RESULTS IN THIS REPORT
ARE PRELIMINARY AND
NOT FOR PUBLICATION

1979 Fruit Tour
Hudson Valley Laboratory
Entomology Trials
September 5, 1979

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Highland, NY 12528

S	M	S	M	RB	RD	RB	RD	M[1]	EM[3]	S	M
RB	C	RB	C	EM[2]	Gr	C[1]	Gr	RB	C	RB	C
GD	RD	GD[3]	RD	RB	M	RB	M	GD	RD	GD	RD
	Gr	S	Gr	GD	C	GD	EM[3]	EM[2]	Gr	EM[2]	Gr
2	2	5	5	7	7	10	10	11	11	9	9
	C	Mu	C	RB	Gr	RB	Gr	EM[2]	C	GD	C
RB	RD	RB	RD	GD	M	GD	M	RB	RD	RB	RD
GD	Gr	GD	Gr	EM[2]	C	S	C	GD	Gr	GD	Gr
S	M	EM[2]	M	GD	RD	EM	RD	S	M	EM[2]	M
3	3	12	12	4	4	1	1	6	6	8	8
EM[2]	M	EM[2]	M	Id	RD	Id	RD	GD[3]	M	S	M
RB	C	RB	C	EM[2]	Gr	EM[2]	Gr	RB	C	RB	C
GD	RD	GD	RD	RB	M	RB	M	GD	RD	GD	RD
S	Gr	S	Gr	GD	C	GD	C	EM[2]	Gr	EM[2]	Gr
10	10	11	11	6	6	9	9	5	5	3	3
S	C	EM[2]	C	RB	Gr	RB	Gr	EM[2]	C	Mu	C
RB	RD	RB	RD	GD	M	GD	M	RB	RD	RB	RD
GD	Gr	GD	Gr	EM[2]	C	EM[2]	C	GD	Gr	GD	Gr
EM[2]	M	RB	M	GD	RD	GD	RD	S	M	EM[2]	M
8	8	4	4	2	2	12	12	7	7	1	1
S	M	S	M	RB	RD	Id	RD	GD[3]	M	EM[2]	M
RB	C	RB	C	EM[2]	Gr	EM[2]	GR	RB	C	RB	C
GD	RD	GD	RD	RB	M	RB	M	GD	RD	GD	RD
EM[2]	Gr	EM[2]	Gr	GD	RD	GD	RD	EM[2]	Gr	S	Gr
7	7	9	9	3	3	8	8	4	4	10	10
EM[2]	C	GD	C	RB	Gr	RB	Gr	EM[2]	C	EM[2]	C
RB	RD	RB	RD	GD	M	GD	M	RB	RD	RB	RD
GD	Gr	GD	Gr	S	C	S	C	GD	Gr	GD	Gr
S	M	EM[2]	M	EM	RD	EM	RD	S	M	S	M
6	6	1	1	11	11	5	5	2	2	12	12

C - Cortland
EM - Empire
GD - Golden Delicious
Gr - R.I. Greening
Id - Idared
M - McIntosh
MU - Mutsu
RB - Rome Beauty
RD - Red Delicious
S - Spy

Treatment & Form.[1]	Rate AI/100 gal	Oz. Form./100 gal
1. Vydate 2E	.5 lb	32
2. Vydate 2E	.25 lb	16
3. + Imidan 50WP	.5 lb	16
3. Ambush 2E	.1 lb	6.4
4. Lorsban 50WP	.5 lb	16
+ Captan 50WP	1 lb	32
5. Lannate L	.112 lb	8
+ Penncap 2M	.125 lb	8

Treatment & Form.[1]	Rate AI/100 gal	Oz. Form./100 gal
[2]6. W 439 50WP	.25 lb	8
7. UC-55248 4EC	.5 lb	16
8. Guthion 50WP	.25 lb	8
9. Primor 50WP	.0625 lb	2
10. Diazinon 50WP	.5 lb	16
11. Pounce 3.2EC	.05 lb	2
12. Check		

[1]All trts applied 5-15 & 19, except #7 (4-23).
[2]4 Tree plots only.

1979 WEATHER CONDITIONS - HUDSON VALLEY LABORATORY, Highland, NY

Date	Temp. Max	Temp. Min	Rain in.
Apr. 1			
2			
3			.17
4			.01
5			
6			.15
7			
8			
9			
10			
11			
12			
13	54	36	
14	41	36	
15	46	37	
16	48	40	
17	54	40	1.10
18	56	38	
19	56	35	
20	61	33	
21	66	37	
22	74	40	
23	74	49	
24	76	42	
25	66	51	
26	64	50	
27	62	57	.63
28	66	48	
29	64	48	
30		38	
	TOTAL		2.06
May 1	64	47	
2	66	37	
3	68	40	
4	65	54	
5	59	44	
6	66	44	
7	75	46	
8	84	52	
9	92	60	
10	91	68	
11	81	62	
12	67	55	
13	69	60	
14	60	52	
15	75	53	
16	70	54	
17	71	47	
18	59	46	
19	65	56	
20	74	56	
21	74	58	

Date	Temp. Max	Temp. Min	Rain in.
22	72	52	
23	58	48	
24	58	56	
25	68	56	
26	72	59	
27	62	47	
28		56	
29	71	49	
30	73	53	
31	78	50	
	TOTAL		--
June 1	80	55	
2	74	56	
3	74	59	
4	78	57	
5	84	54	
6	71	55	.95
7	82	57	
8	80	66	
9	77	64	
10	80	66	
11		61	
12	64	43	1.39
13	68	46	
14	77	46	
15	86	55	
16	88	66	
17	83	65	
18	81	65	
19	76	46	
20	80	51	
21	79	56	
22			
23			
24			
25			.05
26	76	44	
27			
28			
29			
30			
	TOTAL		2.39
July 1			.51
2	72		
3	77	67	
4	65	48	
5	60	41	.01
6	70	44	
7	74	43	
8	79	46	
9		54	
10			

Date	Temp. Max	Temp. Min	Rain in.
11			
12			
13			
14			
15			
16	85		.12
17	83	68	
18	70	64	.02
19	85	58	
20	85	63	
21	86	66	.60
22	86	64	
23	89	66	
24	88	68	.13
25	91	69	
26	86	72	
27	87	70	
28	87	65	
29	85	67	
30	90	67	
31	89	68	
		TOTAL	1.39

1979 WEATHER CONDITIONS - Clintondale, NY

Date	Temp. Max	Temp. Min	Rain in.
Apr. 1	80	44	
2	56	38	
3	46	36	.20
4	50	30	.07
5	46	33	.25
6	43	30	
7	48	28	
8	46	21	
9	58	32	
10	44	32	
11	52	28	
12	66	34	
13	66	35	
14	57	36	.58
15	44	37	.20
16	56	37	.12
17	58	32	
18	60	30	
19			
20	60	32	
21	62	36	
22	70	40	
23	78	44	
24	80	44	
25	82	52	
26	72	50	.03
27	68	52	.72
28	63	47	.24
29	73	47	.51
30	70	37	
	TOTAL		2.92
May 1	74	48	
2	70	34	
3	70	42	
4	72	53	.30
5			
6	61	42	
7	72	43	
8	80	52	
9	90	58	
10	95	63	
11	98	62	
12	86	55	
13	70	60	.05
14	73	51	.38
15	68	52	.13
16	80	50	.03
17	78	42	
18	73	44	
19	73	44	.22
20	67	55	.05
21	76	54	
22	76	48	
23	76	47	
24	57	54	1.90
25	58	53	1.40
26	58	53	.04
27	74	44	.10
28	74	44	.03
29	80	46	.02
30	79	52	.20
31	82	48	.03
	TOTAL		4.88
June 1	83	54	
2	86	56	
3	86	59	
4	81	57	.03
5	81	53	
6	88	52	.42
7	82	56	
8	86	63	
9	87	62	
10	86	63	
11	87	59	
12	68	40	1.40
13	77	40	
14	82	46	
15	82	50	
16	93	60	
17	96	60	
18	90	62	
19	94	61	.16
20	84	51	
21	85	54	
22	84	52	
23	82	56	.07
24			
25	64	42	
26	76	46	
27	80	46	
28	81	52	
29	84	54	
30	85	60	.10
	TOTAL		2.18
July 1	85	63	.24
2	84	56	.15
3	89	59	.03
4	89	50	
5	80	43	.03
6	78	47	
7	80	47	
8	82	51	
9	88	58	
10	91	56	
11	84	57	
12	87	65	
13	93	63	.03
14	97	66	
15	96	70	
16	90	70	
17	91	66	.54
18	84	64	
19	75	56	.05
20	90	62	
21	92	62	
22	90	61	.05
23	93	65	
24	95	67	.62
25	93	68	
26	98	70	
27	93	69	
28	95	63	
29	93	65	
30	91	64	.03
31	94	65	
	TOTAL		1.77

1979 WEATHER CONDITIONS - Clermont, NY

Date		Temp. Max	Temp. Min	Rain in.
Apr	1	54	42	
	2	44	40	.25
	3	50	38	
	4	48	26	.30
	5	48	33	
	6	43	30	
	7	41	30	
	8	48	19	
	9	35	31	.85
	10	48	31	
	11	58	22	
	12	65	27	
	13	56	28	
	14	43	36	.75
	15	46	36	
	16	48	38	.20
	17	56	38	
	18	57	29	
	19	59	25	
	20	63	22	
	21	70	25	
	22	73	45	
	23	76	44	
	24	81	33	
	25	67	42	.10
	26	70	52	.40
	27	67	64	.25
	28	66	46	.55
	29	63	46	
	30	70	38	
			TOTAL	3.65
May	1	65	45	
	2	66	30	
	3	69	32	.20
	4	62	48	
	5	59	42	
	6	63	42	
	7	76	42	
	8	87	44	
	9	97	50	
	10	96	61	
	11	85	60	
	12	74	54	
	13	70	57	
	14	66	51	.30
	15	76	47	
	16	72	49	
	17	72	42	
	18	63	38	.10
	19	66	51	.05
	20	74	51	
	21	73	58	.05
	22	72	49	
	23	60	40	.95
	24	58	52	2.10
	25	67	53	.25
	26	71	53	
	27	64	47	
	28	76	48	
	29	72	46	.25
	30	74	49	
	31	80	42	
			TOTAL	4.25
June	1	80	47	
	2	78	52	
	3	79	59	
	4	79	56	
	5	84	49	
	6	77	48	
	7	81	53	
	8	82	63	
	9	80	64	
	10	80	66	
	11	68	62	1.50
	12	67	43	
	13	72	40	
	14	78	36	
	15	88	56	
	16	90	60	
	17	86	66	
	18	86	60	.20
	19	79	55	
	20	83	45	
	21	81	47	
	22	76	52	.10
	23	78	56	
	24	66	50	
	25	66	45	
	26	78	36	
	27	80	51	
	28	82	58	
	29	82	46	.20
	30	81	61	.10
			TOTAL	2.10
July	1	82	64	
	2	76	60	.05
	3	84	62	
	4	72	44	
	5	68	44	
	6	78	44	
	7	80	39	
	8	86	43	
	9	88	50	
	10	82	61	
	11	85	63	
	12	90	64	
	13	96	57	
	14	96	60	
	15	88	69	.15
	16	85	70	
	17	82	67	
	18	68	60	1.55
	19	83	56	
	20	87	57	
	21	87	57	.25
	22	86	63	
	23	90	60	
	24	89	67	.05
	25	92	66	
	26	86	72	.75
	27	83	65	
	28	87	62	
	29	88	62	
	30	92	64	
	31	90	69	
			TOTAL	2.80

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Table 1. Comparison of San Jose scale control treatments applied against overwintering and first generation scale stages. Warwick, NY. 1979.

Treatment[1]	Rate form. per 100 gal	Applic. dates	% Mortality overwintering ♀ scale[5] Old twigs June 6	New twigs June 6	Mean No. active crawlers per 10 ft of twig length[6] June 26	% Fruit infested[7] July 9
1. Oil 70 sec	2 gal	April 11[2]	99.2 a	96.9 a	2.0 a	29.3 bc
2. Lorsban 4E	1 pt	April 11	92.6 ab	90.0 a	5.0 ab	25.3 c
3. Oil 70 sec + Diazinon 50WP	2 gal 1 lb	April 11	100.0 a	98.7 a	7.8 abc	21.8 c
4. Diazinon 50WP	1 lb	May 14[3]	75.4 bc	73.4 ab	3.5 a	29.0 bc
5. Guthion 50WP	1/2 lb	May 14	42.8 d	28.3 cd	27.8 bc	43.0 bc
6. Lannate L	2 pt	May 14	29.4 de	52.5 bc	38.3 c	55.5 ab
7. Penncap 2FM	2 pt	May 14	68.4 c	84.2 a	1.5 a	28.8 bc
8. Check			16.2 ef	18.6 d	572.0 d	72.0 a
9. Diazinon 50WP	1 lb	June 15[4] July 2	5.1 f	34.8 cd	6.5 abc	18.0 c

[1]Means not followed by same letter are significantly different by the Waller and Duncan's BSD test, k = 100 (p = ca. .05). Percentages analyzed using arcsin transformation. Treatments applied to single tree Red Delicious plots replicated 4 times, using a high pressure handgun sprayer at 350 psi, and applying 9 gal/tree (April 11) or 12 gal/tree (May 14-July 2) (360-480 gal/acre) dilute to runoff.

[2]Green tip. [3]Petal fall. [4]First crawler emergence.

[5]Based on examining 5 one-foot twigs of one year old growth (new twigs) and 5 one-foot twigs of 2 year or older growth (old twigs) per plot.

[6]Based on examining 5 two-foot branches per plot obtained from the tops of the trees.

[7]Based on examining 100 fruits per tree, 60 from lower scaffold branches and 40 from tops of the trees.

Table 2. European red mite (ERM) and twospotted spider mite (TSM) populations on apple leaves in seasonal insecticide programs. Hudson Valley Laboratory, Highland, NY. 1979.

Treatment and oz form./100 gal[1]		Mean no. mites per leaf[2]								
		June 8		July 5		July 12	July 20		August 20	
		ERM	TSM	ERM	TSM		ERM	TSM	ERM	TSM
1. Vydate 2E	32.0	0.3	Tr	0.7	0.0		1.4	0.0	0.1	Tr
2. Vydate 2E + Imidan 50WP	16.0 16.0	Tr[3]	0.1	0.9	0.0		1.8	0.2	0.9	0.0
3. Ambush 2E	6.4	0.5	0.0	6.3	0.0	Plic.[4]	1.6	0.1	0.4	15.7
4. Lorsban 50WP + Captan 50WP	16.0 32.0	0.3	Tr	10.8	0.3	Plic.	2.5	0.1	0.8	0.5
5. Penncap 2M + Lannate L	8.0 8.0	2.0	Tr	45.2	0.2	Plic.	1.1	Tr	0.2	1.8
6. W 439 50WP	8.0	4.5	0.3	20.1	0.6		7.2	7.9	0.0	8.0
7. UC-55248 4EC	16.0	Tr	0.0	1.1	0.1		0.8	0.1	1.1	0.2
8. Guthion 50WP	8.0	1.2	0.1	30.6	0.3	Plic.	1.2	0.0	0.2	0.2
9. Pirimor 50WP	2.0	5.7	0.4	93.7	0.5	Plic.	1.7	0.0	0.1	0.1
10. Diazinon 50WP	16.0	0.2	Tr	1.0	1.8	Plic.	Tr	2.0	Tr	0.2
11. Pounce 3.2EC	2.0	2.9	0.1	31.3	0.8	Plic.	2.0	2.7	0.4	16.0
12. Check		13.8	1.0	61.7	1.2		3.7	0.4	0.0	0.0

[1]Treatments applied at petal fall, May 15, and in six cover sprays, May 29, June 14, June 28, July 12, July 26 and August 13, except treatment no. 7 which was applied at tight cluster April 23 and again on July 12. Treatments applied dilute to runoff using 4.2 gal spray/tree (403 gal/acre) with high pressure handgun sprayer at 400 psi (no. 12 nozzel disc) to eight tree plots replicated three times, except treatment no. 6 which was applied to four tree plots.

[2]Based on sampling 25 Red Delicious leaves per replicate and brushing the leaves with a mite brushing machine.

[3]Tr = trace or $<.05$

[4]Plictran 50WP applied with treatments at rate of 4 oz form./100 gal.

Table 3. Apple rust mite (ARM) and the predatory phytoseiid mite, *Amblyseius fallacis* (AMB), populations on apple leaves in seasonal insecticide programs. Hudson Valley Laboratory, Highland, NY. 1979.

Treatment and oz form./100 gal[1]		Mean no. mites per leaf[2]								
		June 8		July 5		July 12	July 20		August 20	
		ARM	AMB	ARM	AMB		ARM	AMB	ARM	AMB
1. Vydate 2E	32.0	0	.00	0	.00		0	.00	0	.00
2. Vydate 2E + Imidan 50WP	16.0 16.0	0	.00	0	.00		0	.09	0	.00
3. Ambush 2E	6.4	1	.00	2	.00	Plic.[3]	0	.00	0	.00
4. Lorsban 50WP + Captan 50WP	16.0 32.0	0	.01	46	.00	Plic.	0	.03	0	.03
5. Penncap 2M + Lannate L	8.0 8.0	0	.01	25	.01	Plic.	0	.03	0	.01
6. W 439 50WP	8.0	27	.01	196	.03		11	.08	0	.00
7. UC-55248 4EC	16.0	0	.00	173	.04		0	.03	0	.11
8. Guthion 50WP	8.0	16	.01	330	.27	Plic.	0	.25	0	.03
9. Pirimor 50WP	2.0	2	.01	201	.04	Plic.	0	.24	0	.01
10. Diazinon 50WP	16.0	2	.00	213	.07	Plic.	0	.21	0	.05
11. Pounce 3.2EC	2.0	0	.00	10	.00	Plic.	0	.00	0	.00
12. Check		0	.03	321	.09		28	1.39	0	.05

[1]Treatments applied at Petal Fall, May 15, and in six cover sprays, May 29, June 14, June 28, July 12, July 26 and August 13, except treatment no. 7 which was applied at tight cluster April 23 and again on July 12. Treatments applied dilute to runoff using 4.2 gal spray/tree (403 gal/acre) with high pressure handgun sprayer at 400 psi (no. 12 nozzel disc) to eight tree plots replicated three times, except treatment no. 6 which was applied to four tree plots.

[2]Based on sampling 25 Red Delicious leaves per replicate and brushing the leaves with a mite brushing machine.

[3]Plictran 50WP applied with treatments at rate of 4 oz form./100 gal.

Table 4. Aphid, leafminer, and cicada control on apple in seasonal insecticide programs. Hudson Valley Laboratory, Highland, NY. 1979.

Treatment and oz form./100 gal[1]		Mean no. apple aphid infested terminals/25[2]	Mean No. spotted tentiform leafminer mines/25 leaves[3] R.I. Greening	Mean No. spotted tentiform leafminer mines/25 leaves[3] McIntosh	Mean No. broken branches/tree from Periodical Cicada oviposition[4]
1. Vydate 2E	32.0	6.7 b	0.0 a	0.0 a	2.6
2. Vydate 2E + Imidan 50WP	16.0 16.0	13.0 c	0.0 a	0.0 a	2.9
3. Ambush 2E	6.4	1.7 a	0.3 a	0.0 a	3.5
4. Lorsban 50WP + Captan 50WP	16.0 32.0	15.0 cd	22.0 c	13.0 cd	4.8
5. Penncap 2M + Lannate L	8.0 8.0	16.0 cd	1.7 a	0.3 a	3.7
6. W 439 50WP	8.0	21.7 ef	0.0 a	0.0 a	
7. UC-55248 4EC	16.0	21.3 ef	11.7 b	10.0 bc	
8. Guthion 50WP	8.0	18.7 de	10.7 b	6.7 b	3.7
9. Pirimor 50WP	2.0	13.3 c	10.3 b	14.6 cd	3.0
10. Diazinon 50WP	16.0	13.3 c	9.3 b	13.0 cd	4.7
11. Pounce 3.2EC	2.0	1.0 a	0.3 a	0.3 a	2.5
12. Check		23.3 f	19.0 c	15.3 d	3.7

[1]Treatments applied at Petal Fall, May 15, and in six cover sprays, May 29, June 14, June 28, July 12, July 26 and August 13, except treatment no. 7 which was applied at tight cluster April 23 and again on July 12. Treatments applied dilute to runoff using 4.2 gal spray/tree (403 gal/acre) with high pressure handgun sprayer at 400 psi (no. 12 nozzel disc) to eight tree plots replicated three times, except treatment no. 6 which was applied to four tree plots.

[2]Based on examining 25 McIntosh terminals per replicate on July 6.

[3]Based on examining 25 leaves/variety/replicate for tissue-feeding stage mines on August 20.

[4]Based on counting the number of broken terminals/tree from each of six varieties/replicate on July 11.

Table 5. Early season apple insect control with several insecticides. Hudson Valley Laboratory, Highland, NY. 1979.

Treatment and oz form./100 gal[1]		% Fruit injured[2]				% Clean Fruit
		Plum curc.	Tarn. P. Bug	CM OFM	GFW OBLR	
1. Vydate 2E	32.0	1.3 a	7.0 a	0.0 a	0.0 a	91.3
2. Vydate 2E + Imidan 50WP	16.0 16.0	6.0 ab	5.0 a	0.0 a	0.3 a	88.3
3. Ambush 2E	6.4	0.0 a	4.7 a	0.0 a	0.0 a	94.0
4. Lorsban 50WP + Captan 50WP	16.0 32.0	3.0 a	6.7 a	0.0 a	0.0 a	90.7
5. Penncap 2M + Lannate L	8.0 8.0	0.3 a	5.3 a	0.0 a	0.0 a	94.0
6. W 439 50WP	8.0	14.3 ab	2.3 a	0.0 a	1.0 a	82.3
7. UC-55248 4EC	16.0	12.7 ab	4.7 a	0.3 a	1.7 a	80.7
8. Guthion 50WP	8.0	2.3 a	3.7 a	0.0 a	0.3 a	91.3
9. Pirimor 50WP	2.0	12.7 ab	4.0 a	0.3 a	0.7 a	82.7
10. Diazinon 50WP	16.0	2.3 a	6.0 a	0.0 a	0.3 a	91.0
11. Pounce 3.2EC	2.0	2.0 a	2.0 a	0.0 a	0.0 a	95.7
12. Check		20.7 b	2.0 a	2.3 b	8.3 b	69.7

[1]Treatments applied at Petal Fall, May 15, and in six cover sprays, May 29, June 14, June 28, July 12, July 26, and August 13, except treatment no. 7 which was applied at tight cluster April 23 and again on July 12. Treatments applied dilute to runoff using 4.2 gal spray/tree (403 gal/acre) with high pressure handgun sprayer at 400 psi to eight tree plots replicated three times, except treatment no. 6 which was applied to four tree plots.

[2]Based on examining 100 McIntosh apples/replicate on June 12.

Table 6. European red mite (ERM) control on apple leaves. Marlboro, NY. 1979.

Treatment and oz form./100 gal[1]		Mean No. mites or eggs per leaf[2]					
		July 25		July 30		August 8	
		ERM	ERME	ERM	ERME	ERM	ERME
1. Plictran 50WP	2.0	13.2	23.0	1.0	3.2	3.0	5.8
2. Plictran 50WP	4.0	6.5	23.8	0.4	1.5	1.1	1.8
3. Plictran 50WP	8.0	12.5	31.8	0.1	1.0	0.3	0.8
4. Omite 6E	16.0	6.1	16.2	0.8	5.2	1.5	2.2
5. Check		8.1	17.1	5.3	29.8	39.1	37.0

[1]Treatments applied dilute to runoff July 25 by high pressure handgun sprayer at 400 psi using 12.5 gal/tree (450 gal/acre) and treating single tree plots replicated 4 times of the Red Delicious cultivar.

[2]Based on sampling 4 single tree replicates/treatment, 25 leaves/tree.

Table 7. Formulation trials of Omite WP for European red mite (ERM) control. Milton, NY. 1979.

Program No.[1]	Mean No. mites or eggs per leaf[2]								Mean Leaf Index Rating[3]
	June 21		June 22	July 2		July 5	July 16		
	ERM	ERME		ERM	ERME		ERM	ERME	
1	21.2	205.5	Omite 30WP East Coast 1¼ lb Guthion 50WP 3/8 lb Captan 50WP 1 lb Benlate 50WP 2 oz	21.5	44.8	Omite 30WP East Cost 1¼ lb Lannate L 1 pt Guthion 50WP 3/8 lb	0.1	2.0	0.0
2	5.8	63.8	Omite 30WP West Coast 1¼ lb Guthion 50WP 3/8 lb Captan 50WP 1 lb Benlate 50WP 2 oz	9.9	28.5	Omite 30WP West Coast 1¼ lb Lannate L 1 pt Guthion 50WP 3/8 lb	0.2	2.9	24.3
3	6.7	75.5	Check	51.4	79.6	Check	55.7	349.6	1.0

[1]Programs applied at 8X (50 gal/acre) using a Myers 3 pt. hitch sprayer at 2 1/2 mph. Rates given as amount/100 gal dilute (400 gal/acre dilute base).

[2]Based on sampling 4 Red Delicious trees per plot, 25 leaves/tree.

[3]Value obtained by rating 25 leaves/tree into following categories - 0 = no leaf spots, I = trace, $<$10% of leaf with spots; II = moderate spotting, 10-50% of leaf with spots; and III = severe spotting, $>$50% of leaf with spots. Categories weighted and summed using formula - $\bar{X}_0 \times 0 + \bar{X}_I \times 1 + \bar{X}_{II} \times 2 + \bar{X}_{III} \times 3$.

Table 8. Pear psylla nymphs (N) and eggs (E); twospotted spider mite nymphs (TN) and eggs (TE) and pear insect control in seasonal control programs at Clermont, NY. 1979.

Program[1] No.	April 4	April 26 N[2]	April 26 E[2]	April 28	May 9 N	May 9 E	May 10
1	Pydrin 2.4EC 16 oz/acre	0.0	5.5		0.0	0.0	Guthion 50W 2 lb/acre
2	Pydrin 2.4EC 8 oz/acre	0.0	17.5	Pydrin 2.4EC 8 oz/acre	0.0	0.0	Guthion 50W 2 lb/acre
3	Oil 60 sec 4 gal/acre	0.3	0.0	Guthion 50W 2 lb/acre	0.0	0.0	Guthion 50W 2 lb/acre
4		32.0	105.0	Pydrin 2.4EC 16 oz/acre	0.0	252.5	Guthion 50W 2 lb/acre

	May 21 N	May 21 E	June 7 N	June 7 E	June 20 N	June 20 E	June 20 TN[3]	June 20 TE[3]	June 29	July 7 TN	July 7 TE
1	0.0	0.0	0.0	4.5	15.3	56.5	0.0	0.0	BAAM 1.5EC 3 qt/acre	0.1	0.2
2	0.0	0.0	0.0	1.8	2.3	8.8	0.2	0.2	BAAM 1.5EC 3 qt/acre	1.1	0.3
3	0.0	0.0	0.0	5.3	9.3	53.0	0.0	0.1	Pydrin 2.4EC 16 oz/acre	0.2	0.0
4	0.5	11.8	0.0	0.8	1.8	12.5	0.7	2.1	Imidan 50W 5 lb/acre + Plictran 50W 1 lb/acre	0.1	0.3

	July 8	July 20 N	July 20 E	July 20 TN	July 20 TE	August 2	August 28 N	August 28 E
1	Plictran 16 oz/acre	1.5	7.5	0.0	0.0	Imidan 50W[4] + Captan 50W	34.5	113.8
2	Plictran 16 oz/acre	0.0	1.0	0.0	0.0	Imidan 50W + Captan 50W	23.3	126.5
3	Plictran 16 oz/acre	0.0	1.0	0.0	0.0	Imidan 50W + Captan 50W	4.0	35.25
4		0.3	2.5	0.0	0.0	Imidan 50W + Captan 50W	3.5	11.3

	Tarnished plant bug	% fruit injury: Pear plant bug	% fruit injury: Plum curculio	% fruit injury: GFW OBLR	% fruit injury: Late leafroller	% Clean fruit
1	1.8	1.3	0.3	0.0	0.3	97.3
2	0.8	1.5	0.8	0.3	0.8	96.5
3	3.0	2.3	0.0	0.0	0.3	94.5
4	1.0	3.0	0.3	0.0	0.3	96.0

[1]Each program consists of ca. 2 acres of Bartlett and Bosc pears. All treatments applied at 4X using 100 gal spray/acre with Myers airblast sprayer traveling 2½ mph.

[2]Mean no./5 spurs based on sampling 5 spurs/tree from 4 Bartlett trees/program.

[3]Mean no./leaf based on brushing 25 leaves/tree from 4 Bartlett trees/program.

[4]Imidan applied at the rate of 2 lb/acre; Captan applied at the rate of 2.5 lb/acre.

Table 9. Pear psylla nymphs (N) and eggs (E); twospotted spider mite nymphs (TN) and eggs (TE) in seasonal control program conducted at Marlboro, NY. 1979.

Program No.[1]	March 30	April 24	May 8 N[2]	May 8 E[2]	May 10	May 22 N	May 22 E
1	Pydrin 2.4EC 5 1/3 oz	Pydrin 2.4EC 5 1/3 oz	0.0	0.0	Guthion 50W 2 lb	0.0	0.0
2	Pydrin 2.4EC 10 2/3 oz		0.0	0.0	Guthion 50W 2 lb	0.0	0.3
3		Pydrin 2.4EC 10 2/3 oz	2.3	59.5	Guthion 50W 2 lb	4.5	2.0
4	Oil, 70 sec 4 1/2 gal		93.3	159.5	Pydrin 2.4EC 5 1/3 oz	2.8	11.8

	May 30 TN[3]	May 30 TE[3]	June 18 N	June 18 E	June 18 TN	June 18 TE	June 22
1	.08	.26	1.5	21.8	1.1	1.5	BAAM 1.5EC 2 qt
2	.07	.03	.8	8.0	1.4	1.4	Guthion 50W 2 lb Plictran 50W 1 lb
3	.05	.24	7.0	56.0	.8	.5	BAAM 1.5EC 4 qt
4	.02	.32	14.0	71.0	1.2	.6	BAAM 1.5EC 2 qt

	July 6 N	July 6 E	July 6 TN	July 6 TE	July 9	July 19 N	July 19 E	July 19 TN	July 19 TE
1	78.3	102.5	3.4	5.9	BAAM 1.5EC 3 qt/acre Plictran 50WP 1 lb/acre	4.8	17.3	0.0	0.6
2	50.3	221.7	0.0	0.2	BAAM 1.5EC 3 qt/acre	0.0	13.0	0.0	0.0
3	70.5	47.5	1.6	2.6	BAAM 1.5EC 3 qt/acre Plictran 50WP 1 lb/acre	1.5	32.8	0.0	0.3
4	235.8	85.3	1.1	1.4	BAAM 1.5EC 3 qt/acre Plictran 50WP 1 lb/acre	6.8	33.3	0.0	0.4

[1]All programs conducted in ca 1 acre unreplicated blocks of Bartlett and Bosc pear varieties. All sprays applied with a Bean[R] model 1229 3 pt. hitch airblast sprayer delivering 100 gal/acre (4X) at 3 mph.

[2]Mean no./5 spurs based on sampling 5 spurs/tree from 4 Bartlett trees in each program.

[3]Mean no./leaf based on brushing 25 leaves/tree from 4 Bartlett trees in each program.

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Table 10. Control of the Green fruitworm, Orthosia hibisci, in the Champlain Valley, Peru, New York. 1979.

Program No.	Treatment and rate form/acre[1]		Application dates[2]	% Mortality (May 24)[3] larval	% Mortality (May 24)[3] larval + empty sites	% injured fruit (Aug. 2)[4]
1	Guthion 50WP	2 lb	April 25 May 24	21	78	3.64
2	Thuricide Thiodan 50WP	1 lb 2 lb	May 11 May 28	11	66	0.59
3	Dipel Zolone 3EC	2 lb 4 pt	May 11 May 21	27	84	0.51
4	Dipel Penncap 2M	2 lb 4 pt	May 11 May 21	68	95	0.11
5	Dipel Lannate L	1 lb 8 pt	May 11 May 21	100	100	0.0
6	Lannate L	4 pt	May 21	100	100	0.04
7	Thiodan 50WP	4 lb	May 21	100	100	0.28
8	Zolone 3EC	8 pt	May 21	50	97	1.30
9	Penncap 2M	8 pt	May 21	68	95	0.28

[1]Treatments all applied at 4X (100 gal/acre) with a Bean model 502 speed sprayer at 2 1/4 mph to 1-1 1/3 acre plots replicated twice for each program.

[2]1/2" green = April 25, Pink = May 10, Petal fall = May 21.

[3]Based on examining 30 feeding sites/tree (15 top, 15 bottom) from 2 trees/plot, 2 plots/program.

[4]Based on evaluating ca 600 apples/tree, 2 trees/plot, 2 plots/program.

Pear pysila nymphal (N) and egg (E) counts from seasonal insecticide applications, Hudson Valley Laboratory, Highland, NY. 1979.[1]

Treat No.	Material and formulation	Oz form. /100 gal	May 18	May 29 N[2]	May 29 E[2]	June 1	June 14 N	June 14 E	July 3 N	July 3 E
1	BAAM 1.5EC	24.0	May 20	1.6	0.3	"	1.3	22.8	26.3	32.3
2	BAAM 50WP	9.0	"	1.5	7.8	"	1.3	6.3	11.3	40.8
3	SN-72129 20WP	50.0	"	1.3	4.8	"	0.3	2.3	2.0	13.8
4	SN-72129 20WP	100.0	"	1.3	8.5	"	0.5	2.0	1.0	6.0
5	Pydrin 2.4EC	2.6	May 18	0.3	4.3	"	0.0	0.0	0.0	0.0
6	Pydrin 2.4EC	5.3	"	0.0	2.8	"	3.8	0.0	0.0	0.0
7	Pydrin 2.4EC	2.6	"	0.0	13.3		0.5	3.3	2.0	6.0
8	Pydrin 2.4EC	5.3	"	0.0	31.0		2.8	0.0	1.8	7.5
9	Pydrin 2.4EC	2.6	"	0.8	17.0	"	0.0	0.0	0.0	0.0
10	Pydrin 2.4EC	5.3	"	1.0	2.3	"	0.0	0.5	0.0	1.0
11	Guthion 50WP	8.0	May 20	43.0	32.3	"	21.3	22.8	73.5	94.0
12	Check			88.0	16.5		41.3	32.0	71.8	59.5

	July 17 N	July 17 E	July 20	July 31 N	July 31 E	August 15 N	August 15 E
1	28.0	40.8	"	1.6	8.3	2.8	27.0
2	33.3	153.5	"	1.8	11.8	2.5	43.3
3	2.0	39.3	"	.3	3.8	0.0	15.5
4	0.8	11.3	"	.0	3.3	0.0	12.0
5	0.0	0.0		13.5	34.0	2.3	56.5
6	0.0	0.0		4.0	14.3	0.0	9.5
7	9.0	62.0		25.5	18.5	6 5	68.0
8	1.8	10.3		18.5	28.8	6.8	59.8
9	0.0	1.0	"	0.0	0.3	0.0	0.0
10	0.0	0.3	"	0.3	0.8	0.0	0.8
11	76.5	60.5	"	20.3	30.5	31.3	127.0
12	42.0	33.0		20.8	28.0	5.8	42.8

[1]Treatments applied by high pressure handgun sprayer at 400 psi using 1.5 gal spray/tree on 4 tree plots (2 Bartlett, 2 Bosc varieties) replicated 4 times in a randomized complete block design, trees were 4 years old.

[2]Mean no./5 spurs based on sampling 5 Bartlett spurs/plot.