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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.