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FY03 ARS Agreement #: 59-0790-3-082

Research Area: EDM

Duration of Award: 1 Year

Project Title: *G. zeae* Population on Leaves and Effect of Inoculum Levels on FHB Development.

PROJECT 1 ABSTRACT

(1 Page Limit)

Fusarium head blight (FHB) has become a serious threat to wheat production during the last decade in North Dakota. At present, North Dakota wheat growers are mainly depending on fungicides and cultural practices to manage the disease because of scarcity of resistant cultivars. This situation forces the researchers, especially the epidemiologists, to search for a disease forecasting system which could significantly predict the time of infection periods, and give wheat growers enough time to make the decision if they need to spray fungicides on their crop. Knowledge of sources of inoculum and its level, and weather conditions for FHB development is crucial in devising a precise disease forecaster. The experiments proposed in this research project would provide information on the variables described above. The data obtained from North Dakota will be compared with the data of other collaborators who are using the same protocol, from Ohio, Indiana, Pennsylvania, and South Dakota. Also, the role of wheat foliage as a carrier of FHB pathogen and its affect on the disease incidence and severity will be explored. In conclusion, the information obtained in this research would ultimately speed up the efforts in the development of a disease forecaster, and would help wheat producers better manage the disease. This is the second year of this project.