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PROJECT 1 ABSTRACT

(1 Page Limit)

Deployment of disease prediction models provides small grain producers with accurate and timely estimates of disease risk, and helps them evaluate the need for a fungicide application. A multidisciplinary team of plant pathologist, meteorologists and computer information technology specialists has already made considerable progress in the deployment of disease prediction models; however, additional work is needed to improve the stability, and verify the accuracy of this system. Our specific objectives for 2009 and 2010 include: 1. Continued deployment of the disease prediction models in 24 states including the support of the state commentary tools, and the platform for testing additional experimental models. 2. Expanding bias correction to include the states of South Dakota, Nebraska, Kansas and Iowa. 3. Enhance stability of the data streams and archives data through a dedicated server. 4. Incorporate additional state Agnets from Oklahoma, Illinois, and Missouri. 5. Implement a user survey as a metric for the utility of the FHB prediction system. 6. Verification of model performance based on reports of FHB/DON from cooperators – for refinement in the delivery of the current and experimental models. 7. Increase the atmospheric prediction input from 48 to 60 hours. During the past four years the disease prediction tools have become an important part of the integrated management of FHB and DON. The work proposed here would ensure the consistent delivery of these tools in nearly all states that have experienced significant losses to FHB. These objectives are consistent with the research priorities of MGMT RA targeting the deployment of disease prediction and management tools.