IPM Issues

Pest Management Research In Field Corn, Cotton Highlights Field Day

BETTY VALLE GEGG-NAEGER
MidAmerica Farmer Grower

ST. JOSEPH, LA.

Insect pest management in cotton and field corn in northeast Louisiana was discussed recently by Dr. B. Rogers Leonard, research and extension entomologist with the LSU AgCenter. Leonard spoke at the Northeastern Research Station Crop Production and Pest Management Field Day.

"Probably the biggest issue in field corn right now is the reintroduction or advancement of insecticide seed treatments," he said. "Many growers and companies are moving toward a nematicide as a component to the current insecticides and fungicides on the seed and used at the time of planting."

Some of these products fit very well in nematode infested soils, however, in most instances it is the insecticide and/or fungicide that is increasing the corn seed yield. In fact, these combination treatments on the seed have incorporated a higher rate of insecticide compared to the original seed treatment. The added dose of insecticide provides longer residual efficacy and a broader spectrum of insect pest control.

"Another current area of field corn insect pest management research that is ongoing concerns the adoption of new transgenic traits," Leonard said. "We're spending a considerable amount of time looking at the SmartStax technology. These insect control traits are a combination of insecticidal proteins from Monsanto and Dow AgroSciences that have been incorporated into field corn plants. This tool will increase the spectrum of caterpillar pest control in field corn and eliminate the need for most supplemental insecticide sprays used against those specific pests in Louisiana field corn."

Research efforts directed by Mr. Jared Hardke, one of LSU's graduate students, has demonstrated significant reductions in whorl leaf damage from fall armyworm and ear tip injury from corn earworm on SmartStax corn lines compared to that on commercial transgenic field corn cultivars.

"In our cotton IPM systems, the most important pest problem is tarnished plant bugs," Leonard continued. "This pest has really evolved into a full-season problem, and for several years has been very difficult to manage with the currently recommended insecticides. We have continued to screen numerous experimental and commercial products in annual field trials trying to find an effective holistic insecticide use strategy. During the mid- to late-season when cotton fields experience the highest infestation levels, our best treatments are co-applications of pyrethroids combined with either Centic, Trimax, Orthene, Diamond or Bidrin.

"Another one of our graduate students, Mr. Josh Copes, has been surveying the susceptibility of Louisiana tarnished plant bug populations to acephate (Orthene)," he added.

All of the field collections that he has made across the state during the past thee years have expressed some level of resistance. Unfortunately, if high populations persist, producers are likely to experience unsatisfactory performance and, in some instances, control failures.

"However, I believe that effective scouting and timely applications of the appropriate treatments used in a rotation pattern (alternation of products in successive applications) can reduce the potential of severe yield losses from this pest in most circumstances," he concluded. Δ

Leonard emphasizes the most important pest problem is the tarnished plant bugs. He continued to say the pest has evolved into a full-season problem and has been difficult to manage.
Photo by John LaRose

BETTY VALLE GEGG-NAEGER: Senior Staff Writer, MidAmerica Farmer Grower