

PI: Bullerman, Lloyd

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Research Area: CBC

Project Title: Inhibition of *Fusarium graminearum* and Fusarium Head Blight by *Bacillus pumilus*.

PI's E-mail: lbullerman1@unl.edu

ARS Agreement #: NEW

Duration of Award: 1 Year

PROJECT 1 ABSTRACT

(1 Page Limit)

Fusarium graminearum is the most common cause of Fusarium Head Blight or scab in wheat and barley in the U.S. In addition it may produce deoxynivalenol (DON, Vomitoxin) and zearalenone (ZEN) causing food safety concerns in grain and grain based foods. In previous studies, we have found that *Bacillus pumilus* NE B1, a strain isolated from dried fish, exhibit strong antifungal and anti-mycotoxigenic properties. The objective of this proposal is to determine the ability of live cells and cell-free supernatants of *B. pumilus* NE B1 to prevent development of Fusarium Head Blight or scab by *F. graminearum* on wheat plants in greenhouse trials.