## ENTOMOLOGY

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District Entomologist

**Crop/arthropod situation for NE Mississippi:** Arthropod numbers in 2001 were in many ways similar to 2000 in NE Mississippi. `Different' pests continue to crop up in the area. The growing season began with reports of saltmarsh caterpillars in almost all crops. Soybeans, cotton and corn were infested and in some cases treated for these pests. Grasshoppers also were again in outbreak numbers in grass crops, but also in soybeans and cotton. Fall armyworms appeared much earlier than usual in grass crops and a number of pastures and hay fields required insecticide applications to halt the pest. Stink bugs caused a great deal of damage to soybeans and were also heavy hitters in some area cotton fields. Spider mites were also present in 2001 in some area cotton fields. In general the year was fairly light arthropod wise.

**Cotton:** Cotton is one of the mainstays in row crop agriculture in Northeast Mississippi and arthropod management is a major concern for cotton producers. As boll weevil eradication progresses and becomes more successful, cotton acres are gradually increasing in the area. The hill counties currently grow approximately 554,000 acres of cotton. Arthropod losses in 2001 were extremely light. All arthropods reduced yields by 4.67%. The bollworm/budworm complex caused the most problems reducing yields of NE Mississippi cotton by 1.8%. Northeast Mississippi farmers combat these pests by 1) planting Bt transgenic cotton and by 2) spraying insecticides for their control. Only about 1/3 of the acres were treated with any insecticide in 2001 and about 60% of the acres were planted to the Bt transgenic varieties. Foliar applications of insecticide were very low with an overall cost of $13.92 per acre in Northeast Mississippi. The total cost of arthropod management, including - at planting insecticides, Bt use fees, eradication costs, scouting, and foliar insecticides was $69.08 per acre. Yields were higher than in a number of years with many farms reporting in excess of 2 bales per acre. A complete listing of all Cotton Insect Losses is available at http://www.msstate.edu/Entomology/Cotton.html.

**Soybeans:** Insect activity in soybeans centered on outbreaks of grasshoppers and saltmarsh caterpillars during the early summer and stink bugs, late. The grasshoppers and saltmarsh caterpillars attacked young plants and completely destroyed stands in a number of counties in NE Mississippi. Insecticides were not as effective as desired and often, repeated applications were required to bring the outbreaks under control. In the late season , stink bugs moved into many fields damaging as many as 50% of the pods in areas. Insecticides were required to bring these pests under control in early maturing group IV and V soybeans especially.

**Corn:** Early corn was damaged by chinch bugs, saltmarsh caterpillars and high numbers of grasshoppers. In some areas of the NE District, stand was lost because of the outbreaks of these pests. Southwester cornborers were also heavy hitters in a large number of fields in the NE area. Trapping and intensified cultural management are planned for the upcoming season because of the increased presence of this pest.

**Sweetpotatoes:** Losses to insects in sweetpotatoes are almost always recognized after it's too late to do anything. Pests of this crop include – the grub complex (white grubs, whitefringed beetles, cucumber beetles, and others), the black flea beetle, and wireworms below ground, and the Lepidoptera – mostly armyworm complex above ground. In 2001 insect damage was fairly light. Early season damage and resultant stand loss occurred as a result of high cutworm numbers in fields shortly after slips were planted. The caterpillars cut mainstems in younger potatoes causing stand loss. Insecticide applications, prior to sweetpotatoes running, were required in many fields to control these pests. Wireworms returned as the numbers one pest of below ground portions of the sweetpotato, but the whitefringed beetle continues to build as a problem in NE Mississippi. There was still damage from cutworm/armyworms to the crown of sweetpotatoes, but not nearly as bad as in 2000. As in previous years, the later in the season harvest is delayed the greater the damage from insects, especially from wireworms, white grubs and whitefringed beetles.

**Other entomological activities in NE Mississippi:** Interest in butterflies and butterfly gardens continues to develop in NE Mississippi. Numerous Garden Clubs and other similar organizations are developing butterfly gardens throughout the area. Schools are also getting into the act by building outside science and environmental

study laboratories, which include butterfly plants. Homeowner gardens and Master Gardener Projects also received attention during 2001.

**4-H Activities:** There were 5 Junior Linnaean teams and 4 Senior Linnaean teams from the 28 county area in 4-H Linnaean Game competition. Lee and Attala Junior Linnaean teams were winners in their respective areas and Attala's Senior Team was first place in the Senior Linnaean Games at 4-H Club Congress and were the Linnaean Champions in the regional at the Mid-South Fair. There were 20 Insect collections from the 28 county area displayed in various fairs and competitions. More than 60 young people from the area participated in 4-H entomological activities including Entomology Camp in 2001. A number of NE Mississippi Extension Agents were extremely helpful with 4-H entomological activities in 2001. These individuals include – Connie Robbins and Tim Needham, Tippah county; Connie Patterson, Itawamba; Stan Wise, Union; Christine Fielder, Yalobusha; Karen Benson and Julie White, Attala; Scott Cagle, Montgomery.

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