

UK Insect Pest Early Warning System Benefits Producers

PRINCETON, KY.

For more than 20 years, specialists with the University of Kentucky Integrated Pest Management Program have trapped moths of Kentucky's major agricultural pests to give producers an early warning about potential outbreaks. A recent UK College of Agriculture survey shows this program is paying financial and environmental dividends for the agricultural industry.

Fall armyworm moth trap counts at the UK Research and Education Center in Princeton reached record numbers on two different occasions during the summer of 2012. The fall armyworms arrived in July in Western Kentucky, earlier than ever before, and were the largest and longest lasting population in 10 years of data collection. Following the outbreaks, UK extension entomologist Doug Johnson and Patty Lucas, IPM extension specialist, conducted an online survey to determine the value of the early warning system.

The survey had 39 individual responses representing 24 Kentucky counties and locations in Illinois, Ohio and Indiana. The respondents said UK's early warning system protected more than \$1.6 million in crop yields and saved producers more than \$270,000 in unnecessary pesticide applications.

Additionally, 12 percent of responders reported they did not receive the early warning and lost at least \$18,000 in crops due to fall armyworm damage, because they did not scout for the pest or make a timely insecticide application.

"It is very clear from these data that early warning of an insect infestation provides a significant financial advantage to producers, and being unaware of early warnings can result in a significant financial penalty," Johnson said. "Although our respondent sample size was small, it does indicate that the early warnings were used by a significant portion of agricultural and horticultural interests, which allowed them to make on-time, real-time management decisions for control of this pest."

The fall armyworm is a pest of many crops including alfalfa, row crops, tobacco, cucumbers and tomatoes, but it prefers grasses. The moths migrate from the South each summer, and the

worms are active in the state from the mid-summer until the first killing frost. Survey respondents reported most of the damage from the 2012 outbreak was in grass used for hay and pastures.



Fall armyworm on corn

PHOTO: Patty Lucas, UK IPM extension specialist

About 85 percent of the 2012 survey respondents said they received warning about the high trap counts. Survey respondents listed Kentucky Pest News, extension specialists, UK's Grain Crops Update Blog and county extension agents as the main ways they received the early warning.

Of the respondents, nearly 45 percent said, due to the early warning system, they scouted their fields and determined they did not have a fall armyworm problem. As a result, respondents reported 22,775 acres were not treated with a pesticide application. This not only saved producers money but also had human health and environmental benefits. It reduced the risk of pesticide exposure to handlers and applicators as well as beneficial insects including natural predators and pollinators.

Of the producers who found fall armyworms in their fields, 47 percent said the early warning system gave them enough time to make a timely control decision to prevent crop damage or loss.

Survey participants included producers, consultants, extension agents, pesticide industry representatives and farm supply business personnel. △

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