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Grasshoppers Are Beginning to Hop Everywhere!!!

As we walk outdoors in late summer, we might be overwhelmed by the number of grasshoppers. This is due to warm, dry autumns and hot, dry summers, which favor grasshopper survival and reproduction. Grasshoppers develop through simple metamorphosis with an egg, nymph and adult stage. The female grasshopper uses its long ovipositor to deposit eggs ½ to 2 inches into the soil in the fall. They will deposit eggs in such areas as weedy places, fence rows, and ditches. The eggs hatch in the spring or early summer, depending upon species. The nymphal stage feeds for around 6 weeks before molting into an adult with fully developed wings. The adult grasshoppers will be found until late fall or until a frost occurs.

Grasshoppers feed mainly on weeds. However, when the weeds dry up the grasshoppers go in search for food. This search may lead them to the plants in your landscape.

Some Control Options:

Non-Chemical Controls:

- 1) Weed control is the most effective way to decrease the number of grasshoppers in an area. If weeds are eliminated, nymphs will starve and adults will be discouraged from laying eggs in the area.
- 2) Also tilling the soil in the late summer will discourage female grasshoppers from depositing eggs, since they like to lay eggs in undisturbed soil.
- 3) Floating row covers can be used to protect such areas as vegetables, flower gardens, and small fruit trees from grasshoppers. The fabric allows sunlight through, while protecting plants from insects and cold weather.

Chemical Controls:

Monitor grasshopper infestations and treat when grasshoppers are in the nymphal stage and before they move into crops or landscapes. The immature grasshoppers are more susceptible to insecticides. Some effective insecticides include the active ingredients diflubenzuron, cyfluthrin, bifenthrin, acephate and permethrin. Also baits can be applied such as those containing carbaryl.

Insecticides typically do not persist in the environment more than a few days. This means grasshoppers may soon re-invade.



Differential grasshopper, *Melanoplus differentialis* (Thomas) (Orthoptera: Acrididae).
Photo by Dr. Bart Drees, Texas A&M University.

Chinch Bugs

As we walk onto our lawns this summer, we might come across browning, dying patches of turfgrass. This damage could be the result of chinch bugs. The southern chinch bug, *Blissus insularis*, is one of the most prominent insect pests of St. Augustine-grass in Texas. Even though these insects are around 1/5 inches in length, they can cause damage to large areas of turf.

Chinch bugs develop through simple metamorphosis with egg, nymph and adult stages. Nymphs appear orange red with a pale white band across their abdomens. As they molt, the nymphs will change color from orange red to black and develop wings. The adult chinch bugs have black bodies with fully developed white wings that have black triangular markings on the outer margins. The entire life cycle from egg to adult can occur in about 7 to 8 weeks, so more than one generation can occur in a year.

St. Augustine grass is the primary host of the southern chinch bug, but they can also attack bermudagrass, bahiagrass and zoysiagrass. Both nymphs and adults remove sap from the base of plants and inject a toxic substance that prevents transportation of water within the plant. Damage appears as irregular patches of dead or stunted grass surrounded by a halo of yellowing, dying grass. Damage can develop rapidly, especially during hot, dry weather.

One way to detect chinch bug infestations is to use a floatation method. An open-ended can immersed in the soil filled with water will cause the chinch bugs to float to the top of the can. The can should be placed in different locations in the damaged grass, totaling a square foot sample area. If 20 to 25 chinch bugs are found in random samples equaling one square foot, then control is needed. Also when infestations exist, chinch bugs may be seen walking on leaves or adjacent sidewalks on hot days.



Figure 1. Chinch bug damage on lawn.

Some Control Suggestions:

Non-Chemical Control Options:

- 1) Keeping thatch to a minimum will reduce protective breeding areas for chinch bugs. Lawn aeration and top-dressing, such as compost, can also reduce thatch.
- 2) Too little or too much water also can cause chinch bug problems. Over-watering results in saturated, oxygen-deprived soils which contain few microbes needed to decompose thatch. Dry lawns should be watered immediately when edges of grass blades begin to curl or the grass fails to spring back quickly when stepped on.
- 3) Plant resistant varieties of grass such as 'Floritam', 'Floralawn', and 'Floratine' which shows varying degrees of resistance to feeding.
- 4) Keep beneficial insects in the lawn such as big-eyed bugs (*Geocoris* spp.), minute pirate bugs (*Xylocoris* spp.), and ants.

Chemical Control Options:

A variety of liquid and granular insecticides is available to control chinch bugs. Granular insecticides can be applied with a standard fertilizer spreader and irrigated lightly by applying a 1/4 inch of water to activate the insecticide. Liquid sprays are usually applied using a hose-end sprayer, so be sure to spray back and forth across the same area to ensure entire area is treated.

If chinch bugs are in an isolated areas of the lawn, spot treatments can be used. The off-colored turf and all surrounding infested areas should be treated. Spot treatments can minimize the impact of insecticides on beneficials and help avoid environmental contamination.

Products containing such chemicals as acephate, imidacloprid, lambda-cyhalothrin, bifenthrin and permethrin can be used to control chinch bugs.



Photo: Chinch bugs, *Blissus* spp. (Hemiptera: Lygaeidae), nymphs and adults. Photo by Bart Drees, Texas A&M University.

The Lovely Crickets Are Calling

As we walk outside in the evening, a new sound might greet us. This new sound might be the male cricket's mating song, which is a high-pitched sound produced by the male cricket rubbing his front wings together to attract a female.

Crickets develop through simple metamorphosis, with an egg, nymph and adult stage. The female cricket will deposit eggs into the soil. The eggs hatch into nymphs, which gain wings every time they molt. Adult crickets are 1/2 to 1-1/4 inches long, black in color, and have a stout body. Several generations of crickets are produced every year.

Crickets feed on all organic matter, including decaying plant material and fungi. Since crickets breakdown plant materials, they are considered beneficial by renewing soil minerals. They are also a food source for many animals such as spiders, ground beetles, birds, lizards and small rodents.

Crickets are normally outdoor insects, usually found under rocks, logs, and any crack or crevice. Since they live next to our homes, their song can become an irritant to homeowners. Also, they can enter our homes through such areas as doors and windows.

Some Control Options:

Non-chemical Suggestions:

- 1) Caulk or seal cracks and gaps that are found in the foundation, around doors, windows, and garage doors.
- 2) Trim weeds and tall grass growing near the foundation.
- 3) Remove firewood, brush, rotting wood, boxes, bricks, stones and other objects from around the structure, in order to reduce the number of harborage areas.
- 4) For crickets found inside the home, vacuum or sweep up and discard them.

Chemical Control Suggestions:

If a severe infestation exists, there are granular products that can be used for control, such as those containing hydramethylnon. There are also chemicals that can be sprayed outdoors to provide a barrier around homes, such as pyrethrins or bifenthrin. There are also products that can be applied indoors and outdoors in cracks and crevices, such as those containing boric acid.



A field cricket, *Gryllus* sp. (Orthoptera: Gryllidae). Photo by Dr. Bart Drees, Texas A&M University.

Now is the Time to Treat for Fire Ants:

Since the recent rains, there have been more and more fire ant mounds popping up in landscapes. Fire ant mounds are not only unsightly, but these ants are medically important. These ants are aggressive and tend to come out of their nest by the thousands when disturbed. This causes us to have no choice, but to use control methods to decrease their populations.

Before treating for fire ants, one must first survey the area to determine the number of mounds. If less than 5 mounds are present in a quarter acre plot, then it is advised to treat the individual mounds. The mound treatment is the fastest way to get rid of the fire ant mounds, but it is more labor intensive and more costly to apply when compared to the broadcast baits.

If more than 5 mounds are present, then treatment should be broadcasted over the entire area. A fire ant bait or contact insecticide may be used. Fire ant baits are made up of defatted corn grit covered with insecticide and soybean oil. Before broadcasting the fire ant bait, foraging activity should be assessed. In order to test for foraging activity, place a potato chip or hot dog next to the mound. If fire ants find the chip or hot dog within about twenty minutes, then the bait should be broadcasted. Fire ants will typically actively forage when the soil surface temperature is between 70 and 90° F, which is between May and September. The delivery process of baits into the colony is so effective, that the amount of insecticide applied in an area is significantly reduced. Fire ant baits should never be watered into the soil and they should not be used if they smell rancid. Also contact insecticides can be broadcasted over the entire area and need to be watered into the soil. One contact insecticide containing fipronil can be used for fire ant control and will usually provide 9 to 12 months control.

Both fire ant baits and contact insecticides can be broadcast using a hand-held spreader for small areas or a Herd Seeder can be mounted onto a truck or ATV for larger areas.

Before applying any type of pesticide, always be sure to read and follow the pesticide label. Also, never use harmful toxins, such as gasoline to control fire ants. These products are illegal and dangerous. Also, never leave insecticide baits on streets or walkways after application, in order to avoid unnecessary entrance into the water supply.

For more information, please visit the fire ant webpage at <http://fireant.tamu.edu>.



Red imported fire ant worker. Photo by Bart Drees, Texas A&M University.

Mention of commercial products is for educational purposes only and does not represent endorsement by Texas Cooperative Extension or The Texas A&M University System. Insecticide label registrations are subject to change, and changes may have occurred since this publication was printed. The pesticide user is always responsible for applying products in accordance with label directions. Always read and carefully follow the instructions on the container label.