

## FY18 USWBSI Project Abstract

**PI:** Luther Talbert

**PI's E-mail:** ltalbert@montana.edu

**Project ID:** FY18-SP-012

**ARS Agreement #:** 59-0206-5-004

**Research Category:** VDHR-SPR

**Duration of Award:** 1 Year

**Project Title:** Fusarium Head Blight Resistance for Montana Spring Wheat.

### PROJECT 1 ABSTRACT

(1 Page Limit)

Our focus is to introduce genes for Fusarium head blight resistance into the germplasm base for the Montana public spring wheat breeding program. Our participation in the WheatCAP program and the Uniform Regional Nursery system has allowed us to evaluate lines from neighboring programs to use as parents. In particular, FHB-resistant lines that perform well in local nurseries have been used yearly in our crossing blocks. Initial selection in head rows is for agronomic characteristics of interest to Montana growers. Lines that advance to statewide nurseries are then entered into screening nurseries conducted in Idaho and Montana. We will continue this approach as the foundation of our efforts for the current grant. In addition, in cooperation with Jason Cook, we are using markers for the Sumai3 3B QTL to introduce *Fhb1* into several of our most advanced lines and varieties. Several lines are at the fourth backcross generation, and we will now select homozygous resistant types for further agronomic and FHB testing. Our objective is to develop FHB-resistant varieties for dryland and irrigated spring wheat production in Montana.