**Fungicide Evaluations for Managing Asian Soybean Rust and Other Diseases Affecting Louisiana Soybean**

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**INTRODUCTION**

Asian soybean rust (ASR, caused by Phakopsora pachyrhizi) can devastate soybean yield and quality if not properly managed (Sinclair and Hartman 1999, Bromfield 1994). Yield losses of up to 90% are possible in affected fields (Mohr and Wilson 1929). In the United States, Central Research Station in Baton Rouge, Louisiana, and Dean Lee Research Station in Jennings, Louisiana, were the first areas in the United States where ASR was observed in soybean. Historically, ASR has been a problem in the southeastern portion of the US, but recent reports indicate that it may be spreading northward.

In Louisiana, soybean rust is managed with various fungicides, including strobilurins, quinone outside inhibitors (QoI), and respiratory inhibitor fungicides (Ri). Various fungicide products are available to control soybean rust, but the effectiveness of these products can vary depending on the specific strain of the fungus and the environmental conditions under which the crop is grown.

**MATERIALS AND METHODS**

Each year, LSU AgCenter scientists evaluate fungicide efficacy against numerous diseases distributed throughout Louisiana. Field experiments were conducted at the Central Research Station, northern location, and multiple locations in southern Louisiana. The experimental design was a split-plot, with fungicides applied to broadcast plots, and disease severity assessed on plots within these treatments.

**RESULTS AND DISCUSSION**

### Central Research Station: Asian soybean rust severity developed to moderate levels (28.4% on untreated plots) by October 5 (Table 1). On September 8, ASR severity was less in most fungicide treatments compared to the untreated plots. By September 21, moderate levels of CB occurred at the Northeast Central Research Station (23.8%) in non-treated plots by October 5 (Table 1). On September 8, ASR severity was less in most fungicide treatments compared to the non-treated, and by September 21, ASR incidence was 100% in the non-treated plots, and by September 21, ASR incidence was 100% in the non-treated plots.

### Dean Lee Research Station: Moderate levels of CB occurred at the Northeast Central Research Station. Asian soybean rust and CB epidemics developed late in the growing season in Louisiana, and soybean was plagued by numerous foliar, pod, and stem diseases well before the late-season soybean rust epidemics. Development of these diseases was influenced by the environmental conditions and the timing of fungicide applications.

### Effective programs can be developed.

### References

