1977 Apple Scab and Cedar Apple Rust Infection Periods - Highland, New York

Spray date	McIntosh growth stage	Wetting period: Date	Rain (in.)	Duration (hr.)	Mean temp (°F)	Anticipated Scab severity: Primary	Anticipated Scab severity: Secondary	Cedar Apple Rust inf. period
	¼" Green	Mar 31	0.5	3	57			No
	¼-½" Green	Apr 2-3	0.77	20	43			No
	¼-½" Green	Apr 4-5	1.22	26	39			No
April 15	TC-early pink							
April 25	Bloom; 6-8 term.lvs.	Apr 23-25	2.76	60	45	S		Yes
	Bloom	Apr 26-27	0.3	26	45	L		Yes (light)
May 2								
	PF; 8-9 term. lvs.	May 4-5	0.84	16.5 } 8h	49	L } S		Yes (light)
		May 5-6	0.03	11 } dry	56	L } S		Yes
		May 6	0.17	1.5	66			No
		May 8-10	6" Snow	38	38			No
May 12	10-11 term.lvs.							
		May 18-19	0.33	14	62	M	S	Yes
May 20								
June 1	16-17 term.lvs.	June 1-2	0.02	17	63	M	S	Yes
		June 6-7	0.73	20	52	M	S	Yes
		June 9-11	2.6	36	53	S	S	Yes
June 14	17-19 term.lvs.							
		June 18-19	0.36	14	70	M	S	Yes
		END OF RUST SEASON						
		June 20-21	0.19	13	58	L	M	
		END OF PRIMARY SCAB						
		June 25	0.17	18 } 8h	} 65			
		June 26	0.13	3 } dry	} 65		S	

(continued)

Spray date	McIntosh growth stage	Wetting period: Date	Rain (in.)	Duration (hr.)	Mean temp (°F)	Anticipated Scab severity: Primary	Secondary	Cedar Apple Rust inf. period
June 27								
		June 28-29	?	8	68		M	
		July 6	0.22	11	62		M	
		July 8	0.05	10	67		M	
		July 11-12	0.22	18	63		S	
		July 16-17	?	14	67		S	
July 18	Terminal bud							
		July 25	0.91	12	63		S	
		Aug 1-2	0.71	14	65		S	
		Aug 3	0.30	4	65			
		Aug 5	0.66	6	76		L	
		Aug 6-7	0.32	10	73		M	
		Aug 10	0.08	4	74			
		Aug 12	0.35	4	72			
		Aug 14	0.42	3	72			
		Aug 17	0.31	12	74		S	

S = Severe
M = Moderate
L = Light

Results of 1977 Field Fungicide Trial, Hudson Valley Laboratory, Highland, New York

R. C. Pearson, F. W. Meyer and R. W. Sears

Trt. No.	Treatment[1] & rate/100 gal	Apple Scab[2]			
		McIntosh terminals		Cortland terminals	
		% lvs.inf.	Lesions/inf.leaf	% lvs.inf.	Lesions/inf.leaf
1.	Captan 50W 2 lb	0.03 a	0.33 ab	0.14 a	0.37 a
2.	Polyram 80W 1.5 lb . .	0.54 a	1.17 c	0.05 a	0.37 a
3.	Benlate 50W 2 oz + Glyodin 30% 1 pt. . .	0.02 a	0 a	0 a	0 a
4.	Polyram 80W 1.5 lb + Nimrod 25EC 4 oz. . .	0.66 a	1.0 bc	0.05 a	0.33 a
5.	Polyram 80W 1.5 lb + Nimrod 25EC 8 oz. . .	1.5 a	1.0 bc	0 a	0 a
6.	TD 2058 60W 1 lb. . . .	0 a	0 a	0.05 a	0 a
7.	Captan 50W 1 lb + Glyodin 30% 1 pt + Sulfur 95W 1 lb . . .	0 a	0 a	0 a	0 a
8.	Dikar 80W 1 lb + Glyodin 30% 1 pt. . .	0.15 a	0.67 abc	0 a	0 a
9.	Benlate 50W 2 oz + Cyprex 65W 4 oz . . .	0.04 a	0.33 ab	0 a	0 a
10.	Benlate 50W 2 oz + Cyprex 65W 4 oz + Oil 60° 1 qt.	0 a	0 a	0 a	0 a
11.	Bloc lEC 4.3 oz	0 a	0 a	0 a	0 a
12.	Untreated.	46.6 b	4.73 d	21.8 b	4.17 b

1. No diff on Ct. [illegible]
2. Scab on Ck's [illegible]
3. trts 2, 4, 5 1.5 lb vs 2 lb

The small letters indicate Duncan's multiple range groupings of treatments which do not differ significantly at the 5% level.

[1] Fungicides applied as dilute sprays at 550 psi by hand gun on April 15, 25, May 2, 11, 20, June 1, 14, 27 and July 18. Other sprays: Guthion 50W 8 oz (May 16); Fruitone-N 3.5W 8 oz (G.Del.) and 3 oz (Cortland & Rome) (May 17); Plictran 50W 2 oz + Imidan 50W 1 lb (June 17).

[2] Data recorded from all leaves on each of 20 terminals/replicate (3 single tree reps). 4-5 August 1977.

Results of 1977 Field Fungicide Trial, Hudson Valley Laboratory, Highland, New York

R. C. Pearson, F. W. Meyer and R. W. Sears

Trt. No.	Treatment[1] & rate/100 gal	Powdery Mildew[2] % lvs. inf. Cortland	Cedar Apple Rust[3] % cluster lvs. inf. G. Del.	Cedar Apple Rust[3] % terminal lvs. inf. G. Del.	Cedar Apple Rust[3] % terminal lvs. inf. Rome
1.	Captan 50W 2 lb.	2.5 c	1.5 ab	1.4 bc	3.6 def
2.	Polyram 80W 1.5 lb . . .	0 a	0.2 a	0.1 ab	2.5 cde
3.	Benlate 50W 2 oz + Glyodin 30% 1 pt . . .	0 a	1.3 ab	3.3 c	5.3 fg
4.	Polyram 80W 1.5 lb + Nimrod 25EC 4 oz . . .	0 a	0 a	0.8 abc	2.1 cd
5.	Polyram 80W 1.5 lb + Nimrod 25EC 8 oz . . .	0.1 a	1.0 ab	1.1 abc	1.2 bc
6.	TD 2058 60W 1 lb	0 a	0 a	0.5 ab	0.5 b
7.	Captan 50 W 1 lb + Glyodin 30% 1 pt + Sulfur 95W 1 lb. . . .	0.1 a	4.3 bc	1.0 abc	4.8 efg
8.	Dikar 80W 1 lb + Glyodin 30% 1 pt . . .	0.1 a	0.6 a	1.0 abc	2.2 cd
9.	Benlate 50W 2 oz + Cyprex 65W 4 oz. . . .	0 a	1.5 ab	3.7 c	7.0 gh
10.	Benlate 50W 2 oz + Cyprex 65W 4 oz + Oil 60° 1 qt	0 a	1.2 ab	1.3 bc	6.3 fg
11.	Bloc lEC 4.3 oz.	0 a	0 a	0 a	0 a
12.	Untreated	0.7 b	8.8 c	8.5 d	10.0 h

The small letters indicate Duncan's multiple range groupings of treatments which do not differ significantly at the 5% level.

1 Fungicides applied as dilute sprays at 550 psi by hand gun on April 15,25, May 2,11,20, June 1,14,27 and July 18. Other sprays: Guthion 50W 8 oz (May 16); Fruitone-N 3.5W 8 oz (G. Del.) and 3 oz (Cortland & Rome) (May 17); Plictran 50W 2 oz + Imidan 50W 1 lb (June 17).

2 Data recorded from six youngest leaves on each of 20 terminals/replicate (3 single tree reps) August 11, 1977.

3 Cluster leaf data recorded from all leaves on each of 20 clusters/rep (June 23, 1977) and terminal leaf data recorded from all leaves on each of 20 terminals/rep (July 22, 1977), 3 single tree reps.

1. PM - only Captan & ck differed

1977 Cedar Apple Rust Fungicide Screening Trial on Golden Delicious - Stone Ridge, N.Y.

R. C. Pearson, F. W. Meyer and R. W. Sears
N.Y.S. Agr. Exp. Sta., Highland, N.Y.

Trt. No.	Treatment[1] & rate/100 gal	Cluster leaf data[2] % leaves infected	Cluster leaf data[2] Lesions/ inf.leaf	Terminal leaf data[3] % leaves infected	Terminal leaf data[3] Lesions/ inf.leaf
1	Bloc 1EC 2.2 oz. . . .	0 a	0 a	0.3 a	0.7 a
2	Bloc 1EC 4.3 oz. . . .	0 a	0 a	>0.1 a	1.1 a
5	Thiram 65W 8 oz. . . .	0.5 ab	0.8 abc	4.1 b	2.9 a
6	Thiram 65W 1 lb. . . .	1.4 bc	1.0 abcd	5.1 bc	1.8 a
7	Ferbam 76W 6 oz. . . .	4.6 de	1.2 abcde	13.1 cdef	2.6 a
8	Ferbam 76W 12 oz . . .	5.9 def	1.6 bcde	12.3 bcdef	3.1 a
9	Niacide M 65W 8 oz . .	3.3 cde	1.4 bcde	11.9 bcdef	2.0 a
10	Niacide M 65W 1 lb . .	4.6 de	1.5 bcde	10.0 bcdef	2.0 a
11	Polyram 80W 8 oz . . .	23.7 h	2.5 ef	16.5 ef	3.0 a
12	Polyram 80W 1 lb . . .	13.7 g	2.1 cdef	19.6 f	2.7 a
13	Manzate 200 80W 6 oz .	21.6 h	2.3 cdef	14.6 def	5.4 a
14	Manzate 200 80W 12 oz.	7.4 ef	1.4 bcde	6.9 bcde	2.2 a
17	Ziram 76W 6 oz	10.8 fg	1.7 cde	12.1 bcdef	3.1 a
18	Ziram 76W 12 oz. . . .	2.7 bcd	1.6 bcde	5.5 bcd	1.8 a
19	Untreated	46.3 i	3.8 g	44.5 g	14.5 b

The small letters indicate Duncan's multiple range groupings of treatments which do not differ significantly at the 5% level.

[1] Fungicides applied as dilute sprays at 550 psi by hand gun on April 18, 26, May 3, 11, 19, 31, June 13 and 28. Other sprays: Difolatan 4F 2 qt (April 11); Sevin 50W 2 lb + Fruitone N 3.5W 7.5 ppm (May 17); Cygon 2.67EC 4 pt/acre (June 28).

[2] Data recorded from all leaves on each of 20 clusters/replicate (4 single tree reps). 15 June 1977.

[3] Data recorded from all leaves on each of 20 terminals/replicate (4 single tree reps). 15 July 1977.

1977 Cedar Apple Rust Postinfection Fungicide Applications on Golden Delicious - Stone Ridge, N.Y.

R. C. Pearson, F. W. Meyer and R. W. Sears
N.Y.S. Agr. Exp. Sta., Highland, N.Y.

Trt. No.	Treatment[1] & rate/100 gal	Cluster leaf data[2] % leaves infected	Cluster leaf data[2] Lesions/ inf.leaf	% Terminal leaf area affected[3] Total lesions[4]	% Terminal leaf area affected[3] Normal lesions[5]
3	Bloc 1EC 4.3 oz.	0.5 a	0.6 a	0.02 a	0.02 a
15	Manzate 200 80W 12 oz. . .	42.2 b	3.4 b	2.6 b	2.6 b
19	Untreated	46.3 b	3.8 b	4.7 b	4.7 b

The small letters indicate Duncan's multiple range groupings of treatments which do not differ significantly at the 5% level.

[1] Fungicides applied as dilute sprays at 550 psi by hand gun on April 26. Other sprays: Difolatan 4F 2 qt (April 11); Sevin 50W 2 lb + Fruitone N 3.5W 7.5 ppm (May 17); Cygon 2.67EC 4 pt/acre (June 28).

[2] Data recorded from all leaves on each of 20 clusters/replicate (4 single tree reps). 15 June 1977.

[3] Date recorded as Barratt-Horsfall ratings and converted to percentages by Elanco conversion tables on 8 July 1977.

[4] Total lesions = normal plus abnormal rust lesions were counted.

[5] Normal lesions = only those lesions with normal pycnia were counted.

Results of 1977 Field Fungicide Trial, Hudson Valley Laboratory, Highland, New York
R. C. Pearson, F. W. Meyer, and R. W. Sears

Trt. No.	Treatment[1] & rate/100 gal	% Fruit Infected[2]					
		Apple Scab		Cedar Apple Rust		Sooty Blotch	Ely Speck
		McIntosh	Cortland	Golden D.	Rome	Golden D.	Golden D.
1.	Captan 50W 2 lb	0 a	0 a	0 a	0.1 ab	0.2 a	0.3 a
2.	Polyram 80W 1.5 lb	0.1 a	0 a	0 a	0 a	0 a	0 a
3.	Benlate 50W 2 oz + Glyodin 30% 1 pt.	0 a	0 a	0.1 a	1.5 cd	0 a	0 a
4.	Polyram 80W 1.5 lb + Nimrod 25EC 4 oz.	0.1 a	0 a	0 a	0 a	0 a	0 a
5.	Polyram 80W 1.5 lb + Nimrod 25EC 8 oz.	0.1 a	0.1 a	0 a	0 a	0 a	0 a
6.	TD 2058 60W 1 lb.	0 a	0 a	0 a	0 a	0.1 a	0 a
7.	Captan 50W 1 lb + Glyodin 30% 1 pt + Sulfur 95W 1 lb	0 a	0 a	0 a	0.7 bc	0 a	0 a
8.	Dikar 80W 1 lb + Glyodin 30% 1 pt.	0 a	0.1 a	0 a	0 a	0 a	0 a
9.	Benlate 50W 2 oz + Cyprex 65W 4 oz	0 a	0 a	0.1 a	1.6 cd	0 a	0 a
10.	Benlate 50W 2 oz + Cyprex 65W 4 oz + Oil 60° 1 qt.	0 a	0 a	0 a	0.4 abc	0 a	0.1 a
11.	Bloc 1EC 4.3 oz	0 a	0 a	0 a	0 a	12.6 b	3.4 ab
12.	Untreated.	24.8 b	14.4 b	1.3 b	3.7 d	33.0 b	10.0 b

The small letters indicate Duncan's Multiple Range groupings of treatments which do not differ significantly at the 5% level.

[1]Fungicides applied as dilute sprays at 550 psi by hand gun on April 15, 25, May 2, 11, 20, June 1, 14, 27 and July 18. Other sprays: Guthion 50W 8 oz (May 16); Fruitone-N 3.5W 8 oz (G.Del.) and 3 oz (Cortland & Rome) (May 17); Plictran 50W 2 oz + Imidan 50W 1 lb (June 17).

[2]Percent infected fruit was determined by examining 100 fruit from each of 3 single tree replicates.

Results of 1977 Field Fungicide Trial, Hudson Valley Laboratory, Highland, New York

R. C. Pearson, F. W. Meyer, and R. W. Sears

Treatment[1] & rate/100 gal	% Fruit Infected[2]					
	Apple Scab		Cedar Apple Rust		Sooty Blotch	Fly Speck
	McIntosh	Cortland	Golden D.	Rome	Golden D.	Golden D.
Captan 50W 2 lb	0 a	0 a	0 a	0.1 ab	0.2 a	0.3 a
Polyram 80W 1.5 lb	0.1 a	0 a	0 a	0 a	0 a	0 a
Benlate 50W 2 oz + Glyodin 30% 1 pt.	0 a	0 a	0.1 a	1.5 cd	0 a	0 a
Polyram 80W 1.5 lb + Nimrod 25EC 4 oz.	0.1 a	0 a	0 a	0 a	0 a	0 a
Polyram 80W 1.5 lb + Nimrod 25EC 8 oz.	0.1 a	0.1 a	0 a	0 a	0 a	0 a
TD 2058 60W 1 lb.	0 a	0 a	0 a	0 a	0 a	0 a
Captan 50W 1 lb + Glyodin 30% 1 pt + Sulfur 95W 1 lb	0 a	0 a	0 a	0.7 bc	0 a	0 a
Dikar 80W 1 lb + Glyodin 30% 1 pt.	0 a	0.1 a	0 a	0 a	0 a	0 a
Benlate 50W 2 oz + Cyprex 65W 4 oz	0 a	0 a	0.1 a	1.6 cd	0 a	0 a
Benlate 50W 2 oz + Cyprex 65W 4 oz + Oil 60° 1 qt.	0 a	0 a	0 a	0.4 abc	0 a	0.1 a
Bloc 1EC 4.3 oz	0 a	0 a	0 a	0 a	12.6 b	3.4 ab
Untreated.	24.8 b	14.4 b	1.3 b	3.7 d	33.0 b	10.0 b

small letters indicate Duncan's Multiple Range groupings of treatments which do not differ ificantly at the 5% level.

gicides applied as dilute sprays at 550 psi by hand gun on April 15, 25, May 2, 11, 20, 1, 14, 27 and July 18. Other sprays: Guthion 50W 8 oz (May 16); Fruitone-N 3.5W 8 oz Del.) and 3 oz (Cortland & Rome) (May 17); Plictran 50W 2 oz + Imidan 50W 1 lb (June 17).

cent infected fruit was determined by examining 100 fruit from each of 3 single tree replicates.

1977 Fungicide Screening Trial on Golden Delicious - Stone Ridge, NY

R. C. Pearson, F. W. Meyer and R. W. Sears
N.Y.S. Agr. Exp. Station, Highland, NY

Trt. No.	Treatment[1] rate/100 gal	% Infected Fruit							
		Cedar-apple Rust		Apple Scab		Sooty Blotch		Fly Speck	
1.	Bloc 1EC 2.2 oz.	0	a	0	a	0.4	abc	0	a
2.	Bloc 1EC 4.3 oz.	0	a	0	a	0	a	0.1	ab
5.	Thiram 65W 8 oz.	0.1	ab	0	a	0.4	abc	0.4	ab
6.	Thiram 65W 1 lb.	0.1	ab	0	a	0	a	0.3	ab
7.	Ferbam 76W 6 oz.	0.1	ab	0	a	0	a	0.1	ab
8.	Ferbam 76W 12 oz	0	a	0	a	0.1	ab	0	a
9.	Niacide M 65W 8 oz	0.3	ab	0	a	0	a	0.3	ab
10.	Niacide M 65W 1 lb	0	a	0.1	ab	0.3	ab	0.8	ab
11.	Polyram 80W 8 oz	0	a	0	a	0	a	0	a
12.	Polyram 80W 1 lb	0	a	0	a	0	a	0	a
13.	Manzate 200 80W 6 oz	0.3	ab	0	a	0	a	0	a
14.	Manzate 200 80W 12 oz. . . .	0	a	0.1	ab	0	a	0	a
17.	Ziram 76W 6 oz	0	a	0	a	0	a	0	a
18.	Ziram 76W 12 oz.	0	a	0	a	0	a	0	a
19.	Untreated	2.0	c	0.5	bc	2.5	c	0.6	ab
Post Infection Treatments[3]									
3.	. . . . .	0.7	bc	0	a	1.7	bc	0.3	ab
15.	. . . . .	0.9	bc	1.5	c	1.1	b	1.2	bc

The small letters indicate Duncan's Multiple Range groupings of treatments which do not differ significantly at the 5% level.

1
Fungicides applied as dilute sprays at 550 psi by hand gun on April 18, 26, May 3, 11, 19, 31, June 13, and 28. Other sprays: Difolatan 4F 2 qt (April 11); Sevin 50W 2 lb + Fruitone N 3.5W 7.5 ppm (May 17); Cygon 2.67EC 4 pt/acre (June 28).

2
Percent infected fruit was determined by examining 100 fruit from each of 4 single tree replicates.

3
Fungicides applied as dilute sprays at 550 psi by hand gun on April 26.