Evaluation of Fungicides to Manage White Mold in Canola

Venkat Chapara and Amanda Arens

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, 2022 with the Roundup Ready canola variety 'DKL 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 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 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.

	Rate	**White Mold**		**Yield**	**Test Weight**
Treatments	**(fl oz/A)**	**Incidence (%)**	**MDS (0-5)**	**(lbs/A)**	**(lbs/bu)**
Non-treated	Check	20	0.71	2057	52
Miravis NEO	13.7+.125	17	0.57	2261	52
Proline 480 SC	5.7+.125	10	0.25	2387	52
Priaxor	4+.125	11	0.5	2488	52
Experimental 1	0.315 l/ha+.125v/v	20	0.86	2365	53
Experimental 2	0.315 l/ha+.125v/v	8	0.34	2459	52
Experimental 3	0.315 l/ha	16	0.76	2314	52
	Mean	14	0.6	2333	52
	CV (%)	53	73	13	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 @ 0.125 v/v except for Experimental 3.
NS: Statistically non-significant

Results: There were no significant differences in white mold incidence, mean disease severity, test weight and yield observed among the fungicides tested and the non-treated check (p-value non-significant).

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