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Project ID: 0304-HA-048 **ARS Agreement #: NEW**
Research Area: CBC **Duration of Award: 1 Year**
Project Title: Spray System, Spray Volume, and Spray Orifice Orientation for Improved Efficacy of Fungicide.

PROJECT 2 ABSTRACT
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The research will determine if spray orifice orientation to the grain spike, spray carrier volume, and spraying system will enhance the efficacy of fungicide for the control of FHB. The research trial will determine if orienting the spray orifice to spray both sides of the grain spike will enhance the effectiveness of fungicide for FHB. The study will determine if increasing the quantity of spray volume will improve effectiveness of fungicide. The research will determine if spray solution carrier, air or hydraulic pressure nozzle, best enhances fungicide for FHB control.

The project will compare a conventional sprayer, equipped with hydraulic flat fan nozzles, and an air assist sprayer, using air as the principle spray solution carrier most effectively enhances the fungicide in the control of FHB. Two spray solution gallonages, 5 and 15 gpa, and two spray orifice orientations, forward and backward angled 30 degrees downward from horizontal, and vertically down will also be compared. Trials will be run on hard red spring wheat and durum. The experimental fungicide AMS21619 will be tested for efficacy. Artificial inoculum will be used to improve chance of FHB infection.

The trial addresses the application technology directive to enhance the efficacy of fungicide by application technology. Specifically the spray volume and nozzle orientation issue is addressed. Both technologies can be easily adapted most sprayers and are relatively inexpensive.