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**Project Title: Mapping Fusarium Head Blight Resistance in Truman Wheat.**

### **PROJECT 3 ABSTRACT**

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Fusarium Head Blight (FHB) of wheat caused by the fungus *Fusarium graminearum* causes extensive yield and quality losses. The fungus produces a toxin called DON. This disease is very problematic in Missouri and the surrounding states. The wheat cultivar called Truman, released from the University of Missouri's breeding program in 2003 continues to be among the best broad-based sources of resistance in the soft red winter wheat region and couples this with excellent agronomic performance. In 2004, it was adopted as a resistant check in the Northern and Preliminary Northern Winter Wheat Scab Nurseries, while its full-sib Bess was added as a resistant check in the Southern Winter Wheat Scab Nursery in 2007. Resistance data have continually shown that the FHB resistance in Truman is broad-based, having significant levels of types I and II resistance as well as good kernel quality retention and low DON under disease pressure. In collaboration with the genotyping center at Raleigh N.C., we have preliminarily haplotyped Truman and determined that the source of resistance in Truman differs from both Chinese germplasm and from Ernie. This project will identify the FHB resistance gene in Truman through QTL mapping.