

PI: Bruce Bleakley

PI's E-mail: Bruce.Bleakley@sdstate.edu

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Research Category: MGMT

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Project Title: Uniform Fungicide and Biological Control Trials for Management of Fusarium Head Blight in South Dakota.

PROJECT 2 ABSTRACT

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Fungicide trials will be established on hard red spring wheat and hard red winter wheat at multiple sites in South Dakota. Treatments will reflect **uniform fungicide and uniform biological control treatments** for Fusarium head blight (FHB) control that will be established for the Uniform Fungicide/Biocontrol research trials and to be studied in multiple states where spring wheat/barley and winter wheat are grown in the United States. This core set of treatments across a number of states allows evaluation of products and methods for consistency in performance over a wide number of environments and across grain types affected by FHB. Also, because FHB does not occur every year in every location, regardless of attempts to ensure infection through added inoculum or misting systems, having the trials across environments increases the chance of favorable disease levels for evaluation across multiple sites.

We will conduct our evaluation of fungicides in an irrigated, inoculated nursery at Brookings, SD and have natural infection at other sites in eastern South Dakota and contribute the results to the coordinated project. Fungicide treatments will be applied at multiple timings on a susceptible variety ('Wesley') of hard red winter wheat and in the hard red spring wheat; it will be applied on a resistant variety (Brick) and on a susceptible variety (Oklee). The biological trial will be conducted on an intermediate resistant variety ('Briggs'). Data collected from the trials will include FHB incidence, head severity, and disease index within each plot, as well as *Fusarium*-damaged kernels, DON in grain, and common agronomic parameters (yield, test weight, etc.). Additional information collected will include foliar disease ratings for common diseases such as rust.