Evaluation of Fungicides to Manage White Mold in Canola

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This research trial was conducted at the Langdon Research Extension Center to evaluate the performance of fungicides to manage white mold in canola. The trial was planted on May 27, 2025, with the Roundup Ready canola variety 'Dekalb DKTFLL21SC' 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 for 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 CO_2-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 conducted 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 branches 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 the weighted mean of incidence and the number of plants in each severity rating.

Data analysis: Statistical analysis was done using Genovix Generation II software. Fisher's least significant difference (LSD) was used to compare means at p ($\alpha = 0.05$).

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

Treatments & their rate	White Mold % Incidence	% MDS	Yield lbs/A	Test Weight lbs/bu
Non-treated Check	73	56	1647	52
Miravis Neo @ 13.7 fl oz/a	6	3	1651	51
ProPulse @ 13.6 fl oz/a	0	0	1864	52
Priaxor @ 4 fl oz/a	25	9	1789	52
Topsin 70WP @ 2 lb/a	10	4	1775	52
Endura @ 6 oz/a	19	10	1833	52
MEAN	**22**	**14**	**1760**	**52**
CV%	**32**	**30**	**10**	**0.8**
LSD	**11**	**6**	**NS**	**NS**
P-Value (0.05)	**0.00001***	**0.00001***	**NS**	**NS**

Note: Non-Ionic Surfactant was added to each treatment of fungicide at the rate of 0.25% v/v
*Significant differences among the treatments at P-value < 0.05.
NS: Non-Significant differences among the treatments at P-value < 0.05.

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

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