

**PI: Bullerman, Lloyd**

**Project ID: 0304-BU-060**

**Research Area: CBC**

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

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**ARS Agreement #: NEW**

**Duration of Award: 1 Year**

**PROJECT 1 ABSTRACT**

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*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.