

Wheat Fusarium Fungicide Trial

Objective: The purpose of the first project (Table 1) is to quantify the impact of fusarium head blight on the quality of harvested grain (Table 2) by comparing a farmer’s normal fungicide application at recommended timing to a fungicide application 3-5 days later. The purpose of the second project (Table 3) was to compare the use of a biological product EcoTea Foliar “HDI” versus fungicide to control fusarium head blight.

Summary:

Table 1: 3 site-years had a significant yield increase with fusarium fungicide application; both the recommended and late timing increased wheat yield above the control, but the two timings did not significantly differ from one another. Of the 17 site-years between 2018-2020 there were 5 site-years that showed a significant difference in yield.

Table 3: There was a significant yield difference using a fusarium fungicide versus a biological product.

Table 1: Fusarium Fungicide Timing

Trial ID	Rural Municipality	Variety	Yield			CV %	P-Value	Statistically Significant @ 95%
			Late	Rec'd	Untreated			
2020-WFHB02	Roland	SY Rowyn	92.5	94.0	91.1	4.5	0.0037	Yes
2020-WFHB03	Grey	AAC Brandon	85.5	85.4		3.2	0.9420	No
2020-WFHB04	Grey	AC Cardale	74.7 ^A	71.3 ^B	72.7 ^{AB}	3.1	0.0443	Yes
2020-WFHB05	Morris	AAC Brandon	75.0	74.7		4.2	0.8920	No
2020-WFHB06	Brokenhead	AAC Brandon	78.6	79.9	75.3	2.9	0.0006	Yes
2020-WFHB07	Cartwright-Roblin	AAC Brandon	52.8	51.6	47.4	5.6	0.4890	No
2019-WFHB01	Westlake-Gladstone	AAC Brandon	57.9	59.5	56.5	5.1	0.1461	No
2019-WFHB02	St. Francois Xavier	AAC Brandon	98.9	100.5	104.0	4.5	0.6582	No
2019-WFHB03	MacDonald	AAC Brandon	54.0	53.9	49.7	7.3	0.0025	Yes
2019-WFHB04	St. Clements	SY Rowyn	72.9	74.4	71.5	4.0	0.0886	No
2019-WFHB05	Dauphin	AAC Viewfield	76.9	81.3	75.6	6.2	0.0874	No
2019-WFHB06	Wallace-Woodworth	AAC Brandon	80.3	79.6	78.0	2.2	0.1138	No
2019-WFHB07	Pembina	AAC Brandon	74.7	80.7	70.1	7.0	0.1478	No
2018-WFHB01	Morris	SY Rowyn	84.6 ^A	83.7 ^{AB}	80.8 ^B	2.8	0.0382	Yes
2018-WFHB02	Louise	AAC Brandon	87.5	86.2	84.4	5.6	0.3459	No
2018-WFHB03	Dufferin	AAC Brandon	60.8	58.4		3.4	0.1627	No
2018-WFHB04	Grey	AAC Brandon	65.0	64.9	62.5	3.4	0.3277	No

Indicates Statistical Difference at 95% confidence interval



Table 2: Quality Analysis

TrialID	Treatment	Protein	Don	Falling Number	TWT (lbs/bu)
2018-WFHB01	Recommended	14.4	< 0.3	> 360	66
	Late	14.5	< 0.3	> 360	67
	Untreated	14.5	< 0.3	> 360	66
2018-WFHB02	Recommended	15.4	< 0.3	> 360	66
	Late	15.5	< 0.3	> 360	66
	Untreated	15.7	0.3	> 360	66
2018-WFHB03	Recommended	16.2	< 0.3	> 360	67
	Late	15.8	< 0.3	> 360	68
2018-WFHB04	Recommended	14.4	< 0.3	> 360	68
	Late	14.3	< 0.3	> 360	68
	Untreated	14.7	< 0.3	> 360	68
2019-WFHB01	Recommended	14.8	0.5	351	67
	Late	15.0	<0.3	344	67
	Untreated	14.8	<0.3	320	67
2019-WFHB02	Recommended	15.5	<0.3	325	66
	Late	15.2	<0.3	285	65
	Untreated	15.3	<0.3	345	64
2019-WFHB03	Recommended	14.5	<0.3	287	63
	Late	14.7	<0.3	294	63
	Untreated	14.6	<0.3	286	63
2019-WFHB04	Recommended	12.4	<0.3	295	63
	Late	12.4	<0.3	269	63
	Untreated	12.5	<0.3	284	63
2019-WFHB05	Recommended	12.2	<0.3	338	65
	Late	12.2	<0.3	336	65
	Untreated	12.2	<0.3	337	65
2019-WFHB06	Recommended	13.7	<0.3	317	64
	Late	13.6	<0.3	309	64
	Untreated	13.8	<0.3	291	63
2019-WFHB07	Recommended	13.0	0.3	225	61
	Late	12.9	0.3	239	60
	Untreated	11.8	0.4	233	59
2020-WFHB01	Prosaro XTR	12.8	< 0.3	339	79
	EcoTea Foliar "HDI"	12.8	< 0.3	345	80
2020-WFHB02	Recommended	13.7	<0.3	353	81
	Late	13.6	<0.3	352	81
	Untreated	13.9	<0.3	347	80
2020-WFHB03	Recommended	14.5	<0.3	349	81
	Late	14.6	<0.3	347	81
2020-WFHB04	Recommended	14.0	<0.3	354	77
	Late	13.8	<0.3	342	77
	Untreated	14.1	<0.3	349	77
2020-WFHB05	Recommended	13.5	<0.3	356	82
	Late	13.7	<0.3	350	81
2020-WFHB06	Recommended	13.4	<0.3	342	80
	Late	13.5	<0.3	349	80
	Untreated	13.5	<0.3	354	79
2020-WFHB07	Recommended	15.5	0.5	289	81
	Late	15.1	0.5	298	80
	Untreated (Reference)	15.1	0.5	325	80



Wheat Fusarium Fungicide Trial cont'd

Table 3: Fusarium Fungicide vs. Biological Stimulant

Trial ID	Rural Municipality	Variety	Yield		Difference	CV	P-Value	Statistically Significant @ 95%
			EcoTea Foliar "HDI"	Prosaro XTR				
			bu/ac		bu/ac	%		
2020-WFHB01	Cartier	AAC Brandon	65.9	69.9	-4.0	4.3	0.0076	Yes



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