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Project ID: 0405-MC-115

FY03 ARS Agreement #: 59-0790-3-080

Research Area: CBC

Duration of Award: 1 Year

Project Title: Integrated Project - Ground and Aerial Application of Fungicides for Improved FHB Control.

PROJECT 2 ABSTRACT

(1 Page Limit)

Fusarium head blight continues to be a yield-limiting factor of wheat and barley in the north central small grain production region. Partial control of the disease has been achieved by timely application of fungicides and increased fungicide deposition on heads using forward and backward angled nozzles. New fungicide chemistries offering greater FHB disease control are limiting, making it imperative that existing chemicals be used in such a manner as to achieve maximum disease control. This project is needed to investigate disease control efficacy by exploring alternative aerial application strategies in hard red spring wheat.

An experimental site(s) of not less than 100 total acres of hard red spring wheat will be secured in northwest Minnesota. Aerial application research efforts will be conducted cooperatively with North Dakota State University (NDSU) researchers from Fargo and Langdon, ND as well as USDA-ARS Aerial Application Technology researchers from College Station, TX. The Minnesota site will be one of three locations that will be included in the aerial research effort. A total of six treatments (5 fungicide treatments and an untreated control) will be tested in a replicated, statistically designed field experiment.

The Minnesota plant pathology team will be responsible for coordinating season-long research efforts at the experimental site such as securing a test site; retrieving field cropping histories; establishing experimental design and field layout; recording crop growth stages, disease parameters (FHB disease incidence, severity, DON concentrations), and yield results from each replicated treatment; communicating with project cooperators; and coordinating aerial fungicide applications with NDSU and USDA-ARS researchers.