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Project Title: Coordinated Evaluation of FHB Resistance of Advanced Soft Winter Wheat Lines and Cultivars.

PROJECT 3 ABSTRACT

(1 Page Limit)

Phenotype advanced breeding lines that are candidates for release. 2) place FHB and other agronomic, disease resistance, and quality data in database, 3) report on purification and seed increase of the best lines. The NUWWSN and PNUWWSN tests were created to specifically test FHB resistance of up to 120 entries and are coordinated by Ohio State University. The entries in these tests come from the seven breeders in this project as well as other public and private winter wheat breeders. In addition to the seven institutions of this CP, the NUWWSN is also evaluated by additional breeders in IN, VA, MD, NE, OH, Ontario, and Romania while the PNUWWSN is evaluated by additional breeders in Ontario and IN. In addition to the FHB data, the NUWWSN and PNUWWSN are also evaluated for quality by the USDA Soft Wheat Quality Lab and are assessed for other diseases as they occur. The USDA SWQL also assess the quality (traits listed in Table 2) of entries in the uniform scab test conducted in the SWW-CP and all funding for the SWQL work is sought in the NWW-CP. Our most advanced lines are also tested specifically for yield and other traits in a series of uniform tests. Some of these are coordinated by Harold Bockelman of the USDA (Uniform Eastern Soft Red Winter Wheat, Uniform Southern Soft Red Winter Wheat) while others are coordinated by breeders. The FHB resistance of the entries in these tests is evaluated by several of the breeders in this coordinated project, though on a more limited scale than the entries in the P+NUWWSNs.