

WISCONSIN HONEY BEE PEST MANAGEMENT OPTIONS 2020

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	APP SEASON & TEMPS
VARROA MITE <i>Varroa destructor</i>	* Apistan (Fluvalinate)	EPA Reg No. 2724-406	6-8 weeks, in spring and fall. No more than 2 strips per brood box. No use during honeyflow.	Spring, fall Temps >50°F
	* CheckMite+ (Coumaphos)	EPA Reg No. 11556-138-61671	6-8 weeks, in spring and fall. No more than 2 strips per brood box. No use during honeyflow.	Spring, summer, fall
*Widespread resistance of Varroa mites to above products. NOT recommended for Varroa control in WI.				
Synthetic chemicals	Apivar Strips (Amitraz)	EPA Reg No. 87243-1	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. Remove strips 2 wks prior to honey flow.	Spring, fall
	HopGuard II HopGuard III (Potassium Salt of Hop Beta Acids)	EPA Reg No. 83623-2 EPA Reg No. 83623-2	1 strip per 5 frames covered with bees in each brood super (or) 2 strips per 10 frames covered in bees in brood super. No strips in honey supers. 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. Can be used during honey flow. – can also be used in packages – see label.	Spring, summer, fall
Organic acids	Formic Pro (Formic Acid)	EPA Reg No. 75710-3	Lay flat across lower brood chamber; 2 strips for 14 days-- OR --1 st strip for 10 days, remove and replace with 2 nd strip for additional 10 days. Daytime temps 50°-85°F. Don't feed during treatment. Can be used during honey flow.	Spring, summer, fall Temps 50°F-85°F
	Mite Away Quick Strip (MAQS) (Formic Acid)	EPA Reg No. 75710-2	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. Can be used during honey flow.	Spring, summer, fall Temps 50°F-85°F
Essential oils	Api-Bioxal (Oxalic Acid Dihydrate)	EPA Reg No. 91266-1-73291	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. Do not use when honey supers are in place.	Spring, fall
	ApiGuard (Thymol)	EPA Reg No. 79671-1	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 25gm dose at temps above 77°F) Do not treat during honey flow. Remove product prior to installing honey supers.	Spring, fall Temps 60°F-105°F
	Api Life Var (Thymol, eucalyptol, menthol)	EPA Reg No. 73291-1	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. Do not use when honey supers are on.	Spring, summer, fall Temps 64°F-95°F
<i>MAQS, ApiLife Var and Apiguard also show some control of tracheal mites. Apivar and oxalic acid do not!</i>				
RESISTANT STOCK: Russian, SMR, VSH, MN Hygienic, Purdue “Ankle-Biter” Queens and packages bred for mite resistance are available for order from many producers.				
INTEGRATED PEST MANAGEMENT (IPM): No single option is even close to 100% effective. Check mite levels frequently. Use a combination of mite resistant stock, drone brood trapping <u>and removal</u> , screen bottom boards, brood interruption, re-queening when necessary, rotate “hard” and “soft” controls and ALWAYS FOLLOW LABEL INSTRUCTIONS.				

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

PEST/ PATHOGEN	REGISTERED TREATMENT (Active Ingredient)	REGISTRATION #	APPLICATION	APP SEASON & TEMPS
THESE MEDICATIONS REQUIRE A VFD ORDER OR PRESCRIPTION FROM A VETERINARIAN				
AMERICAN FOULBROOD <i>Paenibacillus larvae</i> EUROPEAN FOULBROOD <i>Melissococcus pluton</i>	Terramycin, Tetroxy, Oxytetracycline HCl (Oxytetracycline hydrochloride)	<i>FDA Reg No.</i> NADA 008-622 NADA 008-804 ANADA 200-026 ANADA 200-146 ANADA 200-247	Labels and formulations vary. Dusting or feed in syrup, 3 applications, 5-7 days apart, in spring or fall. Remove 6 weeks prior to honey flow.	Spring, fall, or as needed
AMERICAN and EUROPEAN FOULBROOD	Terramycin, OXTC (Oxytetracycline dihydrate)	<i>FDA Reg No.</i> NADA 095-143	Labels and formulations vary. Dusting or feed in syrup, 3 applications, 5-7 days apart, in spring or fall. Remove 6 weeks prior to honey flow.	Spring, fall, or as needed
AMERICAN and EUROPEAN FOULBROOD	Pennox (Oxytetracycline)	<i>FDA Reg No.</i> NADA 138-938	Labels and formulations vary. Contact manufacturer for specific dosages and timings. Dusting or feed in syrup. Remove 6 weeks prior to honey flow.	Spring, fall, or as needed
<i>For AFB (but NOT effective for EFB)</i>	Tylan, BiloVet, Tylovet (Tylosin Tartrate)	<i>FDA Reg No.</i> NADA 013-076 , ANADA 200-455 , ANADA 200-473	Labels and formulations vary. Read directions carefully. Dusting only. 200mg dose in 20g powdered sugar applied weekly for 3 weeks. Complete treatment 4 weeks prior to main honey flow.	Spring, fall, or as needed
<i>For AFB (but NOT effective for EFB)</i>	Lincomix (Lincomycin Hydrochloride)	<i>FDA Reg No.</i> NADA 111-636	Dusting only. Mix with powdered sugar applied once weekly for 3 weeks. Complete treatment 4 weeks prior to main honey flow. Rx only.	Spring, fall, or as needed
INTEGRATED PEST MANAGEMENT: Inspect hives for symptoms of AFB. If found, drown bees and Burn frames with AFB symptoms! 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.				
SACBROOD <i>virus</i>	No treatment available		Usually goes away by mid-June. If not, power wash equipment and re-queen hive.	
CHALKBROOD <i>Ascosphaera apis</i>	No treatment available		Maintain strong colony health. Re-queen with a queen bred for hygienic behavior.	
NOSEMA <i>Nosema apis</i> , <i>N. ceranae</i>	Fumagilin-B (Fumagillin)		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>	
WAXMOTH <i>Achroia grisella</i> , <i>Galleria mellonella</i>	Para-Moth (Paradichlorobenzene)	<i>EPA Reg No.</i> 61671-2	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.	
SMALL HIVE BEETLE <i>Aethina tumida</i>	GardStar 40% EC (Permethrin)	<i>EPA Reg No.</i> 39039-8	Treats the SHB larval stage. Soil drench only. Apply 24-48 hrs prior to placement of hives. Highly toxic to bees!! Follow label directions carefully.	Temps 65°F-85°F
	CheckMite+ (Coumaphos)	<i>EPA Reg No.</i> 11556-138-61671	1 week, No more than 2 strips per brood box. No use during honey flow.	Temp >70°F.
INTEGRATED PEST MANAGEMENT: 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.				
SMALL HIVE BEETLE (SHB) & WAXMOTH IN THE HONEY HOUSE: 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.

UPDATED FEB 2020