MISSISSIPPI SOYBEAN PROMOTION BOARD PROJECT NO. 58-2018 2018 ANNUAL REPORT

TITLE Management of Redbanded Stink Bug in Miss. Soybean Production Systems

INVESTIGATORS:

Angus Catchot, Professor of Extension, Dept. of Biochem., Mol. Biol., Entomol. and Plant Pathol. Mississippi State University, (662) 418-8163, acatchot@ext.msstate.edu

Don Cook, Assistant Research Professor, Dept. of Biochem., Mol. Biol., Entomol. and Plant Pathol. Mississippi State University, 662 255-1899, dcook@drec.msstate.edu

Fred Musser, Professor, Dept. of Biochem., Mol. Biol., Entomol. and Plant Pathol., Mississippi State University, Mississippi State, MS, (662) 325-2974, fm61@msstate.edu

Jeff Gore, Associate Professor, Dept. of Biochem., Mol. Biol., Entomol. and Plant Pathol., Mississippi State University, Mississippi State, MS, (662) 820-9969, fm61@msstate.edu

Trent Irby, Assistant Professor, Dept. of Plant and Soil Science. Mississippi State University, Mississippi State, MS (662) 418-7842, tirby@pss.msstate.edu

Darrin Dodds, Associate Professor, Dept. of Plant and Soil Science. Mississippi State University, Mississippi State, MS (662) 418-1024, ddodds@pss.msstate.edu

Objective 1: Determine insecticidal efficacy of insecticides to control redbanded stink bugs in MS.

Progress: No RBSB were found

Objective 2: Determine insecticide termination timing.

Progress: No RBSB were found

Objective 3: Determine greatest damage potential from RBSB by growth stage in soybean

Progress: No RBSB were found

Objective 4: Conduct ditch bank and early cover crop surveys in legumes in the early spring to predict RBSB populations

Progress: Conducted numerous surveys around the state in the spring. **See attached reports of findings.**

Objective 5: Refine/Validate RBSB thresholds in soybean

Progress: No RBSB were found

Objective 6: Establish a colony of redbanded stink bug at the MSU Insect Rearing Center

Progress: No RBSB were found

Objective 7: Determine how GPA and droplet size effects RBSB efficacy in soybean

Progress: No RBSB were found

Redbanded Stink Bug Ditch Bank Survey 4/15/2018

mississippi-crops.com/2018/04/18/redbanded-stink-bug-ditch-bank-survey-4-15-2018/

Angus Catchot and Jeff Gore, Ext. Entomologists, and Don Cook, Res. Entomologist

April 18, 2018



In 2017, we were able to accurately predict the threat of RBSB based on sampling ditch banks in the spring. Every year we sample ditch banks across the state to make collections of various insect pests. With most pests, such as tarnished plant bugs, what we find in ditch banks does not correlate well to what growers may find in the fields. However, with RBSB finding them in the spring in substantial numbers is an indication of how far north and in what numbers they successfully overwintered. We were commonly finding RBSB in crimson clover well above Hwy 82 in fairly high numbers in 2017. Additionally, we were seeing reproduction as early as March of 2017. Unlike other pests, ditch bank samples for RBSB are a strong indicator of the potential problem and this in fact did materialize into a greater issue last year.

Currently, we have sampled crimson clover as far south as Lucedale, MS, along with sampling in all parts of the state. **As of now we have found zero RBSB**, even in areas that had extremely high numbers last year. This is good news for our soybean farmers. Will there be a RBSB problem in 2018? Chances that we will experience problems even close to our experiences last year will be very low. Louisiana entomologist are also conducting these surveys and to date they are only finding low numbers of adults with no reproduction. The Louisiana survey results are normal for the state but this could result in some level of infestation for the southern part of Mississippi in very late planted beans, if these low populations have time to multiply.

If there is one piece of advice I can give you it's to plant early. Early planted soybeans is the best insecticide we have ever had......

Redbanded Stink Bug Ditchbank Survey 5/10/2018

mississippi-crops.com/2018/05/12/redbanded-stink-bug-ditchbank-survey-5-10-2018/

Angus Catchot and Jeff Gore, Ext. Entomologists, and Don Cook, Res. Entomologist

May 12, 2018



In 2017, we were able to accurately predict the threat of RBSB based on sampling ditch banks in the spring. Every year we sample ditch banks across the state to make collections of various insect pests. With most pests, such as tarnished plant bugs, what we find in ditch banks does not correlate well to what growers may find in the fields. However, with RBSB finding them in the spring in substantial numbers is an indication of how far north and in what numbers they successfully overwintered. We were commonly finding RBSB in crimson clover well above Hwy 82 in fairly high numbers in 2017. Additionally, we were seeing reproduction as early as March of 2017. Unlike other pests, ditch bank samples for RBSB are a strong indicator of the potential problem and this in fact did materialize into a greater issue last year.

WEEK OF MAY 7-11 UPDATE

This week we continued ditchbank surveys around the state. There were 9 RBSB found this week. Dr. Jeff Gore and Don Cook's crew found 1 adult and 1 nymph in the Vicksburg area. This was in 2000 sweeps, so these numbers are extremely low. However, in one spot in Ecru, MS we found 4 adults in 100 sweeps and in Macon, MS we found 3 adults in 100 sweeps. As a whole, numbers are still low. While RBSB are present at low levels at this time in isolated areas, the numbers are low. Soybeans planted in the normal planting window will likely have no or very low incidence of the pest. It will take some time for these numbers to build to threatening levels and only very late planted beans may experience any problems.