

OPTIONS FOR VARROA MITE CONTROL

Nancy Ruppert, NCDA & CS

Product	Cost/hive	Advantages	Disadvantages	How to use*
Powdered sugar	\$3	Inexpensive Very safe No residue	Time-/labor-intensive Efficacy depends on user technique Not useful in cooler temps (<60° F)	Thoroughly dust bees on brood frames every 5-7 days x 4-6 weeks; check mite levels @ 2 and 4 weeks after starting, to assess effectiveness
Queen banking	Depends on method	Inexpensive Non-toxic	Labor-intensive May risk queen +/- efficacy	Temporarily put queen into nuc or mini-nuc hive (or split main hive without replacing queen), to break brood cycle. (Varroa need brood to reproduce.) If temporary banking, Replace queen into main hive 8 days after last brood emergence, if no other queen present.
Mite-trapping via drone comb	\$2.50-5.00	Inexpensive Non-toxic	Need freezer space +/- efficacy	Place 1 or 2 frames drone comb into brood chamber; when drone pupae are capped, remove frame and freeze x 48hrs
Sucroside (sucrose octanoate esters)	\$1	Inexpensive Very safe	Time-/labor-intensive +/- efficacy Not useful in cooler temps (<60° F)	Mix as directed, and using garden-type or backpack sprayer, thoroughly wet bees on brood frames. Repeat every 7 to 10 days x 3 doses
Mite-Away II gel or Mite-Away QuickStrips (both contain formic acid)	\$4.50 \$4-5.00	Helps control tracheal mites also Easy to use Low residue	Very caustic, must use cautiously Need spacer above brood box (for gel pad) Should not use while honey is on hive**	Place pad with holes facing downward on top of brood chamber; remove after 21 days QuickStrips: place 2 per hive (on brood-containing box), leave on for 7 days**
Api-Lif-VAR (thymol, menthol, and eucalyptus)	\$6	Also treats tracheal mites Plant-based Low residue	Not simple to use Temp. range must be 65-95° F Should not use while honey is on hive Need spacer above brood chamber	Break each wafer into 4 pieces; wrap each piece in screen wire, place on top of brood chamber (1 at each corner or side of brood area). Replace wafers every 7 to 10 days x total 3 treatments. Check mite levels after first treatment to assess efficacy
Apiguard (thymol)	\$7	Helps control tracheal mites and chalkbrood Easy to use Low residue	Need spacer above brood chamber Should not use while honey is on hive	Place gel pack on top of brood chamber; replace with new pack in 2 weeks for total of 2 treatments. Check mite levels after first treatment to assess efficacy

Apistan strips (fluvalinate)	\$5.50	Easy to use Effective in many areas	Mites developing resistance May affect queen or drone fertility Should not use while honey is on hive Leaves residue in wax and honey	Place two strips into brood chamber, one each between frames #3-4 and #6-7; leave in x 56 days. (Do not leave too long.) Check mite levels in 2 weeks to assess efficacy
CheckMite + (coumaphos)	\$6.50	Easy to use Treats small hive beetles Effective in most areas	May have toxic effects (including infertility) on bees Mites developing resistance May be toxic to humans if not used carefully Should not use while honey on hive Leaves residue in wax and honey	Place two strips into brood chamber, one each between frames #3-4 and #6-7; leave in x 42 days. (Do not leave in too long.) Check mite levels in 2 weeks to assess efficacy

*Vapor-based treatments, such as Api-Lif VAR, Apiguard, and Mite-Away II gel pads, all require closing off all openings/ventilation except for main hive entrance. Failure to do so properly can result in either treatment failure or bee damage/death.

**Mite-Away QuickStrips were very recently given FDA approval, and retail pricing is yet to be announced. Manufacturer claims that because formic acid is naturally found in honey, these can be left on hive longer than 7 days, even during nectar flow; this may change, and users should be cautious about extended continuous use in hive.

Mite-Away II gel pads not likely to be available much longer, due to change in equipment to manufacture QuickStrips.

Some treatments, especially powdered sugar treatment done inside the hive, work much better with a screened bottom board present.

Note that some treatments have temperature restrictions for efficacy and/or bee safety reasons, so read instructions carefully. (For example: Apiguard should not be used during temperatures lower than 60° F or higher than 105° F; MiteAway Quick Strips should not be used at temperatures below 50° F or above 92° F.)

FOLLOW PACKAGE DIRECTIONS CAREFULLY FOR ANY TREATMENTS USED IN BEEHIVES!!!!!!

Note: At this time varroa mite management is still evolving, and also may include options such as use of VSH (varroa-sensitive hygienic) breeds of honey bees, and yet-to-be approved (in NC) options such as Hivastan, oxalic acid, and essential oils. Stay tuned....