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**Project ID: FY14-NW-009**

**ARS Agreement #: 59-0206-1-114**

**Research Category: VDHR-NWW**

**Duration of Award: 1 Year**

**Project Title: Coordinated Phenotyping of Uniform Nurseries and Official Variety Trials.**

### **PROJECT 3 ABSTRACT**

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Fusarium head blight resistance must be combined with high yield to impact the Eastern US wheat industry. Our breeding program generates breeding lines each year for advanced stages of development and testing. Multi-location testing is needed to determine the FHB resistance of these lines, as well as their yield, quality, agronomic value, and resistance to other diseases. In addition, the Michigan Official Wheat Variety trial will be evaluated for FHB resistance to provide growers and industry with information to make variety planting decisions.

Objectives: 1) Phenotype advanced breeding lines that are candidates for release: 2) place FHB and other agronomic, disease resistance, and quality data in a community database: 3) report on purification and seed increase of the best lines.

Infected grain spawn is used to inoculate a misted nursery. Plots are evaluated for FHB symptoms and traits about 21 days after anthesis. After harvest, data on *Fusarium* Damaged Kernels will be collected and samples sent to Dr. Dong for DON analysis.