

PI: Gary Bergstrom

PI's E-mail: gcb3@cornell.edu

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Research Category: MGMT

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Project Title: Uniform Fungicide and Biological Control Studies in New York.

PROJECT 3 ABSTRACT

(1 Page Limit)

As part of a multi-state Coordinated Project coordinated by Scott Haley, the effect of promising fungicides and biological control agents on Fusarium head blight (FHB) and deoxynivalenol (DON) levels will be evaluated across multiple locations and small grain classes. A uniform fungicide experiment and a uniform biological experiment in New York will be conducted at the Cornell University Musgrave Research Farm in a field of soft red winter wheat Pioneer 25R47 (FHB susceptible) planted into untilled soybean residue. The fungicide experimental design will be a randomized complete block with 4 replications of 12 fungicide treatments and plot sizes of 10 ft wide × 20 ft long. The biological control experiment will be an equivalent design with 9 different treatments. To increase likelihood of disease development, the field will be inoculated with *Fusarium graminearum* conidial suspension (100,000 conidia/ml) applied with the same sprayer used for fungicide applications. At soft dough (Feekes 11.2), FHB incidence and severity will be assessed for each plot. Additionally, incidence and severity of foliar diseases will be assessed on the flag leaves at the same time. Plots will be harvested to determine yield, and grain samples from each plot will be evaluated for percentage Fusarium-damaged kernels. Grain samples from each plot will be sent to the USWBSI-funded DON Testing Laboratory at Blacksburg, VA for DON analysis.