HONEY BEE HIVE MANAGEMENT

All chemical information provided below is given with the understanding that no endorsement of named products is intended, nor is criticism implied of similar products that are not mentioned. Individuals who use pesticides are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Before purchasing or using any pesticide, always read and carefully follow the label directions. Products listed below are identified by common chemical name. A trade name in parentheses may also be listed as a convenience for the reader. Additional trade names may be available.

Pest/Disease	Treatment	Rate	Application	Precautions and Remarks
Fumigation Stored Bee Hive Supers and other beekeeping equipment/ Greater Wax Moth	Aluminum phosphide	150-225 pellets/1000 cu ft 30-40 tablets/1000 cu ft		Special training and precautions are needed before use of aluminum phosphide.
	Paradichlorobenzene 100% (Para Moth)	3 oz/stack of 5 hive bodies	Crystals may be sprinkled on top bars of the frames or, preferably, on a piece of paper or cardboard laid on top bars. Cover tightly. Use tape to seal gaps between hive bodies if necessary. Stacks should be inspected every two to three weeks and more crystals added if needed.	Never use on a live colony of honey bees or on combs of unextracted honey.
	Glacial Acetic Acid (80%)	150 mL (2/3 cup)/stack of 5 hive bodies	Soak an absorbent pad (such as cotton wool) with acetic acid and place on top bars of topmost super; cover tightly. Use tape to seal gaps between hive bodies if necessary. Stacks should be inspected every two to three weeks and treatment repeated if necessary.	Never use on a live colony of honey bees. Repeated use of acetic acid can cause corrosion of metal parts such as wires, nails and frame rests.
Tracheal Mites	Menthol 99.94% granules in packet (Menthol, Mite-A-Thol)	1.8 oz (50 grams)/colony	To treat overwintering hive, place packet on top bars when temperature is 80°F or below; place on bottom board if temperature is above 80°F. Remove packet after 10-12 weeks and discard.	Remove product at least 1 month prior to spring honey flow to prevent honey contamination. In the fall, remove surplus honey prior to treatment. Do not use product when temperature is below 60°F.
Varroa Mites	Tau-fluvalinate 10% (Apistan plastic strip)	1 strip/5 frames of bees in brood chamber	Hang strip between frames in brood nest. Treat for minimum of 42 days and maximum of 56 days. Remove strips and discard. Do not reuse strips.	Treat hives in spring before first honey flow or late in summer or fall after last honey flow. Remove surplus honey prior to treatment. Supers may be returned to hive following treatment. Never consume or sell contaminated honey.
	Coumaphos (CheckMite+)	1 strip/5 frames of bees in brood chamber	Hang strip between frames in brood nest. Treat for minimum of 42 days and maximum of 45 days. Remove strips and discard. Do not reuse strips. Use chemical-resistant gloves to handle strips. DO NOT USE LEATHER BEE GLOVES.	Treat hives in spring before first honey flow or late in summer or fall after last honey flow. Remove surplus honey prior to treatment. Supers may not be placed on hives for 14 days after removal of strips. Never consume or sell honey that has been treated. Do not treat any hive with coumaphos more than two times in one year.
	Formic acid 48.4% (Mite Away II)	1 pad per colony (for 1 or 2 deep hive bodies)	Place pouch, with holes down, on two 4- x 0.5- x 0.5-inch spacer sticks placed 4 inches apart on the frame top bars. Place a 1.5-inch rim on the top box to accommodate treatment and additional 0.5 inch space between the pad and inner cover. Leave pouch in place for 21 days, then discard. Handle product with acid-resistant gloves only.	Apply when daytime temperatures are between 50°F to 79°F. Seal all holes in the hive (including screen bottom boards) except for bottom flight entrance, which should remain fully open during treatment (remove entrance reducers). Brood mortality may occur during initial 14 days of treatment. Supers may be placed on hives immediately after treatment, but do not harvest honey for at least 14 days after treatment has ended.

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Pest/Disease	Treatment	Rate	Application	Precautions and Remarks
Varroa Mites	Thymol (ApiGuard, Apilife VAR, Thymovar)	Dosage prepackaged by manufacturers.	Follow label directions for prepackaged dosages.	Do not use during honey flow. Treatments are most effective when daytime temperatures are between 68° and 86°F. Do not use when temperatures are above 90°F. Remove product at least 30 days prior to honey harvest.
American Foul Brood, European Foul Brood	Oxytetracycline hydrochloride 25 grams/lb (Terramycin soluble powder)	1 tsp/oz powdered sugar/colony or 1 tsp/5 lb jar of 1:1 sugar syrup	Dust colonies three times at 4- to 5-day intervals making sure not to apply dust on frames containing brood. Or, feed syrup solution making three applications at 4- to 5-day intervals.	Make application in spring or fall to avoid contamination of honey. Complete feeding of treatment at least four weeks prior to major honey flow. Remove honey prior to fall application.
	Tylosin (Tylan)	200 mg tylosin in 20 g powdered sugar; use immediately.	Dust top bars of colony weekly for 3 weeks.	Tylosin is recommended for use when foul brood is found to be resistant to other treatments, and only under the supervision of a state apiary inspector.
Nosema	Bioclohexylammonium fumagillin (Fumadil-B)	20 gram/20 gallons of syrup	Feed 2 gal of syrup per colony in fall or 1 gal per colony in spring. When only 1 or 2 colonies are to be treated, the medication may be made with 1 rounded tsp Fumidil-B per gallon sugar syrup.	Not for use during a honey flow. Stop treatment at least 4 weeks prior to addition of honey supers.
	(Nozevit)	1 mL or 20 drops per 1/3 quart of light syrup.	Feed 1/3 quart of prepared syrup per hive, 2 times, 10 days apart, in spring and/or fall.	Not for use during a honey flow. Stop treatment at least 4 weeks prior to addition of honey supers.
Small Hive Beetle	Coumaphos (CheckMite+)	1 strip per hive	Prepare a 5- x 5-inch square of corrugated cardboard by removing the paper from one side. Cover smooth side with duct tape or packing tape to prevent bees from tearing up and removing cardboard. Cut one strip in half and staple both pieces to the corrugated side of cardboard. Place strip side down on bottom board of hive. Use chemical-resistant gloves to handle strips. DO NOT USE LEATHER BEE GLOVES.	Do not use during honey flow. Remove strip 14 days before honey supers are added in spring, or remove surplus honey prior to fall treatment. Never consume or sell honey that has been treated. Do not treat any hive with coumaphos more than two times in one year. The best defense against small hive beetles is a healthy honey bee colony. The use of grease patties for tracheal mite control may attract small hive beetles.