

Evaluation of fungicides for control of white pine blister rust on black currant, 2003.

Trials were conducted in a 2-year-old mixed planting of black currant, red currant and gooseberry in Geneva, NY. Bushes were planted in alternation within rows such that individual plots consisted of three plants, one black currant, one red currant, and one gooseberry. Treatments were arranged in a randomized complete block design with five replications. All treatments were applied to drip using a 2 gal garden sprayer at approximately 30 PSI. Application timings were as follows: 21 May (fruit set), 13 Jun, 18 Jun, 1 Aug (harvest), 14 Aug, and 27 Aug. The incidence of white pine blister rust (WPBR) was evaluated by examining all leaves on 3 canes per plant on 31 Jul on black currant bushes only. Canes were tagged on the same date just below the four most fully expanded new leaves and data taken again on all new fully expanded leaves 11 Sep. Data were arcsin square root transformed before statistical analysis and analyzed in an ANOVA using SAS PROC MIXED. Treatment means were separated using the pairwise difference option (PDIFF) in PROC MIXED ($P < 0.05$).

The season was very conducive for the development of WPBR. The controls and the poorest performing treatments began defoliating from WPBR infection by 14 Aug and some control plants were completely defoliated by 1 October. The 11 Sep rating is difficult to interpret because ratings were done only on new growth. Many of the poorest treatments shown on 11 Jul had delayed or very little new growth, consequently the availability and/or susceptibility of tissue to WPBR infection was much variable after the 11 Jul rating. All treatments significantly reduced WPBR incidence early in the season. Programs incorporating sterol inhibitors (Indar, Nova) or Kocide gave the best early and late season control of disease. Use of copper based compounds for WPBR control will provide a good organic alternative for disease control. As projected, Switch and Elevate gave little reduction in WPBR incidence. Application timings need to be investigated more closely to determine if even higher levels of early season disease control may be achieved.

Treatment, rate/A	Incidence of white pine blister rust	
	July 31*	September 11*
Indar 75WP 2 oz.....	21.3 a	77.5 bcd
Captan 80WDG 3.75 lb + Indar 75WP 2 oz.....	26.5 a	70.0 cd
Switch 62.5WG 0.875 lb + Nova 40W 5 oz.....	27.4 a	55.0 bc
Kocide 2000 7.5 lb + Nova 40W 5 oz.....	28.3 ab	45.4 ab
Kocide 2000 7.5 lb.....	28.6 ab	98.8 cd
Nova 40W 5 oz.....	28.8 ab	27.4 a
Cabrio EG 0.875 lb + Nova 40W 5 oz.....	36.7 abc	41.9 ab
Dithane RSNT 4 lb.....	40.3 abc	98.9 cd
Amistar 80WG 3 oz.....	47.1 bc	100.0 d
Cabrio EG 0.875 lb.....	52.2 cd	99.0 cd
TM45002 68WDG 5.25 lb.....	53.0 cd	100.0 d
Captan 80WDG 3.75 lb.....	69.2 de	100.0 d
Switch 62.5WG 0.875 lb.....	70.9 de	100.0 d
Elevate 50WG 1.5 lb.....	84.5 ef	85.5 cd
Untreated check.....	91.6 f	83.8 cd

* Mean disease incidence, defoliation and foliar necrosis from 5 replicate plots per treatment are shown. Means within a column not followed by a common letter are significantly different.