

EVALUATION OF FUNGICIDES FOR CONTROL OF FRUIT RUSSET OF APPLE, 1998: Trials were conducted in experimental orchards in Geneva, NY. Orchard #1 is a planting of 25 year old Golden Delicious trees planted on MM.106 rootstocks. Orchard #2 is a planting of 20 year old Golden Delicious trees on M.9 rootstocks. Treatments were arranged in a randomized block design. Dilute sprays were applied with a 350 PSI single nozzle handgun sprayer to drip point. Schedule I consisted of 11 sprays: 22 April (pink); 1, 7, 14, 21, 28 May; 5,18, June; 2, 17, 31 July. Schedule II consisted of 3 sprays: 14 May (petal fall), 21, 28 May. Schedule III involved only 2 sprays: 5 May (80% king bloom), 12 May (petal fall). Whole fruit and stem end russets were measured using a visual rating system. Whole fruit russet was assessed using the following rating scale: 0 = 0-3% fruit surface russeted, 1 = 4-20%, 2 = 21-45%, 3 = 46-74%, 4 = >75% fruit surface russeted. Stem end russet was assessed in a similar manner; 0 = 1-10% stem end fruit surface russeted, 1 = 11-35%, 2 = 36-100% stem end fruit surface russeted. Percent stem end or whole fruit russet was calculated as: $[\sum(\text{rating} \times \text{the number of fruit with that rating}) / \text{highest rating} \times \text{total number of fruit}] \times 100$. Values in the table represent the average percent stem end or whole fruit russet for 100 fruit from 3 individual trees from each treatment. Values in the same column followed by different letters differ significantly at $P=0.05$ according to the SAS General linear models t test.

Stem end russet was very severe in both orchards #1 and 2 in 1998, while whole fruit russet was moderate in comparison to the 1997 season. As in previous years, schedules beginning pre-bloom gave good russet control. Thiram 75WDG on schedule I significantly reduced both stem and whole fruit russet in orchard #1. Schedule II, a reduced spray schedule, gave very mixed results. It would appear fruit russet control measures previously under investigation need to be applied before bloom to give best control. BAS490, a new product in the first year of investigation for control of this disease, was most consistent in significantly reducing both stem end and whole fruit russet on this later application schedule (Schedule II).

Treatment and Rate/100 gal.	Schedule	Orchard #1 Golden Delicious		Orchard #2 Golden Delicious	
		Whole fruit russet	Stem end russet	Whole fruit russet	Stem end russet
Thiram 75WDG 24 oz.....	I	16.78 d	65.00 cd	25.27 bcd	100.00 a
Thiram 75WDG 24 oz.....	II	21.58 abc	59.75 d	23.00 cd	100.00 a
Polyram 80DF 32 oz	II	19.35 d	66.50 cd	23.43 cd	97.33 a
Captan 50WP 32 oz.....	II	21.48 bc	83.00 a	28.43 abc	100.00 a
BAS490 0.96 oz	II	17.65 d	72.75 bc	20.93 d	100.00 a
Dithane 75DF 24 oz	II	21.88 abc	78.50 ab	25.03 cd	93.33 a
Triggr 2% 6.5 fl oz.....	III	25.15 ab	82.00 ab	32.60 a	100.00 a
Nontreated.....	...	25.40 a	83.00 a	32.37 ab	97.00 a
LSD	...	3.72	9.72	7.86	NS*

*NS = not significant