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FY08 ARS Agreement #: NA

Research Category: BAR-CP/GDER

Duration of Award: 1 Year

Project Title: Transformation and Field Testing of Transgenic Barley Lines.

PROJECT 1 ABSTRACT

(1 Page Limit)

Transgenic barley lines in the cultivar "Conlon" that express combinations of glucanase, thaumatin-like protein, chitinase and trichothecene transporter genes from rice, yeast and *Fusarium* species will be tested for Fusarium Head Blight (FHB) reaction for the third year in replicated field trials 2009. For field containment, additional safeguards will be followed to prevent transgene escape or mixing with seed from the breeding and pathology projects. Golden Promise barley lines expressing the anti-fungal gene gastrodianin developed in Iowa and others from Wisconsin expressing a thionin gene will be crossed into Conlon to obtain a background closer to commercial malting barley lines for future field testing.