

PI: Guy 'Boyd' Padgett

PI's E-mail: bpadgett@agcenter.lsu.edu

Project ID: FY20-IM-003

ARS Agreement #: 59-0206-0-159

Research Category: MGMT

Duration of Award: 1 Year

Project Title: Evaluating Fungicides for Managing Fusarium Head Blight in Louisiana

PROJECT 1 ABSTRACT

(1 Page Limit)

Fusarium head blight (FHB) has been a major problem in Louisiana wheat over the past several years and is one reason Louisiana wheat acreage has declined. Effectively managing FHB is difficult because there is no highly effective single management practice (varieties or fungicides); therefore, an integrated approach is required. The goals of this project are to develop effective integrated management strategies to limit FHB epidemics and reduce DON by incorporating genetic resistance and fungicides and encourage stakeholders to incorporate these strategies into their production systems.

The objectives of this project are:

- 1) Evaluate the integrated effects of fungicide treatment and genetic resistance on FHB and DON in all major grain classes, with emphasis on a new fungicide, Miravis Ace[®].
- 2) Compare the efficacy of Miravis Ace when applied at early heading or at anthesis to that of standard anthesis application of Prosaro[®] or Caramba[®].

Expected outcomes include identifying effective strategies incorporating soft red winter varieties with limited genetic resistance to FHB in combination with Miravis Ace, Prosaro, Caramba, and possible other effective fungicides. An additional outcome will be to determine if the application window for Miravis Ace is broader than Prosoro or Caramba.

Small plot trials planted to soft red winter wheat varieties (3 to 4) varying in resistance to scab will be conducted on three LSU AgCenter research stations (Ben Hur, Macon Ridge, and the Dean Lee Research and Extension Center). The fungicide treatments, design, data collection, and analysis will be consistent with the recommendations outlined in the protocol for the Integrated Management and Uniform Fungicide Trials outlined in the Coordinated Project. Misting systems will be used when feasible. On-farm demonstrations (replicated strip trials if possible) will be also be conducted to provide stakeholders opportunities to evaluate new chemistries. Treatments will include Miravis Ace and Prosaro applied at Feekes 10.5.2.

Information generated from these trials will add to the existing database of the coordinated project. This information will be especially important for Louisiana wheat producers since scab is an emerging threat in the state.