

Effect of Proline Fungicide on Wheat Yield

Steve Prochaska, Agriculture & Natural Resources Extension Educator

Objective

To compare Proline fungicide treated wheat to untreated wheat by yield.

Background

Crop Year:	2008	Soil test:	pH 6.8, P 26 ppm
Test Location:	OSU Unger Farm		K 124 ppm (2004)
County:	Crawford	Planting Date:	Oct. 6, 2007
Nearest Town:	Bucyrus	Planting Rate:	1,380,000 seeds/A
Drainage:	systematic subsurface	Row Width:	10 inches
Soil type:	Blount	Fertilizer:	16.5-78-60 (Oct. 7, 2007)
Tillage:	no-tillage		78-0-0 (April 5, 2008)
Previous Crop:	Soybeans	Harvest Date:	July 16, 2008
Variety:	Agra 962		

Methods

This study used a completely randomized design with two treatments replicated 8 times to compare the effect of a Proline fungicide treated wheat to the untreated on wheat yield. Treatments were applied on May 24, 2008 at Feeke's wheat growth stage 10.5 with a calibrated sprayer delivering 12 gallons per acre. Nozzle orientation is important. Plots were 40 feet long and 60 inches wide and were harvested with a small plot combine.

Treatments

Control – untreated wheat

Proline @ 5.7 ounces per acre

Results

Treatment	Moisture %	Test Weight lb/bu	Wheat Yield bu/ac
Proline @ 5.7 oz/a	12.4	56.3	86.4 a
Untreated check	12.2	56.2	80.9 b

LSD (P=0.025)

Summary

Yield differences between treatments were statistically significant suggesting that Proline had an effect on controlling wheat disease on Agra 962. Studies of the efficacy of Proline reported by Paul and Mills in 2008 in minimizing yield loss due to various wheat diseases concluded that this product has some effect on limiting damage caused by wheat head scab and Stagonospora. A

survey of the plots for wheat head scab indicated that about 2.5% of the heads expressed symptoms; however Stagonospora glume and head blotch was very prevalent throughout the plot.

A Proline fungicide application would cost approximately \$26.00/acre (material and custom application). A wheat price of \$6.00 per bushel and an average yield increase of 5.5 bushels per acre lead to a net gain on fungicide investment of \$7.00 per acre.

Acknowledgement

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For more information contact:

Steve Prochaska
112 E. Mansfield Street
Bucyrus, Ohio 44820
419-562- 8731
prochaska.1@osu.edu

