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Project ID: 0304-MU-019

Research Area: BIO

Project Title: Developing and characterizing transgenic wheat for scab resistance.

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PROJECT 2 ABSTRACT

(1 Page Limit)

Fusarium head blight (FHB), a fungal disease of small grain crops caused by *Fusarium graminearum*, threatens to reduce wheat to an economically unviable crop in the United States. Substantial losses are occurring due to reduced grain yield and quality. Major breeding efforts are underway to combat this disease problem. To complement the breeding efforts, my lab is developing transgenic wheat carrying genes with the potential to confer resistance to FHB. We plan to continue to develop these plants, and characterize them for the presence and expression of the resistance genes and test them for resistance to FHB in the greenhouse and field. Recent results indicate that we have identified transgenic wheat with reduced FHB severity. We plan to continue to characterize these plants as well as all other transgenic plants we develop. In addition, we have and will continue to combine different resistance genes into a common genetic background and test the efficacy against FHB. The proposed research meets the objectives of the U.S. Wheat and Barley Scab Initiative and fits within the biotechnology area of research because we are developing transgenic wheat with enhanced resistance to scab.