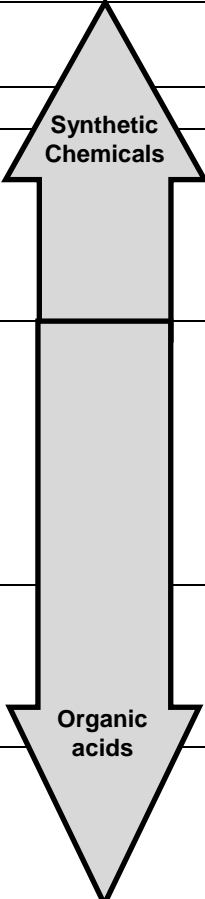
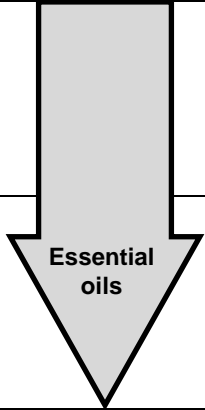


# WISCONSIN HONEY BEE PEST MANAGEMENT OPTIONS 2017

Wisconsin Department of Agriculture, Trade and Consumer Protection

2811 Agriculture Dr. • Madison, WI 53718 • 608.224.4572

elizabeth.meils@wisconsin.gov • <http://datcp.wi.gov>

PEST	REGISTERED TREATMENT (Active Ingredient)	REGISTRATION #	APPLICATION
VARROA MITE <i>Varroa destructor</i>	* <i>Apistan</i> (Fluvalinate)	EPA Reg No. <a href="#">2724-406</a>	6-8 weeks, in spring and fall. No more than 2 strips per brood box. No use during honeyflow
	* <i>CheckMite+</i> (Coumaphos)	EPA Reg No. <a href="#">11556-138-61671</a>	6-8 weeks, in spring and fall. No more than 2 strips per brood box. No use during honeyflow
	<i>*Widespread resistance of Varroa mites to above products. NOT recommended for Varroa control in WI.</i>		
	<i>Apivar Strips</i> (Amitraz)	EPA Reg No. <a href="#">872443-1</a>	2 strips per brood chamber (or 1 strip per 5 frames of bees), hang each in bee cluster with 2 frames between strips. Leave strips inside hive for 42 days, then remove. 2 treatments per year. <b>Remove strips 2 wks prior to honey flow.</b>
	<i>HopGuard II</i> (Potassium Salt of Hop Beta Acids)	EPA Reg No. <a href="#">83623-2</a>	1 strip per 5 frames covered with bees in each brood super (or) 2 strips per 10 frames covered in bees in brood super. <b>No strips in honey supers.</b> Unfold strips and hang over a center brood frame with 1/2 the strip on each side of frame. Remove after 30 days. 3 applications per year max. <b>Can be used during honey flow.</b> – can also be used in packages – see label.
	<i>Mite Away Quick Strip</i> (MAQS) (Formic Acid)	EPA Reg No. <a href="#">75710-2</a>	Place strips on the brood frames, staggered, across width of box. Do not disturb colony for 7 days (or) apply single strip every 2-6 wks. <b>Can be used during honey flow.</b> Outside temperatures between 50°-85°F.
	<i>Oxalic Acid</i> (Oxalic Acid Dihydrate)	EPA Reg No. <a href="#">91266-1-91832</a>	Dribble or vaporize in the hive; late fall or early spring when little or no brood is present to clean up phoretic mites; can also spray broodless packages. See label for application instructions. <b>Do not use when honey supers are in place.</b>
	<i>ApiGuard</i> (Thymol)	EPA Reg No. <a href="#">79671-1</a>	2 50gm trays per hive, add the second tray after 14 days. Use in fall; best results when daily maximum temperature is above 60°F.(use 25mg dose at temps above 77°F) <b>Do not treat during honey flow.</b> Remove product prior to installing honey supers.
	<i>Api Life Var</i> (Thymol, eucalyptol, menthol)	EPA Reg No. <a href="#">73291-1</a>	Break 1 tablet into 4 pieces. Place near 4 corners of brood nest. Repeat 2x more. (7-10 day intervals, leave last treatment 12 days) Remove all residuals. Use when temperatures are 64°-95°F. It is a fumigant; close off screen bottom boards. <b>Do not use when honey supers are on.</b>
	<i>MAQS, ApiLife Var and Apiguard also show some control of tracheal mites.</i>		
<b>RESISTANT STOCK: Russian, SMR, VSH, MN Hygienic, Purdue “Ankle-Biter”</b>		Queens and packages bred for mite resistance are available for order from many producers.	
<b>INTEGRATED PEST MANAGEMENT (IPM):</b> No single option is even close to 100% effective. Check mite levels frequently. Use a combination of mite resistant stock, drone comb trapping and removal, screen bottom boards, brood interruption, rotate “hard” and “soft” controls and <b>ALWAYS FOLLOW LABEL INSTRUCTIONS.</b>			

*\*\*Mite products discontinued for use in Wisconsin: Sucroside, Hivastan, Mite-Away II\*\**

PEST/ PATHOGEN	REGISTERED TREATMENT (Active Ingredient)	REGISTRATION #	APPLICATION
<b>*NEW FOR 2017: THESE MEDICATIONS REQUIRE A VFD ORDER OR PRESCRIPTION FROM A VETERINARIAN*</b>			
<b>AMERICAN FOULBROOD</b> <i>Paenibacillus larvae</i> <b>EUROPEAN FOULBROOD</b> <i>Melissococcus pluton</i>	<b>Terramycin, Pennox, TERRAMYCIN, TM, Tetroxy (Oxytetracycline Hydrochloride)</b>	<a href="#">FDA Reg No.</a> NADA 095-143 NADA 138-938 NADA 008-622 NADA 008-804 ANADA 200-026 ANADA 200-146 ANADA 200-247	<b>Labels and formulations vary.</b> Dusting or feed in syrup, 3 applications, 5-7 days apart, in spring or fall. <b>Remove 6 weeks prior to honey flow.</b> Can be used as a preventative. If AFB is detected, hives must be burned.
For AFB (but NOT effective for EFB)	<b>Tylan, Bilovet, Tylovet (Tylosin Tartrate)</b>	<a href="#">FDA Reg No.</a> NADA 013-076, ANADA 200-455, ANADA 200-473	<b>Labels and formulations vary.</b> Read directions carefully. Dusting only. 200mg dose in 20g powdered sugar applied weekly for 3 weeks. <b>Complete treatment 4 weeks prior to main honey flow.</b>
For AFB (but NOT effective for EFB)	<b>Lincomix (Lincomycin Hydrochloride)</b>	<a href="#">FDA Reg No.</a> NADA 111-636	Dusting only. Mix with powdered sugar applied once weekly for 3 weeks. <b>Complete treatment 4 weeks prior to main honey flow.</b>
<b>*NEW FOR 2017: THESE MEDICATIONS REQUIRE A VFD ORDER OR PRESCRIPTION FROM A VETERINARIAN*</b>			
<b>INTEGRATED PEST MANAGEMENT:</b> Inspect hives for symptoms of AFB. <b>Burn frames with AFB symptoms!</b> Burn or scorch the insides of boxes. Start with new frames and foundation.			
<b>SACBROOD</b> <i>virus</i>	No treatment available		Usually goes away by mid-June. If not, power wash equipment and requeen hive.
<b>CHALKBROOD</b> <i>Ascosphaera apis</i>	No treatment available		Maintain strong colony health. Requeen with a queen bred for hygienic behavior.
<b>NOSEMA</b> <i>Nosema apis, N. ceranae</i>	<b>Fumagilin-B (Fumagillin)</b>  Dissolve 1 rounded teaspoon in 2 oz warm water (not hot) and add mixture to 1 gal of sugar syrup. Feed 2 gals medicated 1:1 sugar/water in spring and 2 gals medicated 2:1 sugar/water in fall. Feed additional unmedicated syrup if necessary but <i>do not dilute the medicated syrup.</i>		Add to feeding syrup in spring and fall, especially to packages.
<b>WAXMOTH</b> <i>Achroia grisella, Galleria mellonella</i>	<b>Para-Moth (Paradichlorobenzene)</b>	<a href="#">EPA Reg No. 61671-2</a>	Use on extracted, stored equipment only. Stack supers on several layers of newspaper and as tightly as possible. No more than 5 deeps or 10 shallow supers per stack. Air out before use.
<b>SMALL HIVE BEETLE</b> <i>Aethina tumida</i>	<b>GardStar 40% EC (Permethrin)</b>	<a href="#">EPA Reg No. 39039-8</a>	Soil drench only. <b>Highly toxic to bees!!</b> Follow label directions carefully.
	<b>CheckMite+ (Coumaphos)</b>	<a href="#">EPA Reg No. 11556-138-61671</a>	1 week, temp >70°F. No more than 2 strips per brood box. <b>No use during honey flow.</b>
<b>INTEGRATED PEST MANAGEMENT:</b> Trap beetles anytime you notice them in the hive. Trap options include: West SHB, Hood, Beetle Blaster, Freeman bottom board, Beetle Jail, Beetle Bee-Gone sheets, etc.			
<b>SMALL HIVE BEETLE (SHB) &amp; WAXMOTH IN THE HONEY HOUSE</b> Keep honey house extremely clean. Extract every 2-3 days or weekly. Do not store supers with brood. Increase air flow with fans, lower humidity with dehumidifiers. Freeze supers if needed; 10°F for 24 hours kills all life stages of small hive beetle.			



The above listed application instructions are only short summaries, **read the product label thoroughly before applying any treatments and follow all instructions.** This list may not be complete. Listing of a product does not infer endorsement by the Department. Omissions are not intended to discriminate against registered products.