

**Southern Region Small Fruit Consortium  
Extension Progress Report  
2024 E-02**

**Title:** Development of Traditional Disease and Arthropod Identification Resources for Strawberry Growers

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**Public Abstract:**

Strawberries are a valuable small fruit crop in the Southeast. Production of a marketable crop requires successful management of arthropods (insects and mites) and plant pathogens (diseases). Diagnosis is the first step in disease and arthropod management as the correct identification of the pest directs use of specific integrated pest management (IPM) practices to reduce damage from these organisms. Strawberry producers and other stakeholders must be able to recognize and identify diseases and insects in their operations so they can more quickly implement effective IPM methods to reduce crop damage and economic losses. Educational resources that will help these stakeholders identify key pests of strawberry in the Southeast are therefore useful tools that can improve the ability of stakeholders to make targeted pest management decisions that will help not only reduce losses caused by these pests but also reduce the overreliance or misuse of pesticides and negative impacts on the environment. Project collaborators met to determine the most economically important diseases and pests of strawberry in the region for inclusion in the guides, developed a draft photo guide for diseases and for arthropods, and submitted guides for production. Photo guides are expected to be available in early 2025.

**Introduction:**

Strawberries are a valuable small fruit crop in the United States, including in the Southeast, where these berries are produced commercially in both conventional and organic production systems and sold as fresh market products in various venues as well as through “pick-your-own” operations. Production of a successful crop requires, among other factors, timely management of arthropods (insects and mites) and plant pathogens (diseases). Diagnosis is the first step in disease and arthropod management. Various management methods for diseases and arthropods are available, but every method is not effective against

every pest. The choice of which management practice(s) to use depends on the biology of the pest, the options available for effective management, and the preferences and feasibility for the producer. The correct identification of the pest allows growers to implement the best management strategies to reduce damage from these organisms. It is critical, therefore, for strawberry producers not only to be able to accurately detect and identify potential pest issues but also to know how to implement various pest management methods. Educational resources providing images and descriptions of the disease signs and symptoms and of arthropod damage and various life stages can be useful not only in assisting stakeholders recognize potential disease or arthropod issues but also in assisting stakeholders identify diseases and insects in their operations, which would allow them to more quickly implement pest management methods to reduce losses caused by these pests.

### **Description of Outreach Activity:**

#### Objectives:

1. To develop traditional resources for identification of common strawberry diseases and arthropods impacting commercial production in the Southeastern U.S.
2. To educate stakeholders in the Southeastern U.S. about integrated pest management (IPM) practices in commercial strawberry production.

Project collaborators will identify the most relevant content for inclusion in a plant disease photo guide and an arthropod photo guide for strawberries in the Southeast. Guides will include images that highlight characteristic signs and symptoms or damage and arthropod life stages of the most economically important diseases and pests of strawberry in the region. Drafts of each publication will be submitted to the Mississippi State University (MSU) Agricultural Communications department (AgComm) for production. Laminated, color photo guides will then be printed and distributed to strawberry stakeholders throughout Alabama, Arkansas, Louisiana, Mississippi, and the Southeast at various educational events where the PD and CoPIs will have the opportunity to teach stakeholders about important diseases and arthropods of strawberries in the Southeast and the importance of proper pest identification.

### **Results or Outcome:**

***\*This is a progress report as the project has not reached its end date (February 28, 2025) and the project objectives are still being completed.\**** Drafts of “A Photo Guide to Diseases of Strawberry in the Southeast” (Figure 1) and “A Photo Guide to Arthropod Pests of Strawberry in the Southeast” (Figure 2) have been completed and submitted to MSU’s AgComm for production. Both guides are expected to be completed and available for printing/distribution in early 2025.