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Project Title: Integrated Strategies for Management of FHB and DON in SRW Wheat in AL.

PROJECT 1 ABSTRACT

(1 Page Limit)

Fusarium head blight (FHB) has been problematic in Alabama in recent years and farmers have become sensitive for the need to produce a disease- and DON-free wheat crop. In the humid conditions that prevail during wheat anthesis in AL production areas, there is a need for evaluating integrated strategies for better control of FHB. This project proposes to evaluate the integration of fungicides applied at flower with varying levels of host resistance using four soft red winter wheat (SRWW) cultivars adapted for coastal plains production areas. In addition, there are particular (generally recently released) SRWW cultivars, adapted for AL, for which information on FHB response is lacking. Newer SRWW varieties will be evaluated for FHB reaction at two sites (Baldwin Co. and PARU, Autauga Co., 32.425, -86.446). Thus, our objectives are to: 1) evaluate the integrated effects of fungicide and genetic resistance on FHB and DON in SRWW grown in AL; 2) evaluate regionally adapted SRWW cultivars for which FHB reactions are lacking; 3) evaluate late and multiple tebuconazole applications for control of FHB. Data collected from these studies will contribute to national efforts toward: 4) conducting an economic analysis of the integrated effects of fungicide and resistance on FHB/DON; 5) developing a more robust “*best-management practices*” for FHB and DON; and 6) advancing the FHB and DON risk prediction effort. Results of these studies will be shared with others in the MGMT Coordinated Project in order to contribute to the national effort for improved management of FHB. Proposed studies have been discussed with appropriate personnel, so that early preparations for winter wheat plot establishment can begin (e.g., obtaining seed, reserving site). Studies done in Alabama will demonstrate to local extension agents, experiment station personnel and growers the effectiveness of integrated strategies for FHB management.