

Evaluation of Fungicides to Manage White Mold in Canola

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This research trial was conducted at the Langdon Research Extension Center with an objective to evaluate the performance of fungicides to manage white mold in canola. The trial was planted on May 23, 2023 with the Roundup Ready canola variety ‘DKL DKTFL21SC’ in a randomized complete block design replicated four times. The trial followed state recommended practices for land preparation, fertilization, seeding rate and weed control. The plot size was 5 ft. wide x 16 ft. long with a canola border on either side of each plot. The trial was irrigated with an overhead sprinkler system set at one hour each day beginning one week before the start of bloom and continuing four weeks after bloom to help increase disease infection levels. Fungicides were applied at 20% bloom using a CO₂-pressurized backpack style sprayer with a three-nozzle boom (XR-8002) at 20 GPA. Ascospores were sprayed at the 20% flowering stage to obtain white mold infection in the research plots. Disease assessments were done on fifty plants within each plot and the levels of incidence and severity were recorded for each plant prior to swathing (August 25) on a 0-5 scale, where 1 = superficial lesions or small branch infected; 2 = large branch(es) dead; 3 = main stem at least 50% girdled; 4 = main stem girdled but plant produced good seed; 5 = main stem girdled, much reduced yield. A white mold mean disease severity index (MDS) was calculated with weighted mean of incidence and the number of plants in each severity rating.

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

Treatment	White Mold		Yield lbs/a	Test Weight lbs/bu
	% Incidence	MDS (1-100)		
Non-treated Check	19	16	3298	52
Experimental + Masterlock @ 6 oz/a	30	26	3113	52
ProPulse @ 13.6 fl oz/a + Masterlock @ 6 oz/a	6	4	3411	52
Priaxor @ 8 fl oz/a + Masterlock @ 6 oz/a	18	12	3240	52
Topsin 70% @ 2 lb/a + Masterlock @ 6 oz/a	14	11	3303	52
Endura @ 6 fl oz/a + Masterlock @ 6 oz/a	10	6	3280	52
Mean	16	13	3274	52
CV%	49	60	10	0.45
LSD	12	12	514	0.35
P-Value (0.05)	0.0091*	0.0113*	NS	NS

NS: Statistically non-significant

Results: There were significant differences observed in white mold incidence and mean disease severity (MDS) among the treatments tested. The fungicide ProPulse provided the best control of white mold over any of the other fungicides tested followed by Endura (Table 1). There were no significant differences found among the treatments tested (p-value non-significant) in terms of yield and test weight.

Acknowledgements: Special thanks to Jacob Kram (NDSU), Brock Freer and Kartheek Chapara.