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Project Title: Uniform Tests of Biological Control Agents against Fusarium Head Blight.

PROJECT 3 ABSTRACT

(1 Page Limit)

Biological control methods are needed to augment cultivar resistance and fungicide strategies for management of Fusarium head blight (FHB). While a number of biological control agents have been found to have promise against FHB in individual field tests and new agents continue to be identified, efficacy of these organisms must be demonstrated across a range of classes and cultivars of wheat and barley and under different environmental conditions in order to identify the best candidate(s) for commercial development. Dr. G. Yuen has been involved in multistate cooperative testing of biocontrol agents for FHB since 2001. In 2004, 2005 and 2006, he coordinated the USWBSI Uniform Biological Control Tests and conducted tests in Nebraska. The objective of this proposed project is to conduct two field tests of biological control agents for control of FHB on winter wheat in Nebraska as part of the 2007 Uniform Biological Control Tests. Biological control agents will be cultured in the Yuen laboratory or provided by collaborators. Their evaluation will be conducted at two sites in which pathogen inoculum will be provided in the form of infested corn kernels and mist irrigation will provide high moisture levels to favor disease development. Standardized methods for applying the biocontrol agents and for determining disease control efficacy will be employed. Yuen will compile data from all test sites and report collective results. This effort will contribute to the Uniform Tests priority in the Chemical, Biological and Cultural Control research area.