2008 Oregon Clover Commission Fungicide Trials

Objective: To obtain efficacy data to support continued 24c registration of Flint and Quadris fungicides for sclerotinia crown rot and wilt, *Sclerotinia trifoliorum*, control in crimson clover grown for seed.

Procedure: A trial site was established in a commercial planting of crimson clover near Woodburn, OR on March 5, 2008. Another site was established in a commercial crimson field near Laurel, OR on March 6. Plot size at both locations was 12 ft by 50 ft. Treatments were applied with a CO2 backpack plot sprayer using a boom with four 8002 nozzles @ 30 psi in 30 gallons of total spray mix per acre. All treatments were replicated four times. The treatments were as follows:

1) Untreated Check
2) Flint @ 1.5 oz/ac
3) Flint @ 2.0 oz/ac
4) Quadris @ 10 oz/ac
5) Endura @ 5 oz/ac
6) Endura @ 8 oz/ac
7) Rovral @ 2 pts/ac

No disease developed at the Woodburn site, so treatments there were not evaluated. The Laurel site was evaluated on June 27. Evaluation consisted of counting all stems in 2 ft of row at 2 locations within each plot. Diseased or dead stems in each 2 ft section of row were also counted and recorded.

Results: Total number of stems per 4 ft of row per plot.

Treatments	Replicates					
	R1	R2	R3	R4	Total	Ave./ft
1) Untreated Check	56	90	101	95	342	21.4
2) Flint @ 1.5 oz/ac	105	85	89	93	372	23.3
3) Flint @ 2.0 oz/ac	102	89	96	92	379	23.7
4) Quadris @ 10 oz/ac	99	78	85	89	351	21.9
5) Endura @ 5 oz/ac	90	84	91	83	360	21.8
6) Endura @ 8 oz/ac	109	90	87	99	385	24.1
7) Rovral @ 2 pts/ac	77	69	83	80	309	19.3

Results: Dead and/or infected stems.

Treatments	Replicates						
	R1	R2	R3	R4	Total	Mean	Ave./ft
1) Untreated Check	6	22	23	19	70	17.5 a	4.4
2) Flint @ 1.5 oz/ac	12	7	23	13	55	13.8 a	3.4
3) Flint @ 2.0 oz/ac	3	4	2	5	14	3.5 b	0.9
4) Quadris @ 10 oz/ac	2	2	5	3	12	3.0 b	0.8
5) Endura @ 5 oz/ac	6	9	14	9	38	9.5 ab	2.4
6) Endura @ 8 oz/ac	7	3	2	5	17	4.3 b	1.1
7) Rovral @ 2 pts/ac	13	8	14	7	42	10.5 ab	2.6

* Means followed by the same letter do not significantly differ (P=.05, Student-Keuls)

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Results: Dead and infected stems as a % of total stems.

Treatments

1) Untreated Check	4.4/21.4 = 20.6 %
2) Flint @ 1.5 oz/ac	3.4/23.3 = 14.6 %
3) Flint @ 2.0 oz/ac	0.9/23.7 = 3.8 %
4) Quadris @ 10 oz/ac	0.8/21.9 = 3.6 %
5) Endura @ 5 oz/ac	2.4/21.8 = 11.0 %
6) Endura @ 8 oz/ac	1.1/24.1 = 4.6 %
7) Rovral @ 2 pts/ac	2.6/19.3 = 13.5 %

Discussion: Because of unusually cool, wet, weather, fall planted crimson clover grew slowly during the fall of 2007 and spring 2008. There was little foliage present to create a favorable environment for the development of sclerotinia. Some sclerotinia was found in established fields of red clover, which is a perennial crop with more winter/spring foliage, in February and March. Light, scattered infections of sclerotinia were not found in crimson fields until April. Only a small amount of sclerotinia was found at either the Woodburn or the Laurel site at the time of application. Sclerotinia did not continue to develop at the Woodburn site but a light infection did continue at the Laurel site. Plant densities at the Laurel site were similar in each replicate. However, when comparing average plant densities by treatments, it is curious that plant density was slightly less in the Rovral treatments.

Conclusion: Results of this trial indicate that all treatments reduced the incidence of sclerotinia infected crimson clover stems when compared to the untreated check. Results showed that Flint @ 2.0 oz/ac, Quadris @ 10 oz/ac and Endura @ 8 oz/ac provided the most significant control.