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Project Title: Split Fungicide Application and Crop Management to Control FHB in Barley.

PROJECT 1 ABSTRACT

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Fusarium head blight (FHB) has reduced the quality of barley grown in the midwest for the last decade due to fungus infected kernels, pinched grain and the presence of the toxin, deoxynivalenol (DON). Individual cultural and chemical control measures have reduced disease, but have been unsuccessful in getting the level of control necessary for the requirements of the malting barley industry. Production of malting quality barley in this region will require an integrated approach to control which includes cultural practices, fungicides, and genetic resistance.

The focus of this project is to fine tune the application of fungicides to increase their effectiveness at reducing disease.

It is likely that the reduced control with fungicides is due to the long period during which the plant is susceptible to infection and the relatively short period of effectiveness of the fungicides used for control. With many diseases that have high disease pressure and multiple infections over time more than one fungicidal spray is used. In high value crops this is economic. We propose that multiple applications be made of the best available fungicidal treatment to determine if this will reduce FHB and DON to acceptable levels. Multiple rates of fungicide will be used to find a rate that is both effective and economic.

The outcome of this work is expected to be a series of crop management recommendations relating to fungicide timing and rates.