

# Researchers Evaluate Insecticides For Peanuts

**STONEVILLE, MISS.**

**P**eanuts have become a good commercial crop for Delta farmers, and Mississippi State University researchers are evaluating the effectiveness of a group of insecticides on hard-to-control pests that impact these little jewels.

"Peanuts are an economically beneficial crop in Mississippi as more farmers are planting them now that the quota system has ended. But these plants are susceptible to pests such as caterpillars, three-cornered alfalfa hoppers and numerous soil insects," said Jeff Gore, an entomologist with MSU's Delta Research and Extension Center.

Caterpillars eat peanut plant leaves and are difficult to control using insecticides. Adults are active at dusk or at night, and lay eggs on plants and foliage. Small, green three-cornered alfalfa hoppers insert their beaks into plants to suck juices from the stems, which leaves the plants girdled and weakened. Soil insects often go unseen, unlike their effects. Soil insects feed on the roots, reducing plant growth and productivity. In worst-case scenarios, these soil insects feed on the developing pods, which reduces yields.

"We are evaluating the potential damage and impact insects cause on peanut yields because we do not know how they have been affecting the state's crop," said Don Cook, a research entomologist in Stoneville.

Using insecticides like organophosphates and carbamates, Gore and Cook are applying treatments and counting insect levels to determine effectiveness. These are the same classes of insecticides that have been used in the past in other areas of the country.

"These insecticides have always been effective, but they have not been evaluated in Mississippi," Gore said.

Currently, most insect control recommendations are based on data derived from other southeastern states and Texas, where peanuts have been grown in recent years. Limited data from Mississippi is available.

When used in crop rotation, peanuts also can

benefit the Delta's cotton farmers by replenishing the soil with organic matter and nutrients such as nitrogen. Cotton requires large amounts of nitrogen to achieve good height, color, fruit production and canopy cover.

"Peanuts leave significant amounts of crop residue and biomass to help supplement the soil after harvest," Cook said.



**Personnel at Mississippi State University's Delta Research and Extension Center in Stoneville harvest peanuts on Nov. 13, 2009, as part of a research study on insecticides.**

(Photo by Rebekah Ray/MSU Delta Research and Extension Center)

According to the National Agricultural Statistics Service, Mississippi farmers planted 4,000 acres of peanuts 10 years ago. In 2005, NASS listed Mississippi as one of 10 states that plant peanuts. Last year, state producers planted 21,000 acres in peanuts and produced 64,000 pounds of the legume. Δ