Evaluation of Fungicides to Manage White Mold in Canola

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A 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 27, 2021 with the Roundup Ready canola variety 'Nexera 1024RR' 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 to 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. The amount of white mold infection obtained in the research plots was natural. Fifty plants were rated within each plot and the levels of incidence and severity were recorded for each plant prior to swathing (August 18) 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.

	Rate	White Mold		Yield	Test Weight
TREATMENTS	**(oz/a)**	**Incidence (%)**	**MDS (0-5)**	**(lbs/a)**	**(lbs/bu)**
NON-TREATED CHECK	0	4	0.08	2622	52
PROLINE	5.7	2.5	0.07	2769	52
EXPERIMENTAL-1	8.2	6	0.11	2929	52
EXPERIMENTAL-2	10.9	5	0.11	3000	52
QUADRIS	15.5	5.5	0.13	3175	52
ENDURA	6	2	0.06	3084	52
INCOGNITO	1.6	5	0.15	3048	52
EXPERIMENTAL-3	12	4.5	0.07	3182	52
Mean		4.3	0.1	2977	52
CV%		112	133	10.5	0.5
LSD		NS	NS	NS	NS
P-Value (0.05)		NS	NS	NS	NS

Non-Ionic Surfactant (NIS) was added to all the fungicide treatments at 0.25% V/V.
NS: Statistically non-significant

Results: Dry weather played a role in low disease incidences of white mold in canola. No significant differences in white mold incidence, mean disease severity, test weight and yield were observed among the fungicides tested and the non-treated check (p-value non-significant).

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