

Management Of Cotton Insect Pest In The Mid-South

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2011 started off rough for cotton producers in the state of Mississippi. Greater than 50% of the crop was planted more than two weeks later than normal due to inclement weather and flooding from the Mississippi River. Also, sandblasting in the north Delta required replanting of more than 20% of the acres in that region. This year was also above average for many of the insect pests that attack cotton, particularly in the Delta.

Tarnished plant bug has ranked as the states number one insect pest of cotton for the past decade. It is not uncommon in the Delta region of the state for some producers to have more than 10 insecticide applications for this pest alone. Many of the problems associated with tarnished plant bug are a result of widespread insecticide resistance to multiple classes of chemistry. Currently to obtain acceptable control of this pest growers have to mix several classes of chemistry together which is ultimately more . To some extent, this pest alone, has contributed to the slow rebound of cotton acres in the Delta despite record high prices of cotton.

Spider mites typically rank as the second or third most damaging pest of cotton over the last five years. Spider mites traditionally have been called a late season or “cutout” type pest of cotton in Mississippi. Spider mites are no stranger to cotton in Mississippi but only in recent years has their status been elevated to a season long pest. Spider mites are somewhat of an “induced” pest of cotton meaning that they can easily exploit changes in the production system to their

advantage. The high number of insecticide applications being made for tarnished plant bugs essentially “flares” spider mites by eliminating beneficial insects. Also, the widespread adoption of insecticide seed treatments to control thrips early in the season has no activity on spider mites allowing them to build earlier in the growing season. In 2011, producers treated approximately 38% of the cotton acres for spider mites.

Tarnished plant bugs and spider mites alone have contributed to greater than 50% of total losses from pest of cotton over the last few years. The good news is growers and consultants have recognized the threat from these pests and have begun to take an integrated approach to managing them. For instance, many growers recognize that cotton/corn interfaces are hot spots for plant bugs to develop and are beginning to try and block their corn away from their cotton fields. Also, research conducted over the last several years at Mississippi State University has shown that planting cotton early can reduce the total numbers of applications needed to control tarnished plant bugs by avoiding late season build ups. Recognizing that certain types of insecticides will flare spider mites, producers are beginning to utilize other chemistries less likely to flare mites when they are present in the system.

This paper will address ways producers can minimize their losses from some of the most damaging insect pests of cotton in the mid-south. Δ

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