

Project Abstract

Project Title:	A Centralized Wheat Transformation and Gene Editing Facility for the FHB Community	
Principal Investigator:	Harold Trick	Kansas State University

Over the past few years there has been increasing interest from the Fusarium community to maintain a centralized wheat transformation facility to minimize cost and duplication. The overall goal/objective of this proposal is: 1) the continuation of the centralized wheat transformation center and to provide a no-cost transformation/gene editing service to the FHB research community. The expected outcome of this proposal is to provide FHB researchers with transgenic and/or gene edited events requested. Under this proposal researchers would submit their requests for wheat transformation/gene editing and provide the appropriate expression vectors along with primer information to detect their gene(s) of interest. The facility will provide consultation to individual researchers on vector design, if requested. The facility would introduce their traits into tissue competent cultivars, regenerate transgenic lines, and screen putative events for the selectable marker and gene of interest. The customer would be provided by the facility DNA samples of primary transgenic events and T₁ generation seeds approximately ten events. In addition to transformation services the center will also be able to evaluate a limited number of genetic backgrounds for tissue culture competency. This proposal would benefit stakeholders by providing more efficient and cost-effective transformation services to the FHB community than having independent laboratories duplicate facilities and perform these tasks independently.