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## Drought and insects in crops

*Gene Munson and Wayne Bailey, Department of Entomology*

Small grain harvest is over in most areas of the state. The chinch bug was a major pest during most of the previous droughts. This insect begins development in small grains and migrates to other crops after the small grains mature. If corn or sorghum is planted in fields near wheat, these fields should be checked for chinch bugs.

### Chinch-bug

The chinch bug should be in the late nymphal stages, still wingless, so the migration will be on the ground. If the insects are observed migrating to corn or sorghum, chemical controls may be applied to marginal rows before they become dispersed throughout the field.

There are three compounds labeled for treatment of both corn and grain sorghum.

- 1) 2.0 pounds carbaryl (Sevin),
- 2) 0.5 pound carbofuran (Furadan),
- 3) 0.5 pound chlorpyrifos (Lorsban).

The chinch bug, because they feed in hard-to-reach locations, is difficult to control. Good coverage of the plant with directed spray is necessary.

### Grasshopper

The moisture shortage, maturation and drying of weedy vegetation, mowing of highway rights of way and several other factors are causing migrations of grasshoppers to cultivated crops that are more attractive to these pests. The major pest species are either large nymphs or adults, so control is becoming increasingly difficult.

These species of grasshoppers normally hatch in late May or early June, and control is much easier when they are small and congregated close to hatching areas. The grasshoppers feed from hatching until August and September when their eggs will be deposited in the soil. The eggs go through the winter in the soil.

The early drought of 1988 caused conditions that obviously hampered the May-June grasshopper hatch resulting in low populations last year. Unfortunately, the moisture distribution was more favorable this season and we have an abundance of grasshoppers in the droughty areas. With the increase of no-till and conservation tillage practices in the state, the pest species tend to lay eggs throughout fields instead of confining oviposition to fence rows and traditional areas. This makes early season scouting more difficult. Generally if more than four large nymphal or adult grasshoppers are found in a square area in the row crops, legumes or pastures during the dry times economic damage will be done.

Several insecticides are recommended for grasshopper control. Some of them are: carbaryl (Sevin), chlorpyrifos (Lorsban), malathion, carbofuran (Furadan), dimethoate (Cygon and others), diazinon, permethrin (Ambush, Pounce) and esfenvalerate (Asana). Check labels to be sure about the commodity to be treated and rates to be used.

The higher recommended rates should be used in late season. Adult grasshoppers are winged and will fly so reinfestation is possible as soon as the residual activity of the insecticide is gone. If CRP or other program land is mowed or grazed adjacent crop or pasture land should be scouted for migrating grasshoppers.

#### Spider mite

During dry seasons following a mild winter spider mites may build up on soybeans. Spider mites usually are first found in field margins next to red clover or weedy fence rows. Controls should be applied when spots or marginal rows are found to be infested. Good coverage with 0.5 pound chlorpyrifos (Lorsban) or 0.33 to 0.5 pound dimethoate (Cygon) should be used for control. If grasshoppers and spider mites are present use one of these two materials for control to prevent a build-up of the mites.

The rates given for control are the actual toxicant rates per acre. Follow all label directions for re-entry, grazing, harvest intervals and application restrictions.

#### Insecticide application

Insecticides are not miracle drugs and will not relieve drought stress on plants, but hopefully they will give protection so the plants will survive.

Insecticides in some instances need moisture for activation. If corn was planted late and very little or no moisture is present to activate the soil insecticide, reduced control of insects such as corn rootworms can be expected. Economic thresholds of insects and most insect control recommendations are formulated under normal or better than normal conditions. We are not experiencing those conditions. We hear that if you don't like Missouri weather wait a day and it will change. We are anxiously waiting.