

Management of Blackleg in Canola with Fungicides

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The research trial was conducted at the Langdon Research Extension Center and was planted on May 19, 2017 with the canola variety “DKL 30-42 (Roundup Ready)” in a randomized complete block design with four replications. Canola production recommendations for northeast North Dakota from the North Dakota State University Extension Service were followed.

The plot size was 5 ft. x 16 ft. long with a canola border between each plot. Two applications of fungicides were applied at the 2-4 leaf stage and 14 days after the first application using a CO₂-pressurized backpack style sprayer with a three nozzle boom (XR-8002) at 10 GPA. The level of blackleg was of natural infection. The severity of blackleg infection was evaluated on 100 plants averaged over four replicates after swathing on August 25. Individual plants were uprooted, cut through the basal part of the stem and scored on the percent of diseased tissue visible in the cross-section. The ratings were zero when no diseased tissue was visible in the cross-section, and 100 if the diseased tissue occupied 100 percent of the cross-section with significant constriction of affected tissues, drying of tissue and brittle or the plant was completely dead.

The results indicate there were no significant differences obtained among the variables tested when compared with that of the non-treated check except in yields. Yields of Proline treated plots are significantly different from the other treatments in the trial.

Table 1: Efficacy of commercially available fungicides in managing black leg and their influence on yield and test weight.

Treatment	Dosage (Fl oz/A)	Application Timing	Black Leg		Yield (lbs/A)	Test Weight (lb/bu)
			Incidence (%)	Mean Severity*		
Non-treated	Check	Check	36	0.48	2646	52
Headline	6	2-4 leaf+14DAA	29	0.25	2385	52
Priaxor	6	2-4 leaf+14DAA	21	0.34	2479	52
Proline	4	2-4 leaf+14DAA	20	0.28	3121	52
Mean			27	0.34	2657	52
CV (%)			63	41	11	0.3
LSD			26	0.21	438	0.25
p-Value			NS	NS	0.01	NS

*Black Leg Mean Severity: was calculated by multiplying the category value (0-5)*actual severity (0.2,0.4,0.6,0.8,1.0), and summing, then dividing by the infected plant count.

NIS: Non-Ionic Surfactant was added at 0.25% V/V in all the fungicide treatments.

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