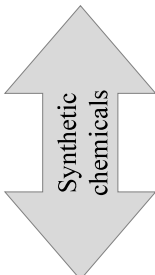
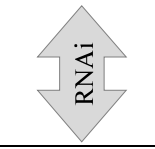
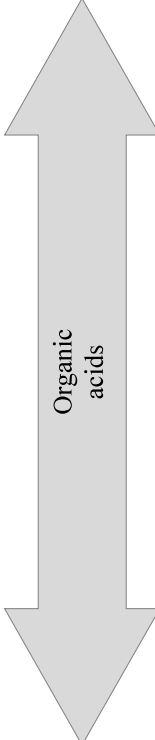
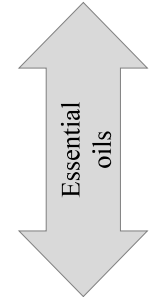


2026 North Carolina Honey Bee Pest Management Options

Read the product label thoroughly before applying any treatments and follow label instructions. The Pesticide Label is the LAW! This list may not be complete, and information is subject to change. Information in this document does not imply endorsement by the NC Department of Agriculture & Consumer Services (NCDA&CS). For more information or questions contact:

NCDA&CS Apiary Services (919)218-3310 for Beekeeping questions or NCDA&CS Pesticide Section (984)236-4575 for Pesticide questions.

Name of Pest	Registered Treatment (Active Ingredient)	Registration Number	Application	Use with honey supers?	Season & Temps.
 Synthetic chemicals	Varroa mite <i>Varroa destructor</i>				
	Apivar® (Amitraz)	EPA Reg. No. 87243-1	Use 2 strips per brood box (1 strip per 5 frames of bees), separate strips, hang each in bee cluster with 2 frames between strips. Leave strips inside hive for 42 days, then remove (<i>max 56 days</i>). Do not re-use strips. Do not use more than 2 times a year.	No. Remove strips 2 weeks before honey flow	spring, fall
	Apivar® 2.0 (Amitraz)	EPA Reg. No. 87243-5	Same as Apivar but leave strips inside of hive for 70 days if brood is present and then remove.	No. Zero day withholding period.	spring, fall; temps >50°F
 RNAI	AmiFlex® 2.0 (Amitraz) <i>Original Amiflex was canceled in Feb. 2026</i>	EPA Reg. No. 87243-6	Use dosing gun to apply 2 doses of 3ml gel onto 2 wooden supports per brood box making sure frames are scraped clean. Leave one frame gel free between 2 frames with gel. Do NOT apply more than 4 times a year.	No. Not for use during nectar flow	spring, summer, fall
	Norroa™ (Vadescana)	EPA Reg. No. 94614-4	Apply 2 pouches inside brood box at same time OR 1 pouch inside brood box followed by second pouch within 1-3 weeks. At least ½ inch space required between frames and cover or place on bottom board. Remove pouches once empty. Do NOT apply more than 4 pouches per calendar year.	No. Not for use during nectar flow	Spring (preferred), fall; must have open brood
 Organic acids	HopGuard®3 (Hop Beta Acids Resin)	EPA Reg. No. 83623-2	Use 2 strips per brood box (1 strip per 5 frames of bees). Unfold strips and hang over a center brood frame with 1/2 of the strip on each side of the frame. If using 2 strips, keep 2 frames between strips. Leave strips in hive for 14 days (<i>max 30 days</i>). Efficacy can increase with low brood present or back-to-back treatments (2 weeks apart). Do NOT use more than 4 times per year.	Yes	spring, summer, fall; temps >50°F
	Formic Pro® (Formic Acid)	EPA Reg. No. 75710-3	Use 2 pads (staggered) for 14 days OR first pad for 10 days, remove and replace with second pad for additional 10 days. Lay pads flat across frames of lower brood box. Do NOT disturb hive during treatment period. Close screen bottom board, open entrance fully. <i>Allow min. one month between applications.</i>	Yes	spring, summer, fall; temps 50°F-85°F
	Api-Bioxal (Oxalic Acid Dihydrate)	EPA Reg. No. 73291-2	Use when little to no brood is present in hive. Ensure bees are clustered before applying trickle solution [1.23 oz (35 g) powder in 0.26 gal (1 L) 1:1 sugar syrup]. <i>Max 1.7 fl oz (50 ml) per colony.</i> Vaporize 0.14 oz (4 g) per brood box. Should only be applied to outdoor colonies. Treat packages with spray method, refer to label. Respirator required, refer to label.	Yes	spring, fall; temps > 37°F
	Api-Bioxal RTU (Oxalic Acid Dihydrate)	EPA Reg. No. 73291-3	Use when little to no brood is present in hive. Smoke bees down; using a syringe trickle 0.03 fl. oz. (5ml) of solution per seam of bees in each brood box. Treatment can be repeated up to four times 7-10 days apart. Respirator required, refer to label	Yes	spring, fall; temps > 37°F
	EZ-OX® Oxalic Acid (Oxalic Acid Dihydrate)	EPA Reg. No. 101743-2	Use when little to no brood left in hive. Vaporizer or solution method. Do NOT use tablets for solution method. Vaporize 2g OR two 1g tablets per deep hive body (<i>max</i>). Should only be applied to outdoor colonies. Respirator required, refer to label.	Yes	spring, fall; temps > 37°F
	VarroaSan™ (Oxalic Acid Dihydrate)	EPA Reg. No. 94413-3	1 strip per 2.5 frames of bees (<i>max. 4 strips per brood box</i>). Leave strips in hive for 42-56 days (<i>max. 56 days</i>). Do not reuse strips. Most effective when colony is actively foraging. Respirator required, refer to label.	Yes, avoid using during intense nectar flow	spring, summer, fall; temps >60°F
 Essential oils	ApiGuard® (Thymol)	EPA Reg. No. 79671-1	Combine weak colonies. Open and place one tray OR administer 51ml of gel, refer to label, centrally on top of brood frames. Make sure worker bees can access tray. After two weeks, repeat treatment for 2-4 weeks (4-6 weeks total for entire treatment). Use 25mg dose if temps above 77°F. <i>Do not enter or allow others to enter treated area(s) for 48 hours after treatment.</i>	No. Not for use during nectar flow	fall (preferred), spring; temps 60°F-105°F
	Api Life Var (Thymol, Eucalyptus, L-Menthol)	EPA Reg. No. 73291-1	Cut pack in half lengthwise. Break 2 half tablets into 2 pieces and place the 4 pieces around edge of brood nest. Leave first tablet 7-10 days. Place second tablet for 7-10 days. Place third tablet for 12 days. Close off screen bottom boards and reduce entrances. Do NOT apply more than twice a year.	No. Not for use during nectar flow. Remove 30 days before honey harvest	fall (preferred), spring; temps 64°F-95°F

Stock Bred for Hygienic Behavior: Queens bred for hygienic behavior and *Varroa* resistance are available through many queen breeders. These queen lines include Russian, VSH/Pol-line, MN Hygienic, and Purdue mite/ankle biters.

Integrated Pest Management (IPM) – *Varroa*: No single treatment option is 100% effective. **Check mite levels monthly and after treatment to ensure efficacy.** Use a combination of hygienic or mite resistant stock, drone brood removal, screen bottom boards, and brood breaks. Rotate “hard” and “soft” controls and keep records of each treatment type and date. Review the [Honey Bee Health Coalition’s \(HBHC\) Varroa Management Guide](#) for more information.

Name of Pest	Registered Treatment (Active Ingredient)	Registration Number	Applications	App. Season &
Wax moth <i>Achroia grisella</i> , <i>Galleria mellonella</i>	Para-Moth® Insecticide (Para-Dichlorobenzene)	<i>EPA Reg. No.</i> 61671-2	Use on extracted, stored combs. Stack boxes tightly on several layers of newspaper. No more than five deeps or 10 mediums per stack. Kills adults and immature stages, but not eggs. Treated stored combs must be thoroughly aired out before use, otherwise bees will be killed, refer to label.	<i>N/A</i>
Small hive beetle (SHB) <i>Aethina tumida</i>	Y- TEX GardStar® 40% EC (Permethrin)	<i>EPA Reg. No.</i> 39039-8	Treats SHB larval stage. Soil drench only. See label for directions and follow carefully. Cut grass prior to application. Apply 24-48 hours prior to placement of hive support(s) (e.g. pallet(s)). Highly toxic to bees.	<i>N/A</i>
SHB	CheckMite+™ (Coumaphos)	<i>EPA Reg. No.</i> 11556-138	Refer to label for directions and follow carefully. Remove honey supers before application. Prepare 4X4 in. piece cardboard. Cut one strip in half crossways and staple the two pieces to the cardboard. Place near center of bottom board with strips down. Leave strips in hive for ≤42 days (<i>maximum 45 days</i>). Do NOT treat for SHB more than four times per year. NOT recommended for <i>Varroa mite</i> control due to documented widespread resistance.	<i>N/A</i>

The following medications require a Veterinary Feed Directive (VFD) order or a prescription from a veterinarian. Labels and formulations vary. Consult with your veterinarian.

American Foulbrood (AFB) <i>Paenibacillus larvae</i> European Foulbrood (EFB) <i>Melissococcus plutonis</i>	TM- (50®, 50®D, 100®, 100®D), Tetroxy® 25, Pennox 343®, Tetroxy® 343 (Oxytetracycline hydrochloride)	<i>FDA Reg. No.</i> NADA 008-804 ANADA 200-146 ANADA 200-026 ANADA 200-247	After consultation with your veterinarian, follow VFD order/ prescription and label precisely. Remove at least six weeks prior to honey flow to avoid contamination of production honey.	As needed in early spring or fall.
AFB and EFB	Terramycin® (10, 30, 50, 100, 200), Terramycin® 200 Granular, Terramycin® 100MR (Oxytetracycline dihydrate)	<i>FDA Reg. No.</i> NADA 095-143		
AFB and EFB	Pennox (50®, 100-MR®, 100 Hi-Flo®, 200-Hi-Flo®) (Oxytetracycline)	<i>FDA Reg. No.</i> NADA 138-938		
AFB (<i>NOT effective for EFB</i>)	Tylan Soluble™, BiloVet®, Tylovet® Soluble (Tylosin Tartrate)	<i>FDA Reg. No.</i> NADA 013-076 ANADA 200-455 ANADA 200-473		
AFB (<i>NOT effective for EFB</i>)	Terramycin® (-343®, soluble powder concentrate) (Oxytetracycline hydrochloride)	<i>FDA Reg. No.</i> NADA 008-622		
AFB (<i>NOT effective for EFB</i>)	Lincomix® Soluble Powder (Lincomycin Hydrochloride)	<i>FDA Reg. No.</i> NADA 111-636		

American Foulbrood (AFB) Guidance: If hive(s) are suspected of having AFB, contact your area NCDA&CS Apiary Inspector. (919) 218-3310 Review the [Honey Bee Health Coalition’s Managing Foulbrood Guide](#) for more information about AFB and EFB.



For more information or questions contact:

NCDA&CS Apiary Services for Beekeeping questions (919)218-3310 www.ncagr.gov/divisions/plant-industry

NCDA&CS Pesticide Section for Pesticide questions (984)236-4575 www.ncagr.gov/SPCAP