



A Preliminary Survey of Pest and Beneficial Insects Impacting Small Farms in Mississippi

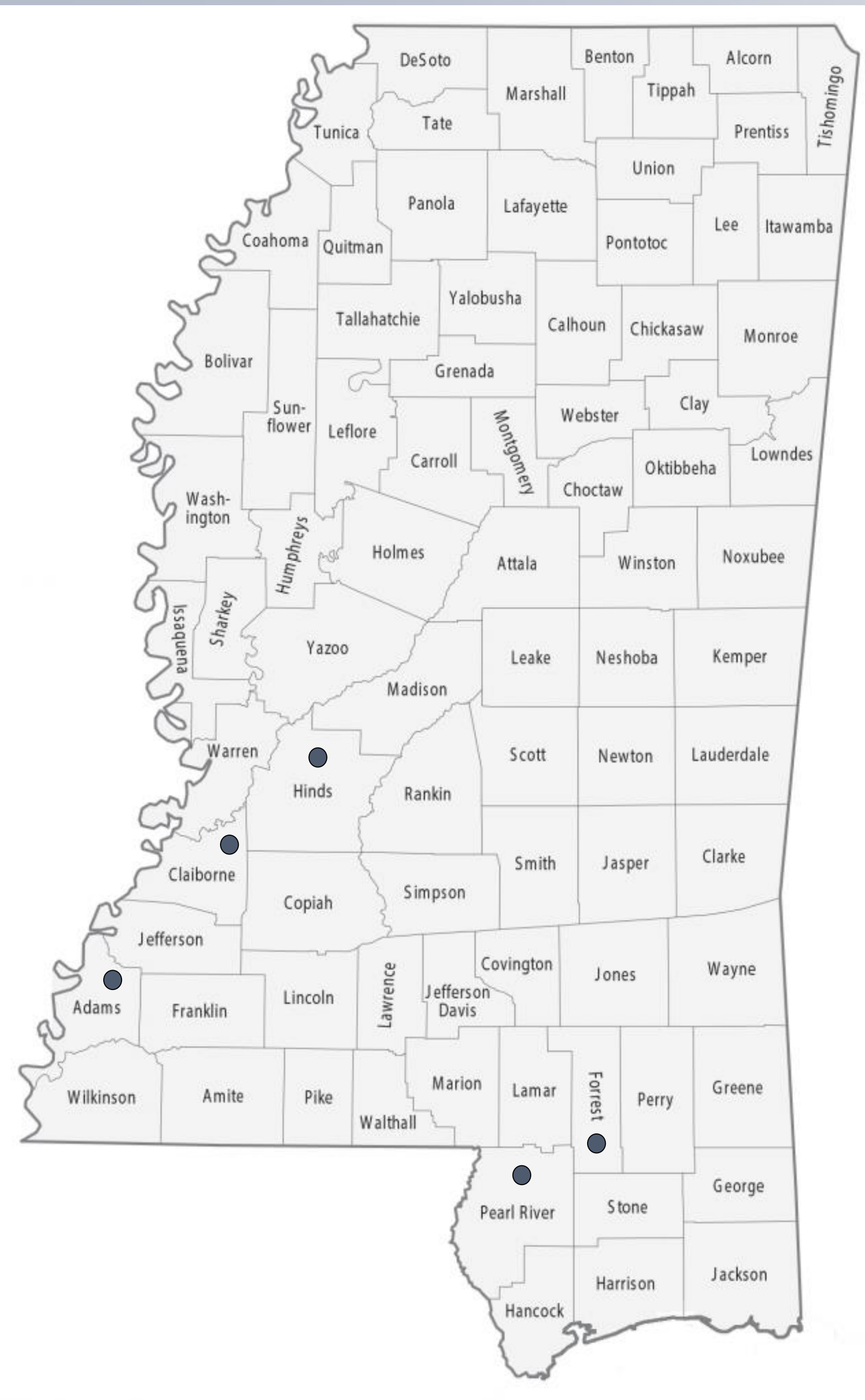
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Introduction

Small farmers in the southern region of the U.S. face serious 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. Socially disadvantaged small farmers are more vulnerable to losses due to lack of Integrated Pest Management (IPM) knowledge, limited resources, and challenging circumstances for managing plant pests. Typically, most IPM projects have focused on large farms. This is a unique project in that it addresses Small Farm IPM.

Information is need on the pest and beneficial insects impacting small farms in order to develop effective research, extension, and educational programs to address small famers integrated pest management needs and concerns. A preliminary plant pest survey was conducted on six farms in southwest and central Mississippi to document the various pests and beneficial insects found on small farms.

Mississippi Counties Surveyed for Pest and Beneficials Insects on Small Farms



Collaborating Farms

Indian Springs Farmers Cooperative

Natchez Community Garden

Environmental Learning Center Jackson Public Schools

We Will Go Ministries Community Garden

Tougaloo Agri-Growth Initiative



Methods

Insect Surveillance and Sampling



Conclusions

- Seven small farms were surveyed in Adams, Claiborne, Hinds, Forest and Pearl River counties Mississippi and East Baton Rouge Parish, Louisiana.
- A variety of insect pest were identified on vegetable crops including stink bugs, aphids, tomato hornworms, army worms, squash bugs, and leaf-footed bugs'
- Beneficial insects identified were ladybug Bettles, assassin bugs, predatory wasps, and a variety of bees.
- Future research will include a detailed statewide survey of both pests and beneficial insects impacting underserved small farmers in Mississippi.

Acknowledgements



Results: Pest and Beneficial Insect Identified on Small Farms

Insect Pests of Tomato



Yellow striped army worm



Tomato Hornworm



Aphids on cowpeas

Beneficial Insects



Predatory wasps



Assassin bug



Butterfly

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