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Project Title: Evaluation of Integrated Management Strategies for FHB in New York.

PROJECT 2 ABSTRACT

(1 Page Limit)

As part of a multi-state, multi-year field study, the integrated control of FHB and DON will be evaluated in winter wheat under two cropping environments at the Musgrave Research Farm in Aurora, NY in 2007-08. The operating hypothesis is that the best control will be achieved by a combination of management tactics. This addresses directly the MGMT research priority for research on the efficacy and economic return of integrated management strategies. The sole objective is to evaluate the individual and combined effects of partially-resistant wheat cultivar and fungicide in the integrated management of FHB and DON contamination in winter wheat in New York. One experimental environment will involve planting wheat in late September into a moldboard-plowed field that follows soybean harvest. The second experimental environment will involve no-till planting of wheat into corn stubble immediately following harvest of grain corn in late October. This should provide two contrasting environments in terms of exposure to within-plot inoculum as well as to different environmental conditions at flowering and early grain development. Four winter wheat cultivars included as main plots are Caledonia (soft white, tops NY acreage, FHB susceptible), Jensen (soft white, just released as certified class, FHB moderately resistant), Freedom (soft red, susceptible), and Truman (soft red, moderately resistant). The subplot spray treatments applied at wheat flowering will be 1) nontreated and 2) Prosaro 6.5 fl. oz/A & 0.125% Induce. We will assess yield, test weight, FHB, and DON. Our interpretation will include an economic analysis (based on yield effect, rejection for DON standards, input cost, and a range of potential grain prices) tailored to wheat production in New York. Results will be presented, summarized, and interpreted in the form of extension publications and presentations for clientele in New York State and the Northeast. PIs will also participate directly in the development of regional and national publications on integrated management guidelines. The experimental plots will be the focus of the Small Grains Management Field Day at Aurora, NY in June 2008. Findings will also be shared at the Northeast Certified Crop Advisors Meeting in December 2008, Cornell Cooperative Extension In-Service Education in November 2008, and the Western and Central New York Small Grains Congresses in February 2009.