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Research Area: EEDF

Duration of Award: 1 Year

Project Title: Enhanced Tools for the Deployment of Fusarium Head Blight Prediction Models.

PROJECT 1 ABSTRACT

(1 Page Limit)

The current system, the Fusarium Head Blight Prediction Center (www.wheatcab.psu.edu), provides daily predictions of disease risk for 23 states at a 20 km resolution. These models are an important part of the disease integrated management for FHB. Our specific objectives for this year include (1) improve the resolution of the risk maps (2) expand map commentary feature available to state specialists (3) establish a collaborative projects with the Canadian modeling team. The increased resolution of the risk prediction maps will be accomplished by using NOAA's National Weather Service (NWS) national 5 kilometer hourly data set entitled, RTMA for Real-time Mesoscale Analysis as a source of model inputs. This source of data will be combined with the NDFD (National Digital Forecast Database), which provides hourly forecast data set on the same 5 km grid as the RTMA, to provide a daily prediction of disease risk and the estimated risk 24 and 48 hours in the future. We will also use an open source software package "Drupal" to develop tools that will enhance the communication between disease experts. These tools also enable the disease specialist to provide commentary about the risk of disease and appropriate management of FHB for the 23 states currently involved in the disease forecasting effort. Finally, we have established a collaborative effort with a DON modeling team in Canada, and we request support to pursue a modeling effort that should increase the accuracy of disease models and DON models in the near future.