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Project ID: FY18-BA-004
ARS Agreement #: *59-0206-7-156*
Research Category: BAR-CP
Duration of Award: 1 Year
Project Title: Collaborative Doubled Haploid Production for FHB Resistance Breeding

PROJECT 1 ABSTRACT
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Our overall project goal is to continue to increase the efficiency with which researchers 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 germplasm from the F1s of cross combinations identified by collaborating breeders. Doubled haploids - being complete homozygotes – are immortal reference stocks that provide unequivocal genotyping and phenotyping data. Our project objectives are to: (1) Produce ~ 1,666 plantlets from the F1 donor plants; (2) hip the *in vitro* plantlets to cooperators, who will raise them to seed – generating a total of ~1,000 doubled haploid plants. Our plan to accomplish goals is: (1) Receive F1 seed no later than July 1 from the collaborating research group(s) identified by the CP Steering Committee 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 ~ 1,666 plantlets from the F1 donor plants; and (4) Ship the plantlets to cooperators, who will raise them to seed – generating a total of ~1,000 doubled haploid plants. Doubled haploids will increase the efficiency of variety development and genetic analysis for all participating researchers, stakeholders, and end-users.