

Title: Effect of Absolute and Prosaro Fungicide on the Control of Stripe Rust on Winter Wheat - 2016

Objective: To evaluate the effects of fungicides on stripe rust control in winter wheat.

Materials and Methods:

Five fungicide treatments were applied to evaluate the effectiveness of stripe rust control in winter wheat. Decade winter wheat was planted two inches deep, on 7.5 inch row spacings, on October 2, 2015. Treatments were then imposed the following spring, using a randomized complete block with three replications. Absolute and Prosaro were each applied at two rates along with the standard treatment of tebuconazole. Fungicide applications were made at flag leaf stage on May 13 and included the adjuvant Induce 90 SL at 0.125% v/v. Treatments were applied using a CO₂ backpack sprayer with Teejet XR11002 nozzles in 20 GPA of water.

Results:

All fungicide treatments reduce stripe rust infection relative to the untreated check, but control was similar among the fungicide treatments. No significant differences were observed between fungicide treatments for height, yield, test weight or thousand kernel weight. However fungicide treatments resulted in higher values compared to the untreated check. Falling number, protein and lodging for all treatments were not significantly different from the check. The one exception was Prosaro applied at the high rate, which decreased percent protein compared to the check.

Summary:

Good control of stripe rust occurred from all of the fungicide treatments. Fungicide treatment had no effect on grain protein, lodging or falling numbers. Height, yield, test weight and thousand kernel weight increased relative to the check, but were not significantly different between treatments.

Table 1. Materials and Methods.

Seeding Date:	4/22/2016	Harvest Date:	8/18/2016
Julian Date:	113	Julian Date:	231
Seeding Rate:	120 lb/A	Soil Type:	Creston SiL
Previous Crop:	Spring Wheat	Soil Test:	99-32-432-40
Tillage:	Conventional	Fertilizer:	BC: 235-40-60 DR: 3-14-0
Herbicide:	Huskie 11 oz/A + Axial 16.4 oz/A + NIS 1 qt/100gal + UAN 28% 1 qt/A		

Table 2. Effect of fungicides on stripe control in winter wheat, Kalispell, MT - 2016.

Trt Treatment	Rate	Percent Stripe Rust			HT in.	LOD %	YLD ¹ bu/a	PRO ² %	TWT ¹ lb/bu	TKW ¹ g	FN sec
		5/28	7/1	7/13							
Check		53.3	57.7	73.0	43.3	10.0	64.1	13.24	52.8	31.7	363.8
Absolute 500SC	4 fl oz/a	13.3	19.3	27.3	46.9	30.0	102.2	13.25	57.9	40.2	354.9
Absolute 500SC	5 fl oz/a	15.0	18.3	30.0	47.0	45.0	96.1	13.22	57.7	39.3	365.4
Prosaro 421 SC	5 fl oz/a	23.3	22.0	30.0	46.1	20.0	93.3	12.85	58.8	40.6	357.4
Prosaro 421 SC	6.5 fl oz/a	28.3	21.0	23.3	46.7	24.0	95.1	12.73	58.1	40.7	364.6
Tebuconozole	4 fl oz/a	21.7	21.7	23.3	45.9	41.7	90.3	13.07	58.4	38.2	361.3
Mean		25.8	26.7	34.5	46.0	28.4	90.2	13.06	57.3	38.4	361.2
CV		26.2	34.7	31.5	2.2	100.3	10.9	1.63	2.6	7.0	2.9
LSD		12.3	16.8	19.8	1.8	ns	17.9	0.39	2.7	4.9	ns
Pr>F		0.0003	0.0027	0.0016	0.0092	0.6681	0.0105	0.0515	0.0060	0.0162	0.7715

HT: height , LOD: lodging, YLD: yield, PRO: protein, TWT: test weight, , TKW: thousand kernel weight,

FN: falling number, ns: nonsignificant.

¹ adjusted to 13% moisture.

² adjusted to 12% moisture.