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Project Title: Genotyping Breeding Lines for FHB Resistance.

PROJECT 1 ABSTRACT

(1 Page Limit)

The Eastern Regional Small Grain Genotyping interacts with breeders in the Southern and Northern soft winter wheat growing region interested in using molecular markers to develop wheat cultivars with improved resistance to FHB. We are proposing to continue to participate in coordinated regional effort to better characterize eastern soft wheat germplasm utilizing molecular markers and develop improved methods for genotyping. The specific objectives of this proposal are (1) to characterize entries in the Southern and Northern scab screening nurseries with markers linked to FHB resistance; (2) to characterize entries with diagnostic markers for genes having major effects on plant growth and development, as well as genes conferring resistance to other pests and for quality traits; (3) to investigate next generation sequencing analysis as a means of genotyping SRWW. This project will provide data to breeders for use in selecting lines for advancement and identification of FHB resistant parents for crossing. This project will increase the capacity of the genotyping lab to process genotyping projects for wheat and result in the mapping of genomic regions involved in disease resistance.