

**USDA-ARS  
Mid South Area  
SOUTHERN INSECT  
MANAGEMENT RESEARCH UNIT**

**Mission**

- *The mission of the Southern Insect Management Research Unit (SIMRU) is to generate new knowledge of arthropod pest biology, ecology and management and integrate this knowledge into contemporary farming systems that will promote economical and environmentally stable pest management practices for the southern U.S.*
- *The vision of SIMRU is to be a recognized center of innovation for negating agricultural pest problem through deployed scientific knowledge of pest biology, ecology and management options.*

**CRIS PROJECT**

**Insecticide Resistance Management and New Control Strategies for Pests of Corn, Cotton, Sorghum, Soybean, and Sweetpotato**

**PROJECT INVESTIGATORS**

- **Clint Allen (Project Leader)**
- Randall Luttrell
- Katherine Parys
- OP Perera
- Yu Cheng Zhu

**CRIS PROJECT**

**Control of Tarnished Plant Bugs by Biocontrol and Other Methods**

**PROJECT INVESTIGATORS**

- Randall Luttrell
- **Maribel Portilla (Project Leader)**

## CRIS PROJECT

Effect of Resistance on Insect Pest Management in Transgenic Cotton

### PROJECT INVESTIGATORS

- Clint Allen
- Nathan Little
- Randall Luttrell
- Katherine Parys
- **OP Perera (Project Leader)**
- Maribel Portilla

## NEW PUBLICATION CONGRATULATION Dr. Gordon Snodgrass

### Comparison of Diapause Termination in Tarnished Plant Bugs (Hemiptera: Miridae) from the Mississippi Delta and Springfield, Illinois

G. L. Snodgrass, R. E. Jackson, O. P. Perera, C. Allen, and M. Portilla  
Southwestern Entomologist, 38(3):385-392, 2013

**Abstract:** In a laboratory test, we compared diapausing adult tarnished plant bugs, *Lygus lineolaris* (Pallot de Beauvois), from Stoneville, MS, and Springfield, IL, for their ability to break diapause when kept at 25°C on a nutritious food source (broccoli, *Brassica oleracea* variety botrytis L.) under a diapause-maintaining photoperiod of 10:14 light:dark hours. The temperature, photoperiod, and food simulated environmental conditions in the mid-South region during December when overwintering tarnished plant bugs on blooming winter hosts break diapause. It was unknown if plant bugs from areas such as Springfield (upper Midwest) in which the winters are too cold for hosts to be available also had the ability to break diapause under a diapause-maintaining daylength. One-day-old diapausing adults from Stoneville and Springfield were kept in environmental cabinets for 5 weeks. Males and females from both locations were dissected at weekly intervals to determine their reproductive status. Diapausing adults from both colonies and both sexes terminated diapause. Greater percentages of males and females from Stoneville terminated diapause each week compared to those from Springfield, and the differences were significant in four of the 5 weeks for males and three of the 5 weeks for females. The results showed that the presence of winter hosts in the mid-South has probably selected tarnished plant bugs for more rapid emergence from diapause. The importance of more rapid emergence from diapause to plant bug populations in the mid-South is discussed.

## USDA Career Information Sessions (Students and Recent Graduates)

2 sessions will be offered per month:  
(Feb., Mar., and Apr.)

Sessions will be held:  
1:00 p.m. to 3:00 p.m. (EST)

Register at:  
<https://www.surveymonkey.com/s/USDAInfoSessionsRegistration2014>

For questions contact:  
wenddy.carrasco@dm.usda.gov



## Workshop



Essanya attended a MSU insect rearing workshop at Mississippi State University