

PI: Stephen Wegulo

PI's E-mail: swegulo2@unl.edu

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Research Category: MGMT

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Project Title: Integrated Management of Fusarium Head Blight of Wheat in Nebraska.

PROJECT 1 ABSTRACT

(1 Page Limit)

This project is part of a multi-state cooperative integrated management effort on Fusarium head blight (FHB, scab) of wheat caused primarily by *Fusarium graminearum*. The overall goal of the project is to use an integrated approach to more effectively manage FHB and deoxynivalenol (DON). The specific objectives are to 1) demonstrate that integrated management is the most effective and economical means of reducing losses caused by FHB/DON, 2) decrease the risk of development of FHB epidemics and thus reduce losses caused by FHB/DON, and 3) increase grower adoption of integrated strategies. To accomplish the first and second objectives, we will plant four locally adapted winter wheat cultivars following corn. Two of these cultivars, '2137' and 'Jagalene', are susceptible to FHB; and two, 'Harry', and 'Overland', are moderately resistant. At the beginning of anthesis, two fungicide treatments (spray with Prostar and non-sprayed control) will be applied to each cultivar. Plots will be visually rated for FHB severity at the soft-dough stage. At harvest, yield data, test weight, and percentage of visually scabby kernels will be recorded, and samples will be analyzed for DON content. We will record environmental data using an automated weather station. These data will be furnished to the epidemiology/disease forecasting group for use in developing FHB/DON prediction models to be used as part of an integrated approach to managing FHB/DON. We will accomplish the third objective by disseminating project results through electronic and print media and presentations at field days. This project is relevant to the goals of the US Wheat and Barley Scab Initiative which under the FHB Management research area specifies as one of the research priorities the development of effective control measures that minimize the threat of FHB, including the reduction of mycotoxins, to the producers, processors, and consumers of wheat and barley.