Extension
ALABAMA A&M & AUBURN UNIVERSITIES

Home Lawns

IPM-1314

Insect Control Recommendations for 2021

Diseases, insects, and weeds are all pests of lawns. Insect control is an important part of home lawn care. Following proper management recommendations will promote a healthy, vigorous lawn capable of withstanding most pest problems. However, there are always exceptions when chemical control may be necessary. For help identifying and controlling specific insect issues, contact your county Extension office.

Key Insects

Ants. Unlike fire ants, nuisance ant species are not typically an issue in managed lawns. However, occasionally ants will invade lawns, gardens, landscape beds, playgrounds, and other structures. Their nests are built in the soil, wood, or other suitable materials. Ants establish colonies in sunny locations developing an underground tunnel system with galleries. Aboveground mounds will form as they excavate their tunnel system. Effective control requires killing the queen, but ants can be a reoccurring, annual issue.

Chinch Bugs. Chinch bugs are the most detrimental insect pest in St. Augustinegrass. Chinch bug damage is often confused with drought damage during midsummer. Dry, hot weather is a perfect environment for chinch bug development. Expanding, large, and irregular patches of dead grass with a yellowed border are characteristics of chinch bug damage. Closely examine the turf by separating the grass down to the soil along the yellowed border and looking for chinch bugs.

Cicada Killer Wasps. Cicada killer wasps spend their time digging underground burrows and finding cicadas to feed to their brood. As a result, you'll find these solitary wasps near trees with cicadas. They also prefer well-drained soils with abundant sunlight. Their digging behavior may affect the aesthetic of some laws. However, cicada killer wasps are passive creatures that often fly near the ground and rarely affect humans. Only the females possess a long stinger that is used to paralyze cicadas. Male cicada killers may act territorial but are harmless.

Digger Wasps. Digger wasps (*Scolia dubia* is the most commonly encountered) are ground-nesting insects that prey on root-feeding white grubs (in the case of *Scolia dubia*) or other insects. Their presence can be alarming; however, they do not cause harm to humans or damage to lawns. Digger wasps are considered beneficial insects.

Earwigs. Earwigs are easily recognized by their forceps-like appendages at the end of their abdomen. They prefer moist locations and may use accumulated lawn clippings for breeding sites. Earwigs cause minimal damage to turfgrass.

Fall Armyworms. Armyworms are most notably seen "marching" in large numbers across lawns. They often feed openly, sometimes during the day, making themselves relatively easy to spot. Armyworms are voracious feeders; they can consume large quantities of foliage in a short time. These caterpillars have a distinctive Y pattern on their head. The fall armyworm has been an annual pest on crops in the Southeast for more than 100 years. They attack a variety of plants, including turfgrasses but seem to prefer well-fertilized and maintained bermudagrasses. Fall armyworms will attack most turfgrass species.

Ground Pearls. These insect pests can be difficult to find because they are small and feed on turfgrass roots. Ground pearls belong to the scale insect family *Margarodidae* and will infest bermudagrass, centipedegrass, St. Augustinegrass, and zoysiagrass. Females are pinkish in color and appear in late spring. Eggs will hatch from May through June. These immatures (nymphs) enclose themselves in a white or tan coating made of wax and their cast skins, resembling a pearl. Ground pearls attach themselves to roots via their strawlike piercing-sucking mouthparts. Turf dies back, resembling drought damage. Stressed turf can result in more severe damage. There are no labeled insecticides for the specific control of ground pearls. Cultural control using best management practices to keep the turf healthy is the best defense.

Pillbugs and Sowbugs. These slow-moving arthropods are commonly found under pavers, stones, and logs but will crawl about at night feeding on decaying organic material. While they occasionally feed on plants, the damage is not significant.

Imported Fire Ants. There are two species of imported fire ants: the black imported fire ant, *Solenopsis richteri*, and the red imported fire ant, *Solenopsis invicta*. They are capable of infesting homes, damaging electrical equipment, and terrorizing lawns. Prevention of fire ants requires an integrated pest management solution. Scouting for mounds and applying a control method are the most effective.

Millipedes. Homes across Alabama often experience millipede invasions in early summer. Millipedes should not be confused with centipedes that bear only one pair of legs per body segment. There are about 1,000 different kinds of millipedes. The one that has been most troublesome to homeowners is the common garden millipede. Damage inside the home is rare; however, they can leave a stain if crushed. Millipedes do not carry diseases that affect humans, animals, or plants. Outside of the home, they would be considered beneficial decomposers that break down organic matter in the environment.

Mole Crickets. Mole crickets have become the most destructive insect pest to turf in the Gulf Coast region. There are two distinct families of mole crickets. Destructive mole crickets have digging front legs and live most of their lives in

the soil. Mole crickets feed on grass roots but also feed at night at the surface on grass blades or other insects. Their tunneling can also pose lawn problems when an infestation is severe. Pygmy mole crickets are much smaller and are not associated with damage to turf or pasture grasses.

Sod Webworm. This large group of pests is usually found in sunny areas of turfgrass. At night, the larval stages feed on grass blades and stems near the soil surface. During the day, larvae will hide within silk-lined burrows that penetrate the soil. As they feed, patches of scalped-appearing grass will result, as will accumulations of green frass. The adult stage (moth) does not cause damage to turf. Sod webworms feed on most turfgrasses including fescues and zoysiagrass.

Two-Lined Spittlebugs. These sucking insects are an occasional pest to lawns and ornamental plants. Spittlebugs damage grass by piercing the plant tissue with their needlelike mouthparts and sucking out sap. Spittlebug nymphs surround themselves with a mass of froth close to the soil. Humid, moist environments favor the development of two-lined spittlebug populations. Thick turf and thatch provide perfect conditions for eggs and nymphs to establish.

White Grubs. White grubs are immature (larval) stages of scarab beetles. Most grubs mature in a year; others take 2 or 3 years. Grubs damage turf by feeding on grass roots. Dead or dying patches of turf in the spring or fall may be the result of grubs feeding on roots. The yellow-brown patches of turf will lift from the soil, like a rug from the floor, as no roots are in place to anchor it anymore. Raccoons and opossums digging into lawns or flocks of birds feeding on lawns sometimes indicate the presence of grubs. Most lawn grasses are subject to damage by white grubs.

Table 1. Home Lawn Insecticides

Active Ingredient	Trade Name	Rate per 1,000 sq. ft.	Comments	Labeled Control
Bifenthrin (7.9%)	Bifen IT Insecticide	0.18–1.0 fl. oz.	**DO NOT** reapply within a 7-day period.	Ants, armyworms, cutworms, sod webworms, chinch bugs, millipedes, mole crickets, spittlebugs.
Bifenthrin (0.2%)	Bifen LP Insecticide	1.15–4.6 lbs.	No more than 2 lbs. of active ingredient (200 lbs. of Bifen L/P Granules) per acre per year.	Ants, armyworms, cutworms, sod webworms, chinch bugs, millipedes, mole crickets, spittlebugs.
Bifenthrin (0.115%)	Ortho Home Defense Insect Killer for Lawns	1–4 lbs.	For season-long control, apply 4 lbs. of product per 1,000 sq. ft. Treated area should be thoroughly watered immediately after application. Note: When using these for caterpillars, you shouldn't water it in as the residue needs to be on the leaves for them to eat.	Ants, armyworms, cutworms, sod webworms, chinch bugs, millipedes, mole crickets, spittlebugs.
Bifenthrin (7.9%)	Wisdom TC	0.18–1.0 fl. oz.	Use higher application rates when maximum residual control is desired. Repeat application only if there are signs of renewed insect activity.	Ants, armyworms, cutworms, sod webworms, chinch bugs, millipedes, mole crickets, spittlebugs.

Table 1. Home Lawn Insecticides (con't.)

Active Ingredient	Trade Name	Rate per 1,000 sq. ft.	Comments	Labeled Control
Bifenthrin (0.029%) + Zeta-cyfluthrin (0.115%)	Sevin Insect Killer Lawn Granules	1–4 lbs.	Repeat application only if there are signs of renewed insect activity. **DO NOT** reapply within a 7-day period. **DO NOT** exceed 4 lbs. per 1,000 sq. ft. per application. Best results are obtained if the treated area is thoroughly watered immediately after application.	Ants, armyworms, cutworms, sod webworms, chinch bugs, fleas, millipedes, mole crickets, spittlebugs..
Bifenthrin (0.3%) + Beta-cyfluthrin (0.075%)	Ortho Bug-B-Gon Insect Killer for Lawns and Gardens	6 fl. oz.	Apply to lawn that was mowed and watered within the last 24 hours. Mowing may be resumed after 2 to 3 days. For mole cricket control, water thoroughly immediately after application. Apply when insects first appear. Wait 4 to 6 weeks between applications.	Ants, armyworms, cutworms, sod webworms, chinch bugs, fleas, millipedes, mole crickets, spittlebugs..
Chlorantraniliprole (0.08%)	Scott's GrubEx Season Long Grub Killer	2.87 lbs.	Apply to dry lawn. Water in thoroughly to activate. **DO NOT** exceed more than one application per year.	Armyworm, cutworm, sod webworm, white grubs. Suppresses chinch bug.
Cyfluthrin (0.75%)	BioAdvanced Insect Killer for Lawns	6 fl. oz.	Do not mow for 1 day after application. For severe infestation, retreat every 7 to 14 days. **DO NOT** exceed 9 applications per year.	Ants, armyworm, cutworm, sod webworm, chinch bugs, fleas, mole crickets, spittlebugs, ticks.
Gamma-cyhalothrin (0.05%)	Spectricide Triazicide Insect Killer for Lawns	0.8–1.2 fl. oz.	**DO NOT** apply more than 6 times per year per location at the low rate. **DO NOT** apply more than 3 times per year per location at the high rate.	Ants, armyworm, cutworm, sod webworm, chinch bugs, fleas, millipedes, mole crickets, spittlebugs, ticks, white grubs.
Imidacloprid (0.15%) + Beta-cyfluthrin (0.05%)	BioAdvanced Complete Insect Killer (2-Way Formula)	1–3 lbs.	If pest pressure is high, apply at the rate of 3 lbs. per 1,000 sq. ft. Water thoroughly within a day after applying. To prevent pest damage, apply this product early when pests are still young and easier to kill.	Ants, armyworm, cutworm, sod webworm, chinch bug, mole crickets, white grubs.

Table 1. Home Lawn Insecticides (con't.)

Active Ingredient	Trade Name	Rate per 1,000 sq. ft.	Comments	Labeled Control
Imidacloprid (0.72%) + Beta-cyfluthrin (0.36%)	BioAdvanced Complete Insect Killer (2-Way Formula)	6 fl. oz.	For severe infestations, repeat every 7 to 14 days as needed. **DO NOT** apply more than 0.4 lbs. of Imidacloprid (equiveaant to twenty-one 4 oz. bottles) per acre per year.	Ants, armyworm, cutworm, sod webworm, chinch bug, mole crickets, white grubs.
Permethrin (10%)	Southern Ag Permetrol Lawn Insecticide	0.5 - 1.2 fl.oz.	For surface feeders delay watering or mowing for 24 hours. For subsurface feeders, irrigate with 1/4 inch of water immediately after application. For best results, delay watering or mowing for 24 hours after treatment. For heavy infestations, repeat application after 2 weeks.	Ants, armyworms, cutworms, sod webworms, chinch bugs, millipedes, mole crickets
Spinosad (0.5%)	Green Light Lawn and Garden Spray with Spinosad	0.6 fl. oz.	Does not significantly impact beneficial insects while controlling target pests by ingestion and contact activity. Susceptible insect pests may be observed on plants up to several hours after treatment, but will have ceased active feeding before being killed. Allow treated areas to dry before entering. Note: When treating fire ants, DO NOT water treated areas within 24 hours of application.	Caterpillars, fire ants, fleas, mosquitoes
Trichloron (9.3%)	BioAdvanced Grub Killer Plus	1.33 - 2 lbs.	Water thoroughly within 24 hours after applying. DO NOT mow until the granules are watered in and the grass has dried. DO NOT apply this product to waterlogged areas, as this may decrease the product's effectiveness. DO NOT exceed 3 applications per calendar year. DO NOT reapply within a 7-day period.	Armyworm, cutworm, sod webworm, mole cricket, white grubs

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Active Ingredient	Trade Name	Rate per 1,000 sq. ft.	Comments	Labeled Control
Zeta-cypermethrin (0.35%)	Gordon's Bug-No-More	15 fl.oz.	For best results, apply after mowing (lawn height should not exceed 3 inches at time of application). Repeat application only if there are signs of renewed insect activity.	Ants, armyworm, cutworm, sod webworm, chinch bug, mole cricket, spittlebug, white grubs.
Zeta-cypermethrin (0.35%)	Sevin Insect Killer Concentrate	16 fl.oz.	For best results, apply after mowing (lawn height should not exceed 3 inches at time of application). Repeat application only if there are signs of renewed insect activity.	Ants, armyworm, cutworm, sod webworm, chinch bug, mole cricket, spittlebug, white grubs.

MEASUREMENT CALCULATIONS: Total lawn area in square feet = length x width.

EQUAL MEASURES: 1 fl. oz. = 2 Tbsp. (6 tsp.); 2 fl. oz. = 4 Tbsp; 4 fl. oz. = ½ cup; 8 fl. oz. = 1 cup; 16 fl. oz. = 1 pt; 32 fl. oz. = 1 qt.

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FOR MORE INFORMATION on pesticides, pesticide safety, or submitting samples for analysis, see the following publications in the IPM series:
IPM 1293, "Safety." Safety contact information; worker protection standards; the safe use, handling, and storage of pesticides
IPM 1294, "Submitting Samples." Procedures for submitting samples for diagnosis, analysis, and identification
IPM 1295, "General Pesticide Information." Federal and state restricted use pesticide lists; pesticides and water quality
IPM 1317, "Appendix." Pesticide guidelines for agronomic crops, including preharvest intervals; rain-free requirements; grazing restrictions; crop rotation guidelines; and the names, classifications, and toxicities of pesticides.

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For more information, contact your county Extension office. Visit www.aces.edu/directory.

Use pesticides **only** according to the directions on the label. Follow all directions, precautions, and restrictions that are listed. Do not use pesticides on plants that are not listed on the label

The pesticide rates in this publication are recommended **only** if they are registered with the Environmental Protection Agency or the Alabama Department of Agriculture and Industries. If a registration is changed or canceled, the rate listed here is no longer recommended. Before you apply **any** pesticide, check with your county Extension agent for the latest information.

Trade names are used **only** to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.