

HWW-CP Milestone Matrix for FY16-17:

1. Increase and document acreage seeded to varieties with improved FHB resistance to increase grain yield and grain quality, and reduce DON in the US grain supply

PIs	Months	Progress	Milestones	Outputs/Linkages
Baenziger Bruckner Gonzalez Marais Sehgal	24		Pyramiding different sources of FHB resistance (e.g. <i>Fhb3</i> and <i>Fhb6</i>) into adapted regional breeding lines and varieties	Improved breeding lines and varieties expressing higher levels of resistance to FHB and lower levels of DON production
Baenziger Bai Bruckner DeWolf Marais Sehgal	24		FHB assessment of 11 regionally adapted genotypes with <i>Fhb1</i> and native sources of resistance	Improved breeding lines and varieties expressing higher levels of resistance to FHB and lower levels of DON production
Baenziger Bruckner Friebe Marais Sehgal Friebe	24		Document FHB resistance of KS93WGRC28, a putative new source of FHB resistance	Identification of new FHB resistant gene (s) and/or new gene location (s). Transfer of new source of resistance to adapted regional genotypes.
Bruckner Marais	24		Screening and selection of FHB resistant genotypes expressing excellent winter-hardiness	FHB resistant breeding lines and varieties with resistance to winterkill

2. Increase efficiency of the CPs' funded projects to develop and release FHB resistant varieties and Germplasm

PIs	Months	Progress	Milestones	Outputs/Linkages
Baenziger Dowell Sehgal	24		Additional calibration of a seed-sorting apparatus and its development as a tool for selecting for low FHB and DON content.	More FHB efficient breeding selection protocols for the reduction of DON in seed.
Bai Baenziger DeWolf Marais Sehgal	24		FHB assessment of public and privately developed breeding lines in mist-irrigated nurseries.	Information delivered to producers and ScabSmart providing information on the most FHB resistant breeding lines and varieties.
Gonzalez	24		Mapping FHB resistance of AC Emerson and pyramiding Emerson source of resistance into regional genotypes	New markers for AC Emerson source of resistance and adapted germplasm with AC Emerson resistance for use by regional breeders.
Yen	24		Map using molecular markers the regulatory genes involved in regulating the expression of <i>Fhb1</i> .	Better markers for regional breeders to use in efficiently selecting for FHB resistance.