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**Project ID: FY08-DA-012**

**FY07 ARS Agreement #: NA**

**Research Category: BAR-CP/GDER**

**Duration of Award: 1 Year**

**Project Title: 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 second year in replicated field trials 2008. Lines with lower FHB and/or deoxynivalenol in previous years' trials also will be tested in 2008. Backcross-derived lines from some of these (crossed twice to wild type Conlon) should be available for first-year testing in 2008. 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 will be crossed into Conlon to obtain a background closer to commercial malting barley lines for future field testing.