

PI: Gary Y. Yuen

PI's E-mail: GYUEN1@unl.edu

Project ID: 0506-YU-067

FY04 ARS Agreement #: 59-0790-1-079

Research Area: CBC

Duration of Award: 1 Year

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

PROJECT 2 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, he coordinated the USWBSI Uniform Biological Control Tests and conducted one of the tests in Nebraska. The objective of this proposed project is to conduct a field test of biological control agents for control of FHB on winter wheat in Nebraska as part of the 2005 Uniform Biological Control Tests. Biological control agents will be cultured in the Yuen laboratory. Their evaluation will be conducted at one site in which pathogen inoculum will be provided in the form of conidial sprays 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. This effort will contribute to the Uniform Biological Control Tests and, thus, addresses the research priority in the Chemical and Biological Control research area of “collaborative efforts (Uniform Tests) to evaluate biological control agents for effective and consistent performance against FHB of wheat and barley across multiple environments”.