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Project Title: Evaluation of Fusarium Nurseries for Milling and Baking Quality.

PROJECT 1 ABSTRACT

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This project proposes to evaluate the milling and baking quality of breeding lines entered into the regional Fusarium head blight nurseries. The project is submitted to the Northern Winter Wheat Nursery, however it proposes to work on both the Southern and Northern Winter Wheat Nurseries with funding for work equally divided between the two regional nurseries.

This work will advance the development and adoption of resistant wheat cultivars for the eastern US. The milling and baking industry has a stated goal of promoting the adoption of cultivars resistant to Fusarium head blight, if the cultivars have acceptable milling and baking quality. Both are need for the domestic milling industry to support the continued development of Fusarium head blight resistant cultivars. Identification of lines with acceptable quality and high levels of resistance can best be accomplished in the regional disease nurseries because the disease data is accurate and robust. The germplasm also is widely available to all breeders participating in the nursery. The combination of seed availability, quality data, and disease resistance data will make possible the most rapid incorporation possible into the next cycles of crossing. It will enable the sustained improvement in Fusarium head blight resistance within germplasm that has potential for adoption and promotion by the domestic milling industry.

Most disease nurseries are evaluated for disease but not harvested. This proposal will fund field programs to harvest nurseries that typically would not be harvested and then evaluate those nurseries for the benefit of all cooperators.