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Project ID: FY14-NW-002

ARS Agreement #: New Agreement (Expiring Agreement # 59-0206-9-059)

Research Category: VDHR-NWW

Duration of Award: 1 Year

Project Title: Male Sterile Facilitated Recurrent Selection for FHB Resistance (MPI-5).

PROJECT 2 ABSTRACT

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Recurrent selection is a breeding procedure with the objective of increasing the frequency of desirable alleles for one or more traits while maintaining a high level of variability in the population.

The objective of this project is to advance male-sterile facilitated recurrent selection populations that have been developed to combine genes for FHB resistance from multiple sources in soft winter wheat backgrounds adapted to the eastern U.S. The goal is for this project to further develop several pools of adapted breeding lines with genes for FHB resistance derived from multiples sources.

Seed of one of the dominant male-sterile populations will be planted in an FHB evaluation nursery. The space planted populations will be surrounded with selected pollinators. Male-sterile plants will be identified and tape will be applied to a stem in each of these plants so that they can be identified later. Male-sterile plants to be harvested will be selected based on adaptation and FHB resistance.