

Evaluation of management programs for control of blister spot, 2003.

Trials were conducted in an 18-year-old ‘Crispin’ orchard planted on M.26 rootstocks in Geneva, NY. Individual plots consisted of single trees. Treatments were arranged in a randomized complete block design with five blocks. Treatments were applied to drip using a handgun and high-pressure pump. Cover sprays were applied with an airblast sprayer at 3X concentration. Blister spot incidence (presence/absence) was evaluated by tallying the number of infected fruit out of 50 fruit per tree on 18 Aug. Blister spot severity was evaluated by calculating the mean number of lesions per 50 fruit on the same day. Incidence data were transformed using the arcsin transformation; severity data were log transformed. Transformed data were analyzed in an ANOVA using SAS PROC MIXED. Treatment means were separated using the pairwise difference option (PDIFF) in PROC MIXED ($P < 0.05$).

Blister spot pressure was only moderate, despite a very wet season. This may have been due in part to relatively cooler average temperatures during the post petal fall period when blister spot applications were being made. Maximum daily temperatures did not exceed 80° F until just prior to the last application on 24 Jun. All treatments significantly reduced disease incidence and severity relative to the untreated check. Although not statistically different, NutriPhyte Magnum and Agri-mycin had approximately 40% fewer lesions than all other treatments. For NutriPhyte Magnum and Aliette treatments, the benefits of added bloom sprays were numerically better but not statistically different. Oxidate, a formulation of hydrogen dioxide, gave moderate control of blister spot; there was no evidence of phytotoxicity with the Oxidate treatment despite reports to the contrary when used on other varieties or with different use timings.

Treatment, rate/100gal	Timing*	Blister spot incidence	Blister spot severity
		(No. infected fruit/50)** [% control]	(No. lesions/50 fruit)** [% control]
NutriPhyte Magnum 4 pt.....	5,6,8-11	5.8 a [75]	21.2 a [80]
NutriPhyte Magnum 4 pt.....	8-11	9.0 a [62]	28.2 a [74]
Agri-mycin 17 0.5 lb.....	8-11	9.2 ab [61]	21.0 ab [81]
Aliette 80WDG 1 lb.....	5,6,8-11	10.6 ab [55]	40.0 abc [63]
Oxidate 128 fl oz.....	8-11	10.8 ab [54]	44.8 abc [58]
Aliette 80WDG 1 lb.....	8-11	11.2 ab [52]	40.0 abc [63]
Oxidate 128 fl oz.....	5,6,8-11	12.6 ab [46]	40.4 abc [61]
Dithane 75RSNT 1 lb	1-6		
Topsin-M 3 oz + Captan 50W 1 lb.....	7-15	18.0 b [23]	60.6 bc [44]
Untreated check.....		23.4 c	108.0 c

* Timing designations are as follows: #1= 16 Apr (green tip); #2 = 21 Apr (1/4 in. green); #3 = 28 Apr (1/2 in. green); #4 = 5 May (tight cluster); #5 = 15 May (pink); #6 = 22 May (bloom); #7 = 30 May (late bloom/early petal fall); #8 = 3 Jun (petal fall); #9-15 = 10, 18, 24 Jun, 8, 18, 24 Jul, and 8 Aug (cover sprays). All treatments included Dithane 75RSNT (1 lb/100 gal) at timings #1-6 followed by cover sprays of Captan 50W (1 lb/100 gal) + Topsin-M (3 oz/100 gal) at timings #7-15 for apple scab management.

**Values represent means of five replicates per treatment. Means within a column not followed by a common letter are significantly different using PDIFF ($P < 0.05$).