



# Student Research and Extension Experiential Learning in Climate Smart Integrated Pest Management for Underserved Communities

R. Butler, T. Clifton, J. Goins, A. Cruel, C. Richardson, M. Gaspard, M. Andrews, R. Hooper, D. Collins, and T. Rashid

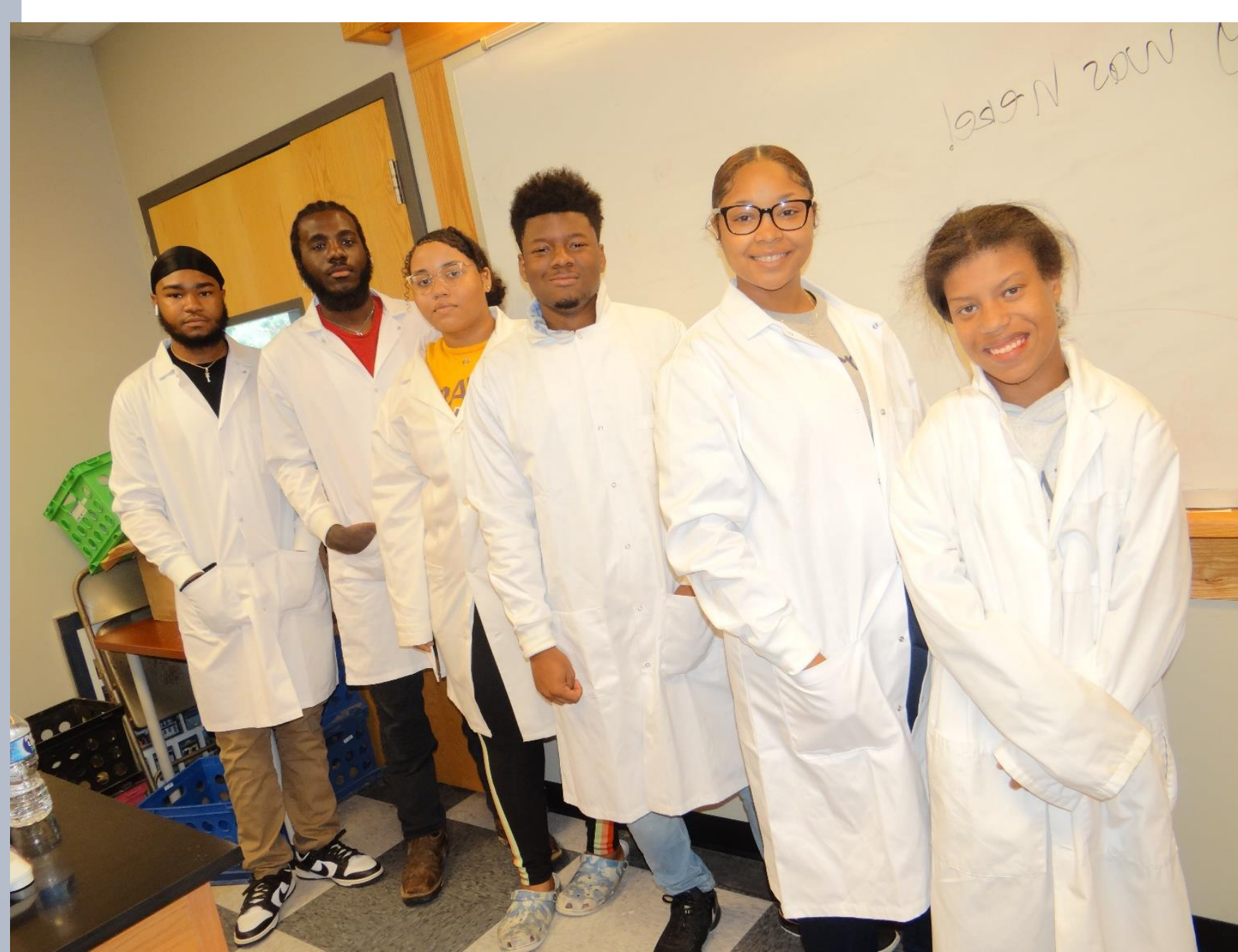
Department of Agriculture, Alcorn State University, Lorman, MS

## Introduction

Small farmers in the southern region of the U.S. face challenges in managing plant diseases, weeds, and insects in crops and forest ecosystems. Yield losses due to sub-tropical climate conditions, weather extremes (e.g., hurricanes, drought, tornados), and pest outbreaks have been substantial pests. As climate change continues to intensify and create new pest threats, it is critical that we train the next generation of plant health management scientist and professionals in how to respond and develop new farm and forest ecosystems management practices to mitigate the impacts of climate change on crop production. Underserved farmers and communities are especially vulnerable due limited resources and lack of integrated pest management training in climate smart agricultural. To maintain our nations global competitiveness in sustainable agriculture we need a diverse well trained workforce. The objective is of this project is to provide students with research and extension experiential learning opportunities through interdisciplinary, and multi-institutional collaboration in climate smart IPM practices such as the use of cover crops, conservation tillage for carbon sequestration, soil health, pollinator health, trap and border crops for biodiversity, and crop pest monitoring, surveillance, and mitigation.

## Objectives And Activities

- Climate Smart IPM Fruit and Vegetable Production Filed Day June 2024. Young Scholars helped plan and implement Climate Smart IPM Field Day.
- Conducted Plant Pest Survey of fruit and vegetable crops on Small Farms in Mississippi.
- Attended the Plant Health 2024 Conference Memphis , TN
- Assisted writing Extension Publications on climate smart IPM practices.



## Small Farm Climate Smart IPM Field Day For Underserved Communities



Small Farm IPM Workshop ,Field Tours, Oral and Poster Presentations June 18-19, 2024



## Impacts

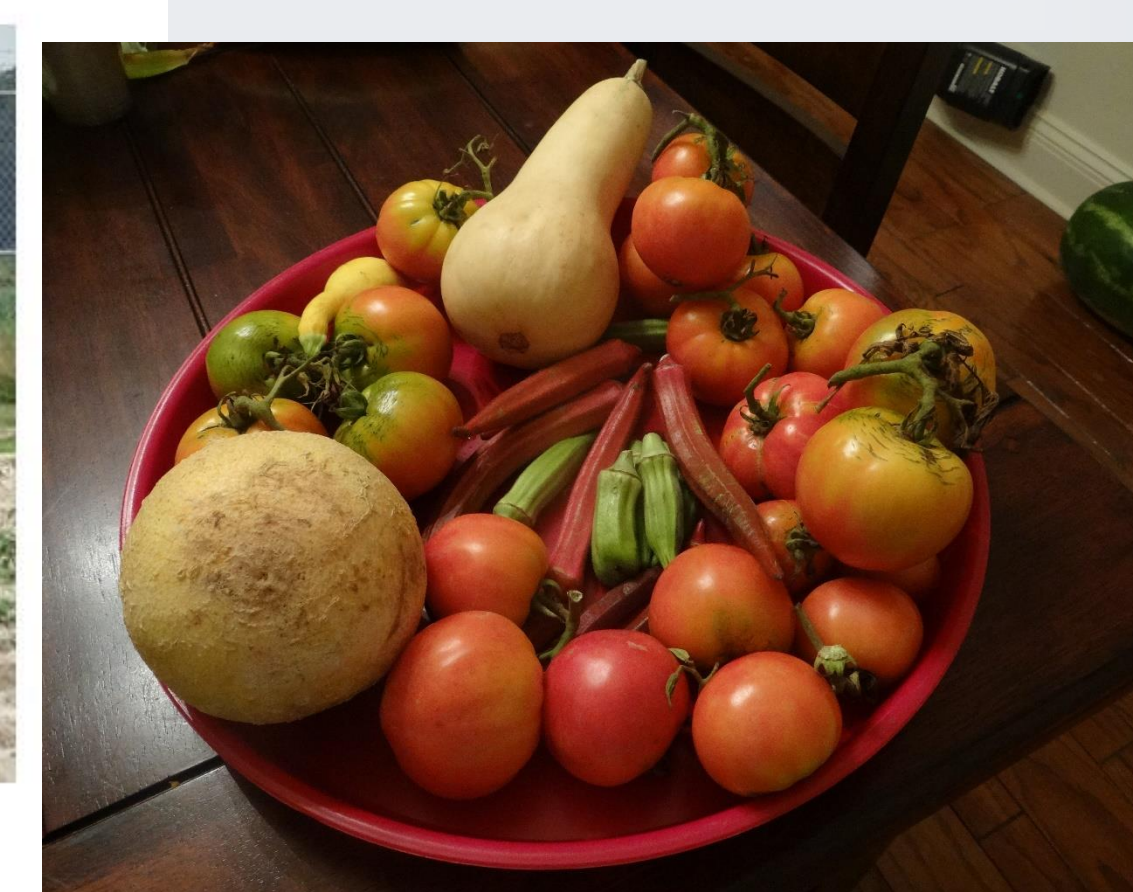
- Nine small farms were surveyed in Adams, Claiborne, Bolivar, Hinds, Forest Quitman, and Pearl River counties Mississippi and East Baton Rouge Parish, Louisiana
- Increase knowledge of Small Farm Climate Smart IPM opportunities and challenges to a diverse group of stakeholders
- Trained 8 Student Interns in Small Farm Climate Smart IPM Practices Targeting Underserved Communities

## Acknowledgements



## Plant pest survey on Small Farms in Mississippi

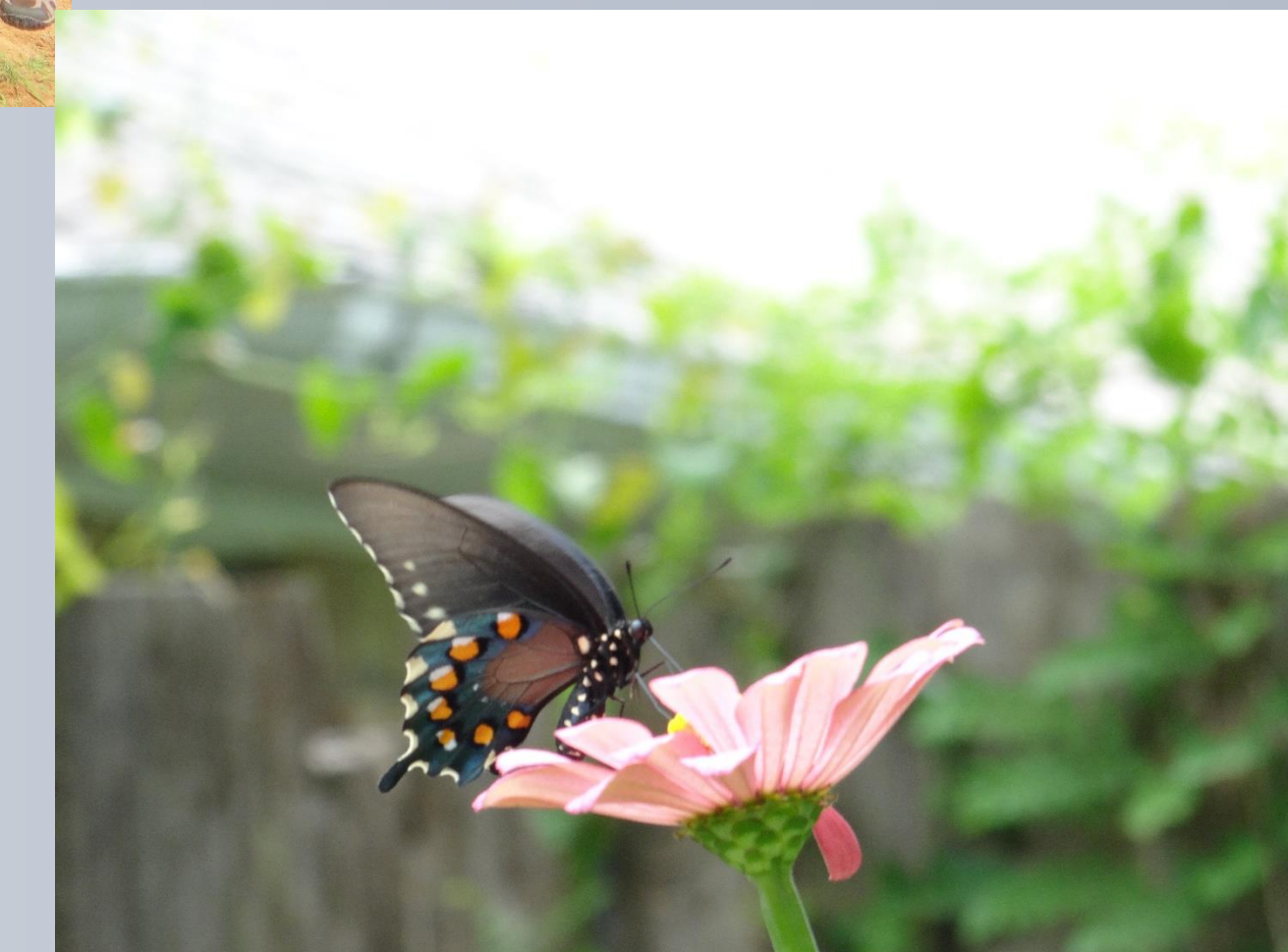
Student Collaborative Research Alcorn State University and Florida A & M University Pest Survey



Fire blight on pears ( *Erwinia amylovora* )



Bacterial Spot on peppers ( *Xanthomonas spp.* )



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