KANAWHA VALLEY
BEEKEEPERS ASSOCIATION

MEDICATIONS
FOR HEALTHY HIVES

API Life VAR

API Life VAR is used to combat the Varroa mite.
The varroa mite shows no resistance to it and it is not harmful to the bees or to the beekeeper!! It does not contaminate the comb. It's a safe, easy to use alternative to those "Hard Chemicals".

Api-Life VAR is a thymol based miticide which is suitable for organic use. Sold in Europe for over 15 years, and has remained affective, without mite resistance. It's safe for your bees, not like nasty chemicals. Api-Life VAR is a formulation of Thymol, Eucalytol, Menthol, and Camphor. The active ingredient, Thymol, is not an essential oil but rather a purified form. The same effectiveness cannot be achieved with essential oils alone.

Apiguard

Apiguard® is a natural product specifically designed for use in beehives. It is a slow release gel matrix, ensuring correct dosage of the active ingredient thymol. Thymol is a naturally occurring substance derived from the plant thyme. It has a proven high efficacy against the varroa mite and is also active against both tracheal mite and chalkbrood.

Apiguard® is a specially designed and patented slow release gel containing thymol. Apiguard gel, presented in 50gm ready to use aluminum trays, regulates the liberation of thymol within the honeybee colony and provides a much more efficient control of hive pests than was possible before.

According to Vita the manufacturer of Apiguard, it has no harmful effect on the honeybee colony, neither on brood nor on adults.

Apiguard® is extremely easy to use. It is simply a matter of placing the opened tray face upwards in the top of brood frames when the temperature is above 60F, preferably centered over the colony. After 10 days examine the tray and if depleted replace with a second tray. If there is product left in the tray after 10 days leave until day 14 and then replace. Leave a second tray in position for a further 2-4 weeks and treatment has been completed (duration of treatment therefore lasts 4-6 weeks).

Apistan

The product Apistan is for managing Varroa mites in honey bee colonies. However, it is imperative that it be used properly in conjunction with an integrated pest management approach. Otherwise, there are numerous negative consequences that could result, including resistance development, and residues in wax and honey.

In many cases Apistan no longer works because of the resistance the mites have quickly built against this compound. As a result, many beekeepers have switched to CheckMite.

The label that accompanies Apistan is informative and MUST be read.

Check-Mite

CheckMite is a compound for the control of varroa mites and small hive beetles in honey bee hives. CheckMite is highly efficacious on varroa that have become resistant to fluvalinate (Apistan). CheckMite is applied as a plastic strip, in which the compound is embedded. The strips are hung in the hive for 45 days for varroa control (length of time for small hive beetle control varies by state). There was a widespread loss of hives in 1999 due to resistance to Apistan; the introduction of CheckMite+ was extremely important in saving beekeepers from further losses.

Fumidil-B

Fumidil-B is an antibiotic for the treatment of Nosema*.

*Nosema apis is a spore-forming parasite that invades the intestinal tracts of adult bees and causes nosema disease. Nosema is also associated with Black queen-cell virus. Nosema is normally only a problem when the bees can not leave the hive to eliminate waste (for example, during an extended cold spell in winter). When the bees are unable to void (cleansing flights), they can develop dysentery.

Menthol

Currently there are several methods used to treat bee hives with menthol.
Here we describe the 'Traditional' and the Blue Shop Towel' methods.

Traditional Method
Buy one standard pack of menthol for each hive... Follow directions.

Blue Shop Towel Method
Ingredients: 4 standard packs of menthol and 16 ozs of canola oil.

1) Prepare Towels:
Cut shop towel roll in half and remove the cardboard tube. What you end up with should look like a tall blue roll of toilet tissue.

2) Measure and mix components:
Place four standard packs of menthol crystals (6.8 ozs. or 200 grams) in a 16 oz. pyrex measuring cup, then add canola oil to fill. Microwave for 4 mins. at 50% power. Check to see that all crystals dissolved--if not, microwave for an additional minute at 50% power.
Dump this heated menthol-canola mix into a 3 pound coffee can or similar sized container.
Alternately, you could melt the crystals with the canola oil in a 3 pound metal coffee can on an electric stove or hot plate using medium heat. You could also use a gas stove as shown on the right but be very careful. The mixture is flammable and the fumes are very potent.

3) Add paper towels:
Place one of the half-rolls of paper towels into the coffee can of warm menthol-canola oil.
Flip the towels in the can until all towels are evenly saturated. If one end of towels are somewhat dry, flip the towels putting dry end down--in about 10 minutes, all will be evenly saturated.
Thus, 16 ozs (2 cups) of menthol-canola oil mix will saturate a half-roll (55 half-sheets) of shop towels -- using 2 half-sheets per colony, this will treat 27 colonies.
Towels can be stored at room temperature indefinitely if held in a tightly sealed container. (A zip-Lock bag works nicely).

4) Apply to colonies:
Do not add to colonies while a honey flow is on.
Place one of the 1/2 sheets on the top bars at the front or back, (not right over the cluster) of each brood chamber. Colonies can be treated anytime during the winter when temperatures rise above about 45 F. The bees will chew up the paper towels and discard them at the entrance in 3-5 days (or longer in winter).
Two treatments are required, so you must repeat the application in ten to fourteen days.

5) That's it.
Note: The best time to treat is September. Tracheal mites are usually not a problem from May to September, so no menthol needs to be used until the time that mites begin to build up in late August or September.
It's best to treat your bees twice a year, though -- spring and fall.
Don't just assume you have control. Be sure.

Note: Use of menthol is at your own risk. No endorsement is made or implied by KVBA.

What is menthol ?
Menthol is a terpenoid, found in the essential oils of the mint family (Mentha spp), such as peppermint, spearmint and others.
Menthol ($C_{10}H_{20}O$) is solid at room temperature, forming long crystals that have a fatty touch.
Menthol is poorly soluble in water, but readily soluble in alcohol or oils.

Besides the use as an aroma in many different food products (especially dental products, such as chewing gum, cough drops and confectionary, such as mints), menthol is contained in non-prescription products for short-term relief of minor sore throat and minor mouth or throat irritation, for example in lip balms and cough medicines. It is classed as an antipruritic, which reduces itching. Menthol is also contained in combination products used for relief of muscle aches, sprains, and similar conditions, as well as in decongestants. In addition, it is used as an additive in certain cigarette brands, both for flavor and to reduce the throat and sinus irritation caused by smoking. Menthol also is a common ingredient in mouthwash.

Mite-Away II

Mite-Away II® is a formic acid treatment for the control of varroa and tracheal mites. It should be used as part of an integrated pest control management program. DO NOT APPLY WHILE HONEY SUPERS ARE ON. Allow at least 2 weeks from treatment before placing honey supers on the hive.

One single application pad can be used to treat 6-20 frames of brood. A 1 1/2-inch spacer rim and two small spacer sticks are required. To apply you must place the pad on top of two spacing sticks which go on top of the brood frames. Place the pad with the holes facing down to help the formic acid circulate throughout the hive. All holes in the hive must be sealed except for the bottom hive entrance, which must be open during the entire treatment. Mite-Away II® should be used when the day time temperatures are in the range of 50-79 degrees Fahrenheit. If daily temperatures exceed 82 degrees Fahrenheit in the first seven days of treatment you must remove the pads. Store pads in original container until heat wave is over. Treatment of hives when temperatures exceed 82 degrees Fahrenheit can cause major damage or loss of colonies. Brood mortality may occur for up to 14 days during the start of treatment with brood rearing returning to normal after treatment.

This is a very dangerous chemical:
Safety equipment must be worn when treating with Mite-Away II®. Read all safety manuals prior to use. Do not wear nylon suit or jacket or coverall when using Mite-Away II®.

Oxalic Acid

The U.S. Environmental Protection Agency (EPA) has registered the new active ingredient oxalic acid for use against the varroa mite.
The West Virginia Department of Agriculture has been given authorization by the State of West Virginia to allow the use of oxalic acid by beekeepers for the treatment of varroa mites.
Oxalic acid (OA) is a natural acaricide used for treatment against varroa mites in colonies with no or low brood such as packages or swarms.

Oxalic acid applications are for outdoor use only and should be used only in late fall or early spring when little or no brood is present. It will NOT control varroa mites in capped brood.
DO NOT use when honey supers are in place to prevent contamination of honey.

Oxalic acid is labeled for application by three different methods:

1. By Solution to Package Bees (Oxalic acid in sugar solution is applied as a spray to the package)
2. By Solution to Beehives (Oxalic acid in sugar solution is trickled between frames and other spaces)
3. apor Treatment of Beehives (Oxalic acid dihydrate is heated and the vapor sublimates in the hive)

Tylan

TYLAN (tylosin tartrate) is for the control of American foulbrood (Paenibacillus larvae) in honey bees.

This is the first approval by the FDA for the use of TYLAN Soluble in a minor species (honey bees). TYLAN Soluble, a product of Elanco Animal Health, a division of Eli Lilly and Company, Greenfield, Indiana, was already approved for therapeutic uses in chickens and swine and production uses in turkeys.

TYLAN Soluble is the second approved new animal drug for honey bees that controls American foulbrood (Paenibacillus larvae). FDA reviewed extensive data to ensure the product met all necessary effectiveness, animal health, human food safety, and environmental standards.

The approval of this supplemental new animal drug application relied on publicly available safety and effectiveness data contained in Public Master File 5783, which were compiled under the oversight of the National Research Support Project-7 (NSRP-7), a national agricultural research program for obtaining clearances for use of new animal drugs in minor animal species and for special uses. Studies were conducted by USDA Bee Research Laboratories.

The FDA has concluded that the honey derived from honey bees fed tylosin tartrate is safe when the animals are fed according to the approved labeling. Additional information on this approval may be obtained by contacting Joan C. Gotthardt, D.V.M., Director, Division of Therapeutic Drugs for Food Animals, FDA, Center for Veterinary Medicine, Office of New Animal Drug Evaluation, 7500 Standish Place, HFV-130, Rockville, MD 20855, 301 827-7571; E-mail: jgotthar@cvm.fda.gov.

Note: Use of any treatment option is at your own risk. No endorsement is made or implied by KVBA.