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**Project ID: 0304-HA-047**

**Research Area: CBC**

**Project Title: Performance Evaluation of Aerial Applied Fungicide.**

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**ARS Agreement #: NEW**

**Duration of Award: 1 Year**

### PROJECT 1 ABSTRACT

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The research will assess airplane spray pattern and droplet size, fungicide deposition coverage on the Hard Red Spring Wheat spike, and efficacy of fungicide for the control of FHB by visual estimation of incidence and severity of the disease. Leaf disease necrosis will also be determined.

The project will address the issue from three areas. A WRK pattern test and droplet sizing equipment will determine the status of the aerial application equipment and performance. A day glo orange dye will quantify spike coverage parameters among the variables. A visual estimation of FHB incidence and field severity will quantify the performance of the fungicide for the control of head disease. Leaf necrosis will be determined by visual estimation. The variable will consist of two spray heights above the canopy. One height will be the recommended height and a closer height will represent deviation from the recommended. Two spray nozzle orifice angles relative direction of travel and the effect wind shear has on the droplet will be the second variables. The wind shear relative to the spray dispersal angle determines droplet size. Folicur fungicide applied at Feekes 10.51 will be used to control FHB and leaf diseases.

The trial addresses the application technology directive to enhance the efficacy of fungicide by application technology with aerial application. The study will address height above the target and orifice angle relative to wind shear, variables that can be easily modified if improvements are justified.