

APPLE (*Malus domestica* 'Braeburn')
 Scab; *Venturia inaequalis*
 Powdery Mildew; *Podosphaera leucotricha*

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EFFICACY OF LANDSCAPE SCHEDULES FOR CONTROL OF APPLE SCAB AND POWDERY MILDEW, 2000: Fungicide treatments were arranged in a randomized complete block design in a block of 'Braeburn' apples on ELMA-111 rootstock planted in 1995 on 20 x 20 ft spacing. Each treatment consisted of 7 double tree replicates (14 trees/trt). Fungicide treatments were applied using a hydraulic handgun sprayer at 200 psi at a rate of 100 gal water/A. Approximately 15-18 gal of a spray suspension were applied per 14 trees depending on the time of year. Treatments were applied on 8 or 11 Apr (prepink to pink), 20 Apr (Pink to Full Bloom), 6 May (100% Petal Fall), 18 May (1st cover), 2 Jun (2nd cover), and 17 Jun (3rd cover). Urea fertilizer was spread within tree rows on 17 May at 25 lb/A. Insecticides were applied to the entire block using an air blast speed sprayer on 21 Jun (Javelin WG at 1 lb/A), 28 Jun (Guthion at 2 lb/A), and 9 Aug (Diazinon 50 WP at 4 lb/A) for leaf roller and codding moth management. Goal 2xL (3 qt/A) tank mixed with Gyphos (2 qt/A) and R-11 (0.5%) was applied to control weeds in the tree row floor on 12 and 19 May and 6 Jun. Apple scab infection periods were monitored using a Luft Agro-Meterological station (HP-100). Using a modified primary infection model (wet periods start with rain and end with 8 hr drying time), a total of 10 infection periods were detected from Apr through Jun: 4 high infection periods (14 Apr, 9 May, 6 and 11 Jun); 2 moderate infection periods (12 and 21 Apr); and 4 light infection periods (28 Apr, 1, 7 and 27 May). The incidence of leaf scab and powdery mildew was determined on 14 Jun by examining all leaves from 10 vegetative shoots (121-158 leaves) randomly selected from the lower portion of each tree. Incidence of fruit scab and russet was evaluated on 11 Oct by picking and examining 50 fruit/tree.

All fungicide treated trees had significantly less leaf and fruit scab than nontreated trees. Trees treated with Eagle plus Syllit according to a standard commercial spray schedule had the best control of scab but the level of scab on trees treated only twice according to a typical landscape schedule was not significantly different. Trees treated with Thiolux or Lime Sulfur had significantly more scab than trees treated with Eagle plus Syllit. All fungicide treated trees had significantly less powdery mildew than nontreated trees. Trees treated with Eagle plus Syllit according to a typical landscape schedule had significantly more leaves with powdery mildew than trees treated according to a commercial schedule. Trees treated with Thiolux or Lime Sulfur had significantly more leaves with powdery mildew than trees treated with Eagle plus Syllit on either schedule. There was no significant difference when the percentage of fruit with russet was compared among all treatments. Trees treated with Lime Sulfur developed yellowed leaves shortly after the 2nd application.

Treatment & Rate/A	Time of Application	Total # of Applications	Apple Scab ¹		Powdery Mildew Leaves (%) ¹	Fruit Russet (%)
			Leaves (%)	Fruit (%)		
Nontreated	none	0	27.2 a	92.6 a	25.3 a	2.0
Eagle 40 WP 2 oz/A + Syllit 65 WP 0.75 lb + Latron B-1956 at 3 fl oz ...	PP, FB, PF, C1, C2, and C3 ²	6	0.1 d	1.0 d	0.2 d	3.4
Eagle 40 WP 2 oz/A + Syllit 65 WP 0.75 lb + Latron B-1956 at 3 fl oz.....	PP & C1 only ³	2	0.8 d	2.6 d	7.0 c	1.1
Thiolux 80 DF 10 lb	PP & C1 only ³	2	13.5 b	17.7 c	17.6 b	1.0
Lime Sulfur (29%) 2 gal.....	PP & C1 only ³	2	10.4 c	42.3 b	12.7 b	1.7

¹ Means followed by same letter do not differ significantly based on Fisher's protected LSD (P=0.05).
² Treatments were applied on 8 Apr (PP), 20 Apr (FB), 6 May (PF), 18 May (C1), 2 Jun (C2), and 17 Jun (C3).
³ Treatments were applied on 11 Apr (PP) and 18 May (C1).