

Insects

Greenbug in Grain Sorghum

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Introduction

Greenbugs are small (1.6 mm long), soft-bodied insects that are oval in shape. Greenbugs usually feed in colonies by sucking sap from leaves. Feeding may cause mottling and discoloration of the plant. Heavily infested leaves turn red or yellow, shrivel and die. Damaging levels of greenbugs can result in the destruction of entire grain sorghum fields.

Description and Biology

The adult aphid is light green with a darker green stripe down its back. The antennae, tips of the leg (tarsi) and cornicles (dual structures near the rear portion where honeydew is excreted) are black. Females produce living young (nymphs) without mating. Under optimal temperatures, nymphs can complete their development to adult form in only 7 days. There can be more than 10 generations of greenbugs per year on sorghum.

Symptoms and Damage

Greenbugs inject a toxin into leaf cells while feeding. This causes leaves to turn red or yellow and leaf death often occurs. Greenbugs may also act as a vector for Maize Dwarf Mosaic Virus (MDMV) if johnsongrass is abundant in the field. The virus produces distinct yellow mottling of leaf tissues and stunting of infected sorghum plants.

Greenbugs are most commonly found on the undersides of leaves (Figure 1) and honeydew may be present. Although aphids are usually more active in the spring when temperatures are cooler, they have been known to cause serious damage in late June.

Control Practice

Greenbugs are reduced in number by predators like lady beetles, parasitic wasps and damsel bugs. In addition, seed companies continue to develop grain sorghum hybrids which have better tolerance to infestations of the greenbug. Biotype “E” greenbug resistant hybrids have been introduced most recently.

Chemical controls may be necessary when greenbug populations are above threshold and natural predators are nonexistent or not effective. The treatment threshold increases with the developmental stage of sorghum (Table 1). A list of recommended insecticides can be found in Table 2.

Table 1 *Treatment Threshold*

Stage of the Plant	When to Treat
Seedling to 4 leaves	One or more aphids present on plants. Leaves begin to show damage symptoms.
5 to 6 leaves	One or more aphid colonies present on lower leaves. Lowest leaf with severe discoloration.
7 leaves to preboot	Numerous colonies present on lower leaves. Lowest leaf dead.
Boot to emergence of grain head	Numerous colonies on lower 3 to 4 leaves. Lowest leaf dead.

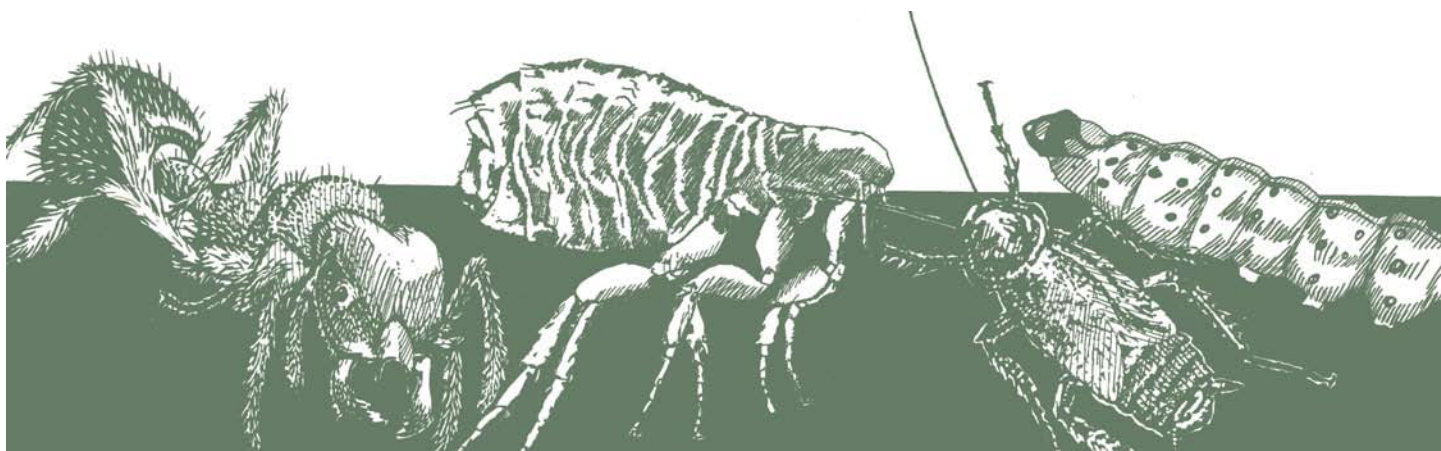


Table 2

Recommended Controls

Insecticide	Rate/Acre	Preharvest Period (days)
Furadan 4F	½ to 1 pt.	75
Mustang Max	3.2 to 4.0 oz.	14
Warrior	1.28 to 1.92 oz.	1 day forage, 7 hay



Figure 1. Greenbugs on leaf. *Photo Credit: Phil Sloderbeck, KSU.*

Precautionary Statement

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

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