Description
The cotton fleahopper, *Pseudatomoscelis seriatus*, is a key pest in eastern Texas. Both adults and nymphs feed on new growth, including small squares. Squares up to pinhead size are susceptible to damage, and the plant is most susceptible during the first three weeks of fruiting. Cotton fleahopper numbers increase in wild hosts and move into cotton fields prior to squaring. In the Southern Blacklands, the population dynamics are consistent through years and vary only in numbers. Since fleahoppers migrate continuously between wild hosts, cotton in this region averages two insecticide applications for fleahoppers, with a range of one to four applications, depending upon the populations. The situation changes in the western part of the state, including the Rolling Plains. There the cotton fleahopper may increase to damaging populations only occasionally. In the Southern Rolling Plains, wild host availability is limited by rainfall and fleahopper populations usually remain small. Cotton in this production region rarely averages more than one insecticide application for fleahoppers.

Research and Results
- Recent research, performed with mechanical removal of squares, which cannot duplicate the physiological impacts of insect feeding, has again shown that the newer cotton varieties can compensate for early square loss (including square losses in the second and third week of fruiting) if square removal ended after the third week.

- This study evaluated cotton fleahopper control strategies in two production regions in Texas in light of new research. It was expanded in 2007 to include not only insecticide treatments but also to incorporate movement and population studies of fleahoppers. Cotton fleahopper populations prior to squaring were high in eastern Texas (Brazos and Burleson counties) but extremely low in the western part of the state (Lubbock and Tom Green counties). Populations were so low in wild hosts that it is difficult to determine how populations build up in levels in cotton.

- Insecticide treatments again showed no significant yield advantages. But the trial in Williamson county indicated that yields in the insecticide treatments were higher than the untreated. After three years, thresholds in the Southern Blacklands are adequate, but questions remain about the treatment frequency. Over the three years of the trial, the three automatic treatments have received 9 applications, while the threshold treatments have received only four. Producers may be able to more effectively target their applications. The Southern Rolling Plains data indicate that thresholds may need to be reevaluated.

For more information, contact
Bob Avant, Corporate Relations Director, Texas AgriLife Research
100 Centeq Bldg. A  |  1500 Research Parkway
College Station TX  77843-2583
Ph: 512.422.6171  |  E-mail: bavant@tamu.edu

http://AgriLifeResearch.tamu.edu