FY16 USWBSI PROJECT ABSTRACT

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Project ID: FY16-KL-005 **ARS Agreement #:**

Research Category: **MGMT** **Duration of Award: 1 Year**

Project Title: Evaluation of Commercial Wheat and Barley Cultivars for FHB Reaction in DE/MD.

PROJECT 1 ABSTRACT

(1 Page Limit)

In 2014, the total estimated value of Delaware and Maryland winter wheat and barley production was valued at over 132 million US dollars (NASS). Damage caused by outbreaks of Fusarium head blight (FHB) must be minimized in order to protect yields, minimize quality issues, and maintain grower profitability. Research has shown that the use of a moderately resistant wheat variety is the most important step in FHB management. Unfortunately, many varieties grown in this region either are not rated for FHB or are rated in other parts of the country, where environmental conditions and pathogenic populations differ. Over the past five years numerous microbreweries have opened in the region and there is great interest in producing local barley for brewing purposes. However, no regional data on FHB or DON tolerance/resistance is available for winter barley. Access to reliable, unbiased FHB screening data will improve FHB management in the region and wheat and barley quality, profitability, and planted acres of MR varieties in the Mid-Atlantic, and surrounding states. The **overall project goal** is to reestablish a misted FHB screening nursery in MD to assess FHB resistance in commercially available or soon to be released wheat and barley varieties.

The specific **project objectives are**:
1) Establish a misted nursery in Maryland to assess FHB and DON in commercially available and soon to be released winter wheat and barley varieties;
2) Improve grower access to unbiased FHB screening data on commercially available or soon to be released wheat and barley varieties planted in Delaware and Maryland; and
3) Enhance communication and end user extension/outreach.

The **expected outcomes** of this project are to:
1) Increase the acreage of MR varieties planted in the region;
2) Increase grower knowledge and use of best management practices for FHB and DON management; and
3) Increase grower profitability by reducing overall losses due to FHB and DON due to improved access to varietal data.

The **project goal will be achieved** by establishing a misted FHB nursery at the Beltsville research station located in the fall of 2015 through 2017. Data will be presented at regional and local conferences and meetings. In addition, electronic and printed copies of data will be available to growers. Variety trial results will be shared with the USWBSI and posted online at the SCABSMART website. Growers and other clientele will be surveyed to assess grower knowledge gain and change in management practices over time.