no issues and some are reporting problems. The charts below provide guidance, based on our research and what the beekeepers have shared.

Ventilation

Entrance at Bottom Board		Additional Ventilation?
Standard Langstroth full hive-width open Bottom Board. Rim height from ½ inch (1.27 cm) to 7/8 inch (2.2 cm).	No modification, matches label	Not required
Screen Bottom Boards?	Slight decrease in efficacy when left open (one trial)	Not required
Concern: the hive has a less than full hive width bottom board opening and/or has a Shallow-rim bottom boards: Example: 3/8 (1 cm) inch rims.	Depending on environmental conditions may be okay but can cause additional stress to the bees.	Creating additional fresh air source recommended – usually done by off-setting the second brood chamber so a bee way full hive width opening along the front of the hive is created.



Environmental Conditions - Queen Issues?

Daytime High Temperatures First 3 days	Nectar/Pollen Flow On	Dearth Period *
Mid to Lower Temperature Range 10° C (50° F) to 29° C (84° F)	Conditions experienced in trials, acceptable brood loss, the beekeepers are pleased overall.	Conditions experienced in trials, acceptable brood loss. The beekeepers are pleased overall.
Higher Temperature Range 30° C (85° F) to 33° C (92° F)	Conditions experienced in trials, acceptable brood loss, the beekeepers are pleased overall.	Anecdotal reports of Queen issues. Higher temperatures + Dearth = Elevated Queen Stress? These conditions were not experienced in trials. We are currently recommending holding off on treatment until a nectar flow is underway and/or temperatures moderate.

** Dearth periods and/or poor pollen sources can see the bees restricting the queen's egg laying. The queen may be under nutritional stress as her body changes. Dearth periods are also naturally a time of higher supersedure rates. In the spring, a flow followed by a dearth often triggers swarming.*

Colony Size & Hive Cavity	
Colony covering less than 6 Standard Langstroth frames or equivalent.	Concern; If treated there is an elevated risk of brood damage and slow recovery.
Colony cluster covering a minimum of 6 brood frames to just filling the hive brood chamber cavity.	Treat. Add honey super(s) if a flow is expected. Queen excluders okay.
Hive brood chamber full to overflowing with bees.	Treat. Cluster will expand during treatment and will overflow the hive (Bearding). It is necessary for the hive to be bigger than just the brood chamber to accommodate the bees. Have super(s) in place. Queen excluders okay.

Increased Adult Bee Death Seen During First 3 days of Treatment?	
<p>Expect up to a cup of bees to be seen around the entrance. This level of bee kill can occur but should not be concern for overall colony health. Only a small percentage will be susceptible to the formic vapors.</p> <p>With varroa feeding on them as they develop many bees have been weakened and are susceptible to viruses, crippling them and shortening their life spans. Treating with MAQS helps clean up the hive environment.</p> <p>Remember that bees are naturally dying at the same rate as the birth rate, more than 1,000 per day. It just usually happens away from the hive so the beekeeper doesn't see it.</p>	<p>Action</p> <p>Do not disturb the hive or remove the strips until after the treatment period.</p>

Feeding Syrup During 7-Day Treatment Period		
To avoid disturbing the colonies during the treatment period they should have good food reserves before treatment. Monitoring feed after treatment recommended.	Having feed in in-hive frame feeders	Not Recommended
	Having feed in hive top tray feeders	Not Recommended
	Feeding with Jar / Can / Pail Feeders	Not Recommended
	Open Barrel with float material (straw?) method.	Best to wait until after the treatment period.

Handling the MAQS strips:

Store in a cool environment, the colder the better. Always wear proper gloves rated for use with formic acid (neoprene, PVC, nitrile) when opening and handling. The strips do get stickier over time. In the yard, using sharp scissors fully open the clear plastic outer wrap to remove the strips. Leaving the paper-wrap on the gel, carefully separate the strips. Place in the hive as described in the Directions for Use. Always follow the label.

For more information please visit our website www.miteaway.com