

Evaluation of foliar fungicides for control of blackleg of canola in Langdon, ND, 2004.

A foliar fungicide trial was conducted on canola at Langdon, ND during the 2004 growing season to evaluate efficacy in controlling blackleg on a moderately susceptible canola cultivar. The study was planted 3 Jun and harvested 6 Oct. Fungicides were applied at the 2 to 4 leaf stage with a CO₂ pressurized backpack sprayer with 8002 flat fan nozzles spaced at 20 in. calibrated to deliver 18 gal/A at 40 psi. The experimental design was a randomized complete block with four replicates, and plots were seven rows wide (6 in. row spacings) and 16 ft long. Untreated canola border plots were planted between every plot to reduce spray drift to adjacent experimental plots. The trial was located on a commercial grower's field adjacent to an area that had high blackleg pressure in 2003. To promote disease development, blackleg affected stubble collected in 2003 was spread throughout the experiment. Ten plants from each plot were evaluated for blackleg on 12 Aug. The lower stem area of each plant was cut crosswise and rated for blackleg severity using a 0 to 5 scale. Disease incidence was calculated by the number of plants with blackleg out of the ten and converting to a percentage. A disease severity index (DSI) was calculated by: (mean severity × % incidence)/5. Data were analyzed with the general linear model procedure (PROC GLM) using SAS (SAS Institute, Cary, NC). Treatment means were compared using Fisher's least significant difference (LSD) at the $P \leq 0.05$ level

Significant ($P \leq 0.05$) differences among treatments for disease severity, disease incidence, and yield occurred. Plots treated with Endura had a significantly lower disease severity rating and disease incidence than the untreated control. Plots treated with Pristine, Headline, JAU 6476, Amistar, A7402T, or Endura had a significantly greater yield than the untreated control. No phytotoxicity from any of the treatments was observed.

Treatment and rate/A	Disease severity (0-5) ^z	Disease incidence (%)	DSI (0-100) ^y	Yield (lb/A)
Pristine 18 oz.....	3.6	100	72	1264
Headline 9 fl oz.....	3.2	95	61	1250
JAU 6476 5.7 fl oz.....	3.2	95	61	1227
Amistar 2.25 oz.....	3.3	95	64	1220
A7402T 1.8 oz a.i.....	3.8	100	76	1141
Endura 6 oz.....	1.7	70	25	1131
Quilt 8.67 fl oz.....	3.4	100	68	1081
Tilt 4 fl oz.....	3.5	93	65	1048
Topsin 70WP 16 oz.....	3.9	98	77	1041
Rovral 4F 14.4 fl oz.....	3.4	90	63	1028
Ronilan 16 oz.....	4.1	100	81	998
Untreated control.....	2.8	95	53	938
LSD (0.05).....	1.0	11	22	190

^z Disease severity was rated using a 0 to 5 scale, in which 0 = no visual penetration or infection of stem; 1 = 25% of the stem circumference with lesions; 2 = 50% of the stem circumference with lesions and slight girdling; 3 = 75% of the stem circumference with lesions and significant girdling; 4 = stem completely girdled, but intact at base; 5 = dead plant.

^y Disease severity index (DSI) was calculated by: (mean severity × % incidence)/5.