

Benefits of Prosaro* Fungicide as a Management Strategy to Control Foliar and Fusarium Head Blight Diseases on Winter Wheat Cultivars in Northeast North Dakota.

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Table 1. Source of variation and confidence levels for significant differences among leaf disease severity, Fusarium head blight incidence, field severity and head severity yield, test weight, protein and deoxynivalenol (DON) on winter wheat Langdon, 2007.

Source of Variation	Early	Leaf Severity	FHB			Yield	Test Weight	Protein	DON
	Leaf Severity		Incidence	Field Severity	Head Severity				
Cultivar	<0.0001	0.3729	<0.0001	<0.0001	0.0763	<0.0001	<0.0001	0.0029	<0.0001
Rep*Cult	0.3191	0.4456	0.5138	0.0049	0.0404	0.6167	0.7342	0.0011	0.7577
Fungicide	0.1637	<0.0001	0.0001	<0.0001	0.0031	<0.0001	<0.0001	0.4442	<0.0001
Cult*Fung	0.0303	0.1313	0.9529	0.0107	0.0349	0.0012	<0.0001	0.0023	0.0134
% C.V.	9	31	27	53	12	10	1	2	37

Table 2. Leaf severity and FHB incidence averaged across winter cultivars and fungicide treatments Langdon, 2007.

Cultivar	Treatment	% Leaf Severity	%FHB Incidence
CDC Falcon			35.0
Jagalene			58.8
Jerry			48.1
Ransom			31.5
Wesley			78.1
LSD			14.5
	Prosaro	74.2	39.3
	Untreated	94.3	61.3

Table 3. Leaf severity, FHB field and head severity, yield, test weight, protein and DON by winter wheat cultivar and fungicide treatments Langdon, 2007.

Cultivar	Treatment	Early	FHB		Yield	Test		
		Leaf Severity (%)	Field Severity (%)	Head Severity (%)	(Bu /acre)	Weight (Lb/ bu)	Protein (%)	DON ppm
CDC Falcon	Prosaro	69.8	69.8	0.4	101.5	60.0	11.3	1.1
	Untreated	73.3	73.3	2.6	77.9	57.1	11.0	1.2
Jagalene	Prosaro	89.0	89.0	3.0	80.7	59.1	11.7	1.3
	Untreated	98.2	98.2	11.4	37.5	52.3	12.1	3.6
Jerry	Prosaro	55.1	55.1	1.5	102.5	59.3	12.4	0.3
	Untreated	50.6	50.6	3.7	88.8	58.3	12.0	1.8
Ransom	Prosaro	69.1	69.1	0.4	90.2	59.7	11.3	0.1
	Untreated	62.4	62.4	1.6	88.8	59.0	11.8	0.7
Wesley	Prosaro	61.3	61.3	6.1	90.2	58.1	13.0	2.1
	Untreated	74.5	74.5	14.9	60.4	53.9	12.5	2.4
LSD		4.8	4.8	1.8	6.0	0.6	0.2	0.4

- Winter wheat was planted in mid September into flax stubble in 6-in rows.
- Fungicide was applied at early flowering growth stage with a CO₂ pressurized backpack sprayer equipped with XR8002 nozzles oriented forward and backward and angled 30° downward from horizontal at 18.4 GPA..
- Prosaro fungicide (Bayer CropScience) and Induce adjuvant (Helena Chemical Co.) were applied at 6.5 fl oz/ acre and 0.125% v/v.
- Jagalene was infected with leaf rust (*Puccinia triticina*) at very early flag emergence and may have benefited from a foliar fungicide to the flag leaf at an earlier application timing.

*Prosaro is a 50:50 blend of tebuconazole and prothioconazole and is expected to receive a federal label after June 2008.