Project Abstract

Project Title:	Collaborative Barley Doubled Haploid Production	
Principal Investigator:	**Patrick Hayes**	**Oregon State University**

This project assists researchers in increasing the efficiency with which they identify and deploy genes and QTLs that contribute to reduction in the losses caused by Fusarium head blight (FHB). This can be achieved by developing doubled haploid (DH) germplasm from the F1s of cross combinations identified by collaborating breeders. DHs are complete homozygotes that provide unequivocal genotyping and phenotyping data. We will supply tissue to a regional genotyping lab so that cooperators can receive doubled haploid seed in real time as well as genotype data on their germplasm of interest.

Project objectives:

1. Produce ~ 2,000 plantlets from the F1 donor plants.
2. Produce ~1,000 DH
3. Submit lyophilized tissue from these DH to the Fargo Genotyping Lab for genotyping.
4. Produce seed from the DH and ship seed to cooperators, who will then be empowered by accessing DHs and with real-time genotype data.

Approaches:

1. Receive F1 seed no later than June 1 from the collaborating research group(s) identified by the CP Steering Committee (CPSC) as having the greatest potential to have economic impact and to contribute to the fundamental body of knowledge.
2. Grow F1 donor plants.
3. Produce ~ 2,000 plantlets (in tissue culture) from the F1 donor plants.
4. Produce seed of ~ 1,000 DHs
5. Lyophilize leaf tissue from the DHs and send to the USDA-ARS Fargo Lab for genotyping.
6. Ship DH to cooperators.