

# WISCONSIN HONEY BEE PEST MANAGEMENT OPTIONS 2019

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PEST	REGISTERED TREATMENT (Active Ingredient)	REGISTRATION #	APPLICATION	APP SEASON & TEMPS
VARROA MITE <i>Varroa destructor</i>	* <b>Apistan (Fluvalinate)</b>	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.	Spring, fall Temps >50°F
	* <b>CheckMite+ (Coumaphos)</b>	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.	Spring, summer, fall
<b>*Widespread resistance of Varroa mites to above products. NOT recommended for Varroa control in WI.</b>				
Synthetic chemicals	<b>Apivar Strips (Amitraz)</b>	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>	Spring, fall
	<b>HopGuard II (Potassium Salt of Hop Beta Acids)</b>	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.	Spring, summer, fall
Organic acids	<b>Formic Pro (Formic Acid)</b>	EPA Reg No. <a href="#">75710-3</a>	Lay flat across lower brood chamber; 2 strips for 14 days-- <b>OR</b> --1 <sup>st</sup> strip for 10 days, remove and replace with 2 <sup>nd</sup> strip for additional 10 days. Daytime temps 50°-85°F. Don't feed during treatment. <b>Can be used during honey flow.</b>	Spring, summer, fall Temps 50°F-85°F
	<b>Mite Away Quick Strip (MAQS) (Formic Acid)</b>	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>	Spring, summer, fall Temps 50°F-85°F
Essential oils	<b>Oxalic Acid (Oxalic Acid Dihydrate)</b>	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>	Spring, fall
	<b>ApiGuard (Thymol)</b>	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.	Spring, fall Temps 60°F-105°F
	<b>Api Life Var (Thymol, eucalyptol, menthol)</b>	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. It is a fumigant; close off screen bottom boards. <b>Do not use when honey supers are on.</b>	Spring, summer, fall Temps 64°F-95°F
<i>MAQS, ApiLife Var and Apiguard also show some control of <b>tracheal mites</b>. Apivar and oxalic acid do not!</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 brood trapping and removal, screen bottom boards, brood interruption, re-queening when necessary, 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	APP SEASON & TEMPS
<b>***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>	Terramycin, Pennox, Tetroxy, Oxytetracycline HCl (Oxytetracycline hydrochloride)	<a href="#">FDA Reg No.</a> 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>	Spring, fall, or as needed
<b>AMERICAN and EUROPEAN FOULBROOD</b>	Terramycin, OXTC (Oxytetracycline dihydrate)	<a href="#">FDA Reg No.</a> NADA 095-143	<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>	Spring, fall, or as needed
<b>AMERICAN and EUROPEAN FOULBROOD</b>	Pennox (Oxytetracycline)	<a href="#">FDA Reg No.</a> NADA 138-938	<b>Labels and formulations vary.</b> Contact manufacturer for specific dosages and timings. Dusting or feed in syrup. <b>Remove 6 weeks prior to honey flow.</b>	Spring, fall, or as needed
<i>For AFB (but NOT effective for EFB)</i>	Tylan, Bilovet, Tylovet (Tylosin Tartrate)	<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>	Spring, fall, or as needed
<i>For AFB (but NOT effective for EFB)</i>	Lincomix (Lincomycin Hydrochloride)	<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. Rx only.</b>	Spring, fall, or as needed
<b>INTEGRATED PEST MANAGEMENT:</b> Inspect hives for symptoms of AFB. If found, drown bees and <b>Burn frames with AFB symptoms!</b> Burn or scorch the insides of boxes. Start with new frames and foundation. Treat all other hives in the yard. Quarantine and monitor yard closely for 12-18 months.				
<b>SACBROOD</b> <i>virus</i>	No treatment available		Usually goes away by mid-June. If not, power wash equipment and re-queen hive.	
<b>CHALKBROOD</b> <i>Ascosphaera apis</i>	No treatment available		Maintain strong colony health. Re-queen with a queen bred for hygienic behavior.	
<b>NOSEMA</b> <i>Nosema apis,</i> <i>N. ceranae</i>	<b>Fumagilin-B (Fumagillin)</b>		Add to feeding syrup in spring and fall, especially to packages. 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>	
<b>WAXMOTH</b> <i>Achroia grisella,</i> <i>Galleria mellonella</i>	<b>Para-Moth (Paradichlorobenzene)</b>	<a href="#">EPA Reg No.</a> <a href="#">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.</a> <a href="#">39039-8</a>	Treats the SHB larval stage. Soil drench only. Apply 24-48 hrs prior to placement of hives. <b>Highly toxic to bees!!</b> Follow label directions carefully.	Temps 65°F-85°F
	<b>CheckMite+ (Coumaphos)</b>	<a href="#">EPA Reg No.</a> <a href="#">11556-138-61671</a>	1 week, No more than 2 strips per brood box. <b>No use during honey flow.</b>	Temp >70°F.
<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.

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