CANOLA(*Brassica napus* 'Hyola 357 Magnum')
Sclerotinia Stem Rot; *Sclerotinia sclerotiorum*

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Evaluation of foliar fungicides on canola for control of sclerotinia stem rot, 2003.

A field experiment was planted on 6 May with the cultivar 'Hyola 357 Magnum' at the Langdon Research Extension Center. The previous crop was fallow. Plot size consisted of seven 6 inch rows 16 ft long with a canola border between every plot to reduce drift to adjacent plots. The trial area had a resident population of *Sclerotinia sclerotiorum* sclerotia with additional sclerotia dispersed on the soil surface following planting to increase infection potential. In addition, petals were artificially inoculated by spray application with ascospores at the 50% bloom stage on 29 June at a rate of 25-29,000 spores/ml at 18 gpa. The trial was irrigated periodically with an overhead sprinkler system keeping the plants wet, favoring infection. A CO_2 pressurized backpack style sprayer with 8002 flat fan nozzles spaced at 20 inches was used to apply an 18 gpa solution at 40 psi. The 30% and 50% bloom treatments were sprayed on 26 June and 28 June, respectively. Twenty-five consecutive stems were rated in two locations within each plot for percent incidence and disease severity, using a 0-5 scale, just prior to swathing. A disease severity index was calculated by: (incidence*severity)/5. The experimental design was a randomized complete block with four replications.

Disease pressure was severe. A strong wind of 50 mph occurred on 2 July resulting in very heavy lodging in the entire trial and promoted high disease levels. Ronilan applied at 50% bloom, Endura, JAU6467, Rovral and V-10116 (30% bloom) treatments provided significantly increased yields over the control and in most instances resulted in the lowest disease severity index levels. Where significant yield increases were observed, most products were more effective applied at 50% bloom compared to 30% bloom.

	Application Timing		Disease		Disease Severity	
Treatment and rate/A	30% early bloom	50% late bloom	Severity[x] (1-5)	Incidence (%)	Index (0-100)	Yield (lb/A)
Control……..			4.5	89	82	1516
Blocker 4F 3pt/a…..……..……	X		4.8	99	95	1623
Blocker 4F 3pt/a + Topsin M 70WSB 0.5 lb/a……..	X		4.3	98	79	1676
Topsin M 70 WSB 0.5 lb/a……..……..	X		4.5	93	88	1862
Ronilan 50EG 12 oz……...	X		4.2	83	78	1952
Ronilan 50EG 12 oz……...		X	4.0	72	67	2081
Endura 70WG 5.8 oz……	X		3.5	65	53	1978
Endura 70WG 5.8 oz…….		X	2.9	66	40	2191
JAU6467 480 SC 5 fl oz + Induce 1.25% v/v[z]……..	X		3.4	50	46	2291
JAU6467 480 SC 5 fl oz + Induce 1.25% v/v[z]……..		X	3.4	73	34	2444
JAU6467 480 SC 5.7 fl oz + Induce 1.25% v/v[z]……..	X		3.6	54	59	2151
JAU6467 480 SC 5.7 fl oz + Induce 1.25% v/v[z]……..		X	2.7	79	35	2437
Rovral 4FL 14.4 fl oz/A + Aphoil 1% v/v[y]……...	X		3.9	77	65	2078
Rovral 4FL 14.4 fl oz/A + Aphoil 1% v/v[y]……...		X	3.7	92	58	2224
Topsin M 70WSB 1 lb/A…….	X		4.0	94	74	1911
Topsin M 70WSB 1 lb/A…….		X	4.2	81	79	1706
TD2193-07 4.5F 20 fl oz/A……..……..	X		3.9	90	66	1895
TD2193-07 4.5F 20 fl oz/A……...		X	3.8	93	70	1892
V-10114 1.67 SC 19 fl oz/A…….……	X		4.7	86	87	1802
V-10114 1.67 SC 19 fl oz/a…….		X	4.4	86	76	1723
V-10116 1.67 FL 9.5 fl oz/a…….……	X		4.2	93	74	2028
V-10116 1.67 FL 9.5 fl oz/a…….……		X	4.5	89	83	1779
Trial Mean			4.0	82	68	1966
LSD(P≤0.05)			0.9	23	24	450

z - Induce is a non-ionic surfactant.
y – Aphoil is a crop oil concentrate.
x - Field severity scale: 0=no symptoms, 1=superficial lesions or small branch infected, 2=large branch dead, 3=main stem at least 50% girdled, 4=main stem girdled but plant produced good seed, 5=main stem girdled, much reduced yield.