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Research Area: CBC **Duration of Award:** 1 Year

Project Title: Fusarium Head Blight Uniform Fungicide Trial in Maryland.

PROJECT 1 ABSTRACT
(1 Page Limit)

Uniform trials investigating fungicidal and biological management of Fusarium head blight (FHB) will be established in spring wheat/barley regions and in winter wheat regions of the United States. This project, the Maryland component of the multi-state uniform fungicide trial, will be conducted on the soft red winter wheat class. A core set of treatments will be tested by a number of cooperators throughout the wheat and barley producing states to allow evaluation of product efficacy and consistency in performance over a wide range of environments and across grain classes. FHB is difficult to ensure in experimental plots, as it does not occur every year in every location naturally. Thus having a uniform trial across multiple sites increases the chance of discovery of an effective disease management tool. The core set of treatments will be based on results from previous years, availability of new and existing materials and decided upon by participants at the USWBSI annual meeting. Promising biological control materials have been tested in past trials and may be included individually and in combination with chemical control agents. Additional treatments are included in the Maryland trial, when space permits. Proposed for FY05 is the comparison of the timing of applications in the Maryland trial. The standard timing used in the uniform trial is at the initiation of flowering. However, the product Folicur that has received section 18 registrations in several states for FHB is limited to pre-flowering applications. Efficacy of products in FHB management appears to be dependent on timing and new products may perform optimally at the different application times. Furthermore, FHB is severe in rainy seasons that will often force non-optimal timings. It is thus important to know what if any reduction in efficacy may occur when applications cannot be made at initiation of flowering. Assessment of efficacy includes: reduction in disease incidence and severity, effect on yield, test weight, average kernel weight and DON toxin contamination of grain. The experimental protocol will include: inoculation with the disease-causal agent, mist irrigation to provide a disease-conducive environment, and twin-angled nozzles on a spray boom to improve application of test products on wheat head.