

**FIGURE 11.1.1
GROWTH STAGES IN
APPLE**



11 Apples

11.1 Insecticides and Fungicides for Apples

See Sections 11.2, 11.3, 11.4, and 11.5 for comments related to this table.

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Silver Tip							
Crown rot	33	Aliette WDG	2.5-5 lb/A 0.5-1 pt/100 gal	14	12		
	4	Ridomil Gold SL	2 qts/A 0.5 pt/100 gal		48		[7.2]
European fruit lecanium		oil	2-3 gal/100 gal			High	[20.2]
European red mite		oil	2-3 gal/100 gal			High	[20.11]
Green Tip							
Apple scab	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24	High	[2.1,2.2]
	M4	Captan 50WP	8.0 lb/A 1.0-2.0 lb/100 gal	0	24	High	[2.1,2.2]
	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24	High	[2.1,2.2]
	M3	Dithane 75DF or M45 /Manzate ProStik /Penncozeb 75DR	3.0-6.0 lb/A 1.0-2.0 lb/100 gal	BL, 77 (A)	24		[1.3,2.2]
	M3	Dithane F45/ Manzate Max	2.4-4.8 qt/A 0.8-1.6 qt/100 gal	BL, 77 (A)	24	High	[1.3,2.2]
	M3	Polyram 80DF	3.0-4.5 lb/A	BL, 77 (A)	24	High	[1.3,2.2]
	M7	Syllit FL <i>plus</i>	2.0 pts/A	7	48	High	[2.15]
	M4	Captan <i>or</i>	see rates above	0	24		[2.1,2.2]
	M3	Manzate, Penncozeb <i>or</i> Polyram	see rates above	BL, 77 (A)	24		[1.3,2.2]
	9	Scala	7.0-10.0 fl.oz./A	72	12	High	
	9	Vanguard WG	3.0-5.0 oz/A	0	12	High	
European red mite		oil	1-2 gal/100 gal			High	[20.3,20.4]
Fire blight	M1	Bordeaux mixture, 8-10-10 <i>plus</i> oil (may also use with any copper below)	8.0 lb/100 gal 1.0 qt/100 gal			Good	[8.4]
		Badge SC	1 to 7.25 pt/A	0	48	Good	
		Badge X2		0	48	Good	
	M1	Champ Formula-2 4.6F	5.33-10.5 pts/A	HIG	24	Good	
	M1	C-O-C-S WDG	8.0-11.7 lb/A	GT	24	Good	
	M1	Cuprofix Ultra Disperss 40DF	5.0-7.5 lb/A	HIG	48	Good	
	M1	Kocide 3000	3.5-7.0 lb/A 1.11-2.3 lb/100 gal	HIG	48	Good	
Rosy apple aphid 1B		Lorsban 4EC	1 pt/100 gal	PB/28 (A)	96	High	[28.2,28.2a]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Green Tip (continued)							
Rosy apple aphid (continued)	1B	Lorsban 75WG	0.3-0.67 lb/100 gal	PB/28 (A)	96	High	[28.2,28.2a]
	28	Exirel	13.5 to 20.5 fl oz/A	3	12		
	1B	Supracide 2EC	3-12 pts/A 1-2 pts/100 gal	PB	72	Moderate	[28.2,28.2a]
	9C	Beleaf 50SG	2.0-2.8 oz/A	21	12	Moderate	[28.2,28.2b]
American plum borer	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
Half-Inch Green							
Apple scab	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24	High	[2.1,2.2]
	M4	Captan 50WP	8.0 lb/A 1.0-2.0 lb/100 gal	0	24	High	[2.1,2.2]
	M4	Captan 4L	0.5-1.0 qt/100 gal	0	24	High	[2.1,2.2]
	M3	Dithane 75DF or M45 /Manzate ProStik /Penncozeb 75DR	3.0-6.0 lb/A 1.0-2.0 lb/100 gal	BL, 77(A)	24		[1.3,2.2]
	M3	Dithane F45/ Manzate Max	2.4-4.8 qt/A 0.8-1.6 qt/100 gal	BL, 77(A)	24	High	[1.3,2.2]
	M3	Polyram 80DF	3.0-4.5 lb/A	BL, 77(A)	24	High	[1.3,2.2]
	M7	Syllit FL <i>plus</i>	2.0 pts/A	7	48		[2.15]
	M4	Captan <i>or</i>	see rates above	0	24		[2.1,2.2]
	M3	Dithane, Manzate, Penncozeb <i>or</i> Polyram	see rates above	BL, 77(A)	24		[1.3,2.2,2.4]
	9	Scala	7.0-10.0 fl.oz./A	72	12		
Dogwood borer	9	Vanguard WG	3.0-5.0 oz/A	0	12		
	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
European red mite		oil	1-2 gal/100 gal			High	[20.3,20.4]
Redbanded leafroller	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[27.1]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
Rosy apple aphid	1B	Lorsban 4EC	1 pt/100 gal	PB/28 (A)	96	High	[28.2,28.2a]
	1B	Lorsban 75WG	0.3-0.67 lb/100 gal	PB/28 (A)	96	High	[28.2,28.2a]
	1B	Supracide 2EC	3-12 pts/A 1-2 pts/100 gal	PB	72	Moderate	[28.2,28.2a]
	7C	Esteem 35WP	3-5 oz/A	45	12	High	[28.2,28.2b]
	28	Exirel	13.5 to 20.5 fl oz/A	3	12		
	9C	Beleaf 50SG	2.0-2.8 oz/A	21	12	Moderate	[28.2,28.2b]
San Jose scale		oil	2 gal/100 gal			High	[29.3]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Half-Inch Green (continued)							
San Jose scale (continued)	1B	Lorsban 4EC	1 pt/100 gal	PB/28 (A)	96	High	[29.3]
	1B	Lorsban 75WG	0.3-0.67 lb/100 gal	PB/28 (A)	96	High	[29.3]
	1B	Supracide 2EC	3-12 pts/A 1-2 pts/100 gal	PB	72	High	[29.3]
	7C	Esteem 35WP <i>plus</i> oil	4-5 oz/A 2 gal/100 gal	45	12	High	[29.3]
	16	Centaur 0.7WDG	34.5 oz/A	14	12	High	[29.3,29.4]
Tight Cluster							
American plum borer	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
Apple scab	M3	Dithane 75DF or M45 /Manzate ProStik /Penncozeb 75DR	3.0-6.0 lb/A 1.0-2.0 lb/100 gal	BL, 77 (A)	24		[1.3,2.2]
	M3	Dithane F45/ Manzate Max	2.4-4.8 qt/A 0.8-1.6 qt/100 gal	BL, 77 (A)	24	High	[1.3,2.2]
	M3	Polyram 80DF	3.0-4.5 lb/A	BL, 77 (A)	24	High	[1.3,2.2]
	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		[2.1,2.2]
	M4	Captan 50WP	8.0 lb/A 1.0-2.0 lb/100 gal	0	24		[2.1,2.2]
	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		[2.1,2.2]
	M7	Syllit FL <i>plus</i>	2.0 pts/A	7	48		[2.15]
	M4	Captan <i>or</i>	see rates above	0	24		[2.2]
	M3	Dithane, Manzate, Penncozeb <i>or</i> Polyram	see rates above	BL, 77 (A)	24		[2.1,2.2]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		[2.13]
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		[2.13]
	3	Rally 40WSP	5-10 oz/A 2-3 oz/100 gal		14	24	
	3	Rubigan	8-12 fl.oz/A	30	12		
	3	Topguard	13 fl.oz./A	14	12		
	7	Fontelis 1.67 SC	16-20 fl.oz./A 5.3-6.7 fl oz/100 gal	28	12		
	11	Cabrio EG	5.0-8.0 oz/A 4.0 oz/100 gal	0	12		[2.4,2.14]
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		[2.4,2.14]
	11	Sovran 50WDG	3.2-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		[2.4,2.14]
	7,11	Luna Tranquility 500SC	11.2-16 fl oz/A 3.7-5.3 fl oz/100 gal	72	12		
	7,9	Luna Sensation 500SC	4-5.8 fl oz/A 3.3-1.9 fl oz/100 gal	14	12		
	7,11	Merivon 4.17SC	4-5.5 fl oz/A	0	12		

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Tight Cluster (continued)							
Dogwood borer	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
European red mite		oil	1-2 gal/100 gal			High	[20.3,20.4]
	10A	Apollo 4SC	4-8 fl.oz./A	45	12	High	[20.5,20.5a,20.6, 20.11,20.11a]
	25	Nealta	13.7 fl oz/A	7	12		
	10A	Onager 1 EC	12-24 fl.oz./A	28	12	High	[20.5,20.5b,20.11, 20.11a]
	10A	Savey 50DF	3 oz/A	28	12	High	[20.5,20.5b,20.6, 20.11,20.11a]
	10B	Zeal	2-3 oz/A	14	12	High	[20.5,20.5b,20.9, 20.11]
Powdery Mildew		JMS Stylet-Oil	1.0-2.0 gal/100 gal	0	4		
		Rubigan EC	8 to 12 fl oz/A	30	12		
	1	Thiophanate Methyl 85WDG	0.6-0.8 lb/A 0.2-0.3 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M 70WP	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M WSB	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		
	3	Procure 480SC	8.0-16.0 fl.oz./A	14	12		
	3	Rally 40WSP	5.0-10.0 oz/A 1.6-3.3 oz/100 gal	14	24		
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		
	11	Sovran 50WDG	4.0-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		
Rosy apple aphid	1B	Lorsban 4EC	1 pt/100 gal	PB/28 (A)	96	High	[28.2,28.2a]
	1B	Lorsban 75WG	0.3-0.67 lb/100 gal	PB/28 (A)	96	High	[28.2,28.2a]
	1B	Supracide 2EC	3-12 pts/A 1-2 pts/100 gal	PB	72	Moderate	[28.2,28.2a]
	7C	Esteem 35WP	3-5 oz/A	45	12	High	[28.2,28.2b]
	28	Exirel	13.5 to 20.5 fl oz/A	3	12		
	9C	Beleaf 50SG	2.0-2.8 oz/A	21	12	Moderate	[28.2,28.2b]
San Jose scale		oil	2 gal/100 gal			High	[29.3]
	1B	Lorsban 4EC	1 pt/100 gal	PB/28 (A)	96	High	[29.3]
	1B	Lorsban 75WG	0.3-0.67 lb/100 gal	PB/28 (A)	96	High	[29.3]
	1B	Supracide 2EC	3-12 pts/A 1-2 pts/100 gal	PB	72	High	[29.3]
	7C	Esteem 35WP <i>plus</i> Oil	4-5 oz/A 2 gal/100 gal	45	12	High	[29.3]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Tight Cluster (continued)							
San Jose scale (continued)	16	Centaur 0.7WDG	34.5 oz/A	14	12	High	[29.3,29.4]
Tarnished plant bug	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[33.1,33.1a,33.1b]
	3A	Ambush 25WP	6.4-25.6 oz/A	PF	12	High	[33.1,33.1a,33.1b]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[33.1,33.1a,33.1b]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	High	[33.1,33.1a,33.1b]
	3A	Danitol 2.4EC	10.67-16 fl.oz./A	14	24	High	[33.1,33.1a,33.1b]
	3A	Pounce 25 WP	6.4-16 oz/A	PF	12	High	[33.1,33.1a,33.1b]
	9C	Beleaf 50SG	2-2.8 oz/A	21	12	High	[33.1,33.1a,33.1d]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[33.1,33.1a,33.1c]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	High	[1.0,33.1,33.1a, 33.1b]
Pink							
American plum borer	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
	4A	Assail 30SG	8 oz/A	7	12	Moderate	[17.2]
Apple scab	M3	Dithane 75DF or M45/ Manzate ProStik/ Penncozeb 75DR	3.0-6.0 lb/A 1.0-2.0 lb/100 gal	BL, 77 (A)	24		[1.3,2.2]
	M3	Dithane F45/ Manzate Max	2.4-4.8 qt/A 0.8-1.6 qt/100 gal	BL, 77 (A)	24	High	[1.3,2.2]
	M3	Polyram 80DF	3.0-4.5 lb/A	BL, 77 (A)	24	High	[1.3,2.2]
	M4	Captan 50WP	8.0 lb/A 1.0-2.0 lb/100 gal	0	24		[2.6,2.7]
	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		[2.6,2.7]
	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		[2.6,2.7]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		[2.13]
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		[2.13]
	3	Rally 40WSP	5-10 oz/A 2-3 oz/100 gal	14	24		
	3	Rubigan EC	8-12 fl.oz./A	30	12		
	3	Topguard	13 fl.oz./A	14	12		
	7	Fontelis	16-20 fl.oz./A	28	12		
	11	Cabrio EG	5.0-8.0 oz/A 4.0 oz/100 gal	0	12		[2.4,2.14]
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		[2.4,2.14]
	11	Sovran 50WDG	3.2-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		[2.4,2.14]
	7,11	Luna Tranquility 500SC	11.2-16 fl oz/A 3.7-5.3 fl oz/100 gal	72	12		
	7,11	Merivon 4.17SC	4-5.5 fl oz/A	0	12		

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Pink (continued)							
Black Rot & White Rot	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		
	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		
	M4	Captan 50WP	8.0 lb/A 1.2-2.0 lb/100 gal	0	24		
	11	Sovran 50WDG	3.2-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		[2.14]
Blister Spot	33	Aliette WDG	2.5-5.0 lb/A 0.5-1.0 lb/100 gal	14	12		[5.1]
Cedar Apple Rust	M3	Ferbam Granuflo	3.5 lb/A 0.88 lb/100 gal	7	24		
	M3	Manzate ProStik	3.0 lb/A 1.0 lb/100 gal	BL, 77 (A)	24		[1.3,2.2]
	M3	Penncozeb 75DF	3.0 lb/A 1.0 lb/100 gal	BL, 77 (A)	24		[1.3,2.2]
	M3	Polyram 80DF	3.0 lb/A	BL, 77 (A)	24		[2.2]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		
	3	Procure 480SC	8.0-16.0 fl.oz./A	14	12		
	3	Rally 40WSP	5.0-8.0 oz/A 1.6-2.0 oz/100 gal	14	24		
	3	Rubigan EC	8 to 12 fl oz/A	30	12		
	3	Topguard	12 fl.oz./A	14	12		
Dogwood borer	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
	4A	Assail 30SG	8 oz/A	7	12	Moderate	[17.2]
European red mite	1A	Vydate 2L	2-4 pts/A 1-2 pts/100 gal	14	48	Moderate	[20.7a]
	10A	Apollo 4SC	4-8 fl.oz./A	45	12	High	[20.5,20.5a,20.6, 20.11,20.11a]
	25	Nealta	13.7 fl oz/A	7	12		
	10A	Onager 1 EC	12-24 fl.oz./A	28	12	High	[20.5,20.5b,20.11, 20.11a]
	10A	Savey 50DF	3 oz/A	28	12	High	[20.5,20.5b,20.6, 20.11,20.11a]
	10B	Zeal	2-3 oz/A	14	12	High	[20.5,20.5b,20.9, 20.11]
Mullein plant bug	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[23.3]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[23.3]
	4A	Actara 25WDG	4.5 oz/A	14/35 (A)	12	High	[23.3,23.3a]
	4A	Assail 30SG	4-8 oz/A	7	12	High	[23.3,23.3c]
	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[23.3,23.3b]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Pink (continued)							
Obliquebanded leafroller	11A	Agree 3.8WS	1-2 lb/A	0	4	Moderate	[24.1,24.2,24.3, 24.3a]
Oriental fruit moth		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]
		Checkmate OFM-F 24.6S	1.32-2.93 fl.oz./A		0	Moderate	[14.2]
		Isomate-CM/OFM TT	200 ties/A		0	High	[14.2]
		Isomate OFM TT	100 ties/A		0	High	[14.2]
Powdery Mildew		JMS Stylet-Oil	1.0-2.0 gal/100 gal	0	4		[9.3,9.4]
	1	Thiophanate Methyl 85WDG	0.6-0.8 lb/A 0.2-0.3 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M 70WP	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M WSB	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		
	3	Procure 480SC	8.0-16.0 fl.oz./A	14	12		
	3	Rally 40WSP	5.0-10.0 oz/A 1.6-3.3 oz/100 gal	14	24		
	3	Rubigan EC	8 to 12 fl oz/A	30	12		
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		
	11	Sovran 50WDG	4.0-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		
Rosy apple aphid	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[12.1d,28.2]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[12.1d,28.2]
	1A	Vydate 2L	2-8 pts/A 1-2 pts/100 gal	14	48	Moderate	[28.2,28.3a]
	1B	Lorsban 4EC	1 pt/100 gal	PB/28 (A)	96	High	[28.2,28.2a]
	1B	Lorsban 75WG	0.3-0.67 lb/100 gal	PB/28 (A)	96	High	[28.2,28.2a]
	2A	Thionex 3EC	2.6 qt/A 0.5 qt/100 gal	21	7 days	Moderate	[28.2,35.1b]
	2A	Thionex 50WP	4 lb/A 0.75 lb/100 gal	21	20 days	Moderate	[28.2,35.1b]
	4A	Actara 25WDG	4.5 oz/A	14/35 (A)	12	High	[15.4,28.2,28.3b]
	4A	Assail 30SG	2.5-4 oz/A	7	12	High	[28.2,28.3c]
	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[28.2,28.4a]
	7C	Esteem 35WP	3-5 oz/A	45	12	High	[28.2,28.2b]
	9C	Beleaf 50SG	2.0-2.8 oz/A	21	12	Moderate	[28.2,28.2b]
	28	Exirel	13.5 to 20.5 fl oz/A	3	12		

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Pink (continued)							
Spotted tentiform leafminer, Apple blotch leafminer	1A	Vydate 2L	2-4 pts/A 1 pt/100 gal	14	48	High	[30.1,30.2, 30.2a,30.3,30.3a]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[30.1,30.1a,30.2, 30.3]
	3A	Ambush 25WP	6.4-25.6 oz/A	PF	12	High	[30.1,30.1a,30.2]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[30.1,30.1a,30.1b, 30.2,30.3]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	High	[30.1,30.1a,30.2, 30.3]
	3A	Danitol 2.4EC	10.67-16 fl.oz./A	14	24	High	[30.1,30.1a,30.1b, 30.2,30.2a,30.2b, 30.3]
	3A	Pyrenone 6L	12 fl.oz./A		12	Moderate	[30.1]
	4A	Actara 25WDG	4.5 oz/A	14/35 (A)	12	High	[15.4,30.1, 30.1d,30.2,30.2a, 30.2c,30.3]
	4A	Assail 30SG	2.5 oz/A	7	12	High	[30.1,30.2,30.2a, 30.3]
	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[30.1,30.2, 30.2a,30.2c,30.3]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[30.1,30.1e,30.2, 30.2a,30.3]
	6	Proclaim 5SG	3.2-4.8 oz/A 0.8-1.2 oz/100 gal	14	12	High	[30.1,30.2,30.3]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[30.1,30.1d,30.2, 30.2a,30.2c,30.3]
	28	Altacor 35WDG	2.5-4 oz/A	5	4	High	[30.1,30.2, 30.2d,30.3]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[30.1,30.2,30.2d, 30.3]
	UN	Aza-Direct 1.2L	11.5-42 fl.oz./A	0	4	High	[30.1,30.2,30.3]
	UN	Azatin XL 0.27EC	10-16 fl.oz./A	0	4	High	[30.1,30.2,30.3]
	3A/6	*Gladiator EC	19 fl.oz./A 4.75 fl.oz./100 gal	28	12	High	[1.0,30.1,30.1a, 30.2,30.3]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
Tarnished plant bug	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[33.1,33.1a,33.1b]
	3A	Ambush 25WP	6.4-25.6 oz/A	PF	12	High	[33.1,33.1a,33.1b]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[33.1,33.1a,33.1b]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	High	[33.1,33.1a,33.1b]
	3A	Danitol 2.4EC	10.67-16 fl.oz./A	14	24	High	[33.1,33.1a,33.1b]
	3A	Pounce 25 WP	6.4-16 oz/A	PF	12	High	[33.1,33.1a,33.1b]
	9C	Beleaf 50SG	2-2.8 oz/A	21	12	High	[33.1,33.1a,33.1d]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[33.1,33.1a,33.1c]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	High	[1.0,33.1,33.1a, 33.1b]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Bloom							
Apple scab	M3	Dithane 75DF or M45 /Manzate ProStik /Penncozeb 75DR	3.0-6.0 lb/A 1.0-2.0 lb/100 gal	BL, 77 (A)	24		[1.3,2.2]
	M3	Dithane F45/ Manzate Max	2.4-4.8 qt/A 0.8-1.6 qt/100 gal	BL, 77 (A)	24	High	[1.3,2.2]
	M3	Polyram 80DF	3.0-4.5 lb/A	BL, 77 (A)	24	High	[1.3,2.2]
	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		[2.6,2.7]
	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		[2.6,2.7]
	M4	Captan 50WP	8.0 lb/A 1.0-2.0 lb/100 gal	0	24		[2.6,2.7]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		[2.13]
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		[2.13]
	3	Rally 40WSP	5-10 oz/A 2-3 oz/100 gal	14	24		
	3	Topguard	13 fl.oz./A	14	12		
	7	Fontelis	16-20 fl.oz./A	28	12		
	11	Cabrio EG	5.0-8.0 oz/A 4.0 oz/100 gal	0	12		[2.4,2.14]
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		[2.4,2.14]
	11	Sovran 50WDG	3.2-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		[2.4,2.14]
	7,11	Luna Tranquility 500SC	11.2-16 fl oz/A 3.7-5.3 fl oz/100 gal	72	12		
	7,11	Merivon 4.17SC	4-5.5 fl oz/A	0	12		
Black Rot & White Rot	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		[10.3,10.4]
	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		
	M4	Captan 50WP	8.0 lb/A 1.2-2.0 lb/100 gal	0	24		
	1	Topsin M 70WP	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		
	11	Sovran 50WDG	3.2-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		
	7,11	Merivon 4.17SC	4-5.5 fl oz/A	0	12		
Blister Spot	33	Aliette WDG	2.5-5.0 lb/A 0.5-1.0 lb/100 gal	14	12		[5.1]
Blossom End Rot	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		[6.2]
	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		[6.2]
	M4	Captan 50WP	8.0 lb/A 1.0-2.0 lb/100 gal	0	24		[6.2]
	1	Thiophanate Methyl 85WDG	0.6-0.8 lb/A 0.2-0.3 lb/100 gal	1	48		[6.2]
Cedar Apple Rust	M3	Ferbam Granuflo	3.5 lb/A 0.88 lb/100 gal	7	24		

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Bloom (continued)							
Cedar Apple	M3	Manzate ProStik	3.0 lb/A	BL,	24		[1.3,2.2]
Rust (continued)			1.0 lb/100 gal	77(A)			
	M3	Penncozeb 75DF	3.0 lb/A	BL,	24		[1.3,2.2]
			1.0 lb/100 gal	77(A)			
	M3	Polyram 80DF	3.0 lb/A	BL,	24		[2.2]
				77(A)			
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		
	3	Procure 480SC	8.0-16.0 fl.oz./A	14	12		
	3	Rally 40WSP	5.0-8.0 oz/A	14	24		
			1.6-2.0 oz/100 gal				
	3	Topguard	12 fl.oz./A	14	12		
	3	Rubigan EC	8 to 12 fl oz/A	30	12		
Codling moth		Checkmate CM-F 14.3S	2.4-4.8 fl.oz./A		4	Moderate	[14.2]
		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]
		Isomate-CM/OFM TT	200 ties/ acre		0	High	[14.2]
Fire blight		Agri-mycin	24.0 oz/A	50	12		[8.3,8.10]
			8.0 oz/100 gal				
		Apogee 27.5%	4.5-9.0 oz/100 gal	45	12		[8.6]
		Bloomtime Biological FD	0.33 lb/A	PF	4		[8.8]
	M1	Cueva	2 to 3 qt/100 gal	0	4		
	44	Double Nickel 55 WDG	0.5 to 1 lb/A	0	4		
	44	Double Nickel LC	1 to 1 qt/ A	0	4		
		Fireline	12.0 oz/100 gal		12		
		Firewall	24.0 oz/A	50	12		[8.3,8.10]
			8.0 oz/100 gal				
	24	Kasumin 2L	64 fl oz/A	90	12		
		Mycoshield 17WP	1.0 lb/100 gal	60	12		[8.9]
		Serenade ASO	2.0-6.0 qt/A	0	4		[8.7]
		Streptrol 17WP	24.0 oz/A	50	4		[8.3,8.10]
			8.0 oz/100 gal				
Lesser appleworm		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]
		Isomate-CM/OFM TT	200 ties/ acre		0	High	[14.2]
Mullein plant bug	4A	Assail 30SG	4-8 oz/A	7	12	High	[23.3,23.3c]
Obliquebanded leafroller	11A	Agree 3.8WS	1-2 lb/A	0	4	Moderate	[24.1,24.2,24.3, 24.3a]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	High	[24.1,24.2,24.3, 24.3a]
	11A	Javelin 7.5WDG	0.5-4 lb/A	0	4	Moderate	[24.1,24.2,24.3, 24.3a]
			0.13-1 lb/100 gal				
	18	Intrepid 2F	8-16 oz/A	14	4	High	[24.2,24.3, 24.3b]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Bloom (continued)							
Oriental fruit moth		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]
		Checkmate OFM-F 24.6S	1.32-2.93 fl.oz./A		0	Moderate	[14.2]
		Isomate-CM/OFM TT	200 ties/ acre		0	High	[14.2]
		Isomate OFM TT	100 ties/A		0	High	[14.2]
Powdery Mildew		JMS Stylet-Oil	1.0-2.0 gal/100 gal	0	4		[9.3,9.4]
	1	Thiophanate Methyl 85WDG	0.6-0.8 lb/A 0.2-0.3 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M 70WP	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M WSB	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		
	3	Procure 480SC	8.0-16.0 fl.oz./A	14	12		
	3	Rally 40WSP	5.0-10.0 oz/A 1.6-3.3 oz/100 gal	14	24		
	3	Rubigan EC	8 to 12 fl oz/A	30	12		
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		
	11	Sovran 50WDG	4.0-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		
Petal Fall							
American plum borer	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
	4A	Assail 30SG	8 oz/A	7	12	Moderate	[17.2]
Apple rust mite	21A	Nexter 75WS	5.2-10.7 oz/A	25	12	Moderate	[13.2]
	21A	Portal 0.4EC	2 pts/A	14	12	High	[13.2]
Apple scab	M3	Manzate ProStik	3.0-6.0 lb/A 1.0-2.0 lb/100 gal	BL, 77 (A)	24		[2.7]
	M3	Penncozeb 75DF	3.0-6.0 lb/A 1.0-2.0 lb/100 gal	BL, 77 (A)	24		[2.7]
	M3	Polyram 80DF	3.0 lb/A 1.0 lb/100 gal	BL, 77 (A)	24		
	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		[2.7,2.6]
	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		[2.7,2.6]
	M4	Captan 50WP	8.0 lb/A 1.0-2.0 lb/100 gal	0	24		[2.7,2.6]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		[2.13]
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		[2.13]
	3	Rally 40WSP	5-10 oz/A 2-3 oz/100 gal	14	24		
	3	Topguard	13 fl.oz./A	14	12		
	7	Fontelis	16-20 fl.oz./A	28	12		

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
Apple scab (continued)	11	Cabrio EG	5.0-8.0 oz/A 4.0 oz/100 gal	0	12		[2.14,2.4]
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		[2.14,2.4]
	11	Sovran 50WDG	3.2-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		[2.14,2.4]
	7,11	Luna Tranquility 500SC	11.2-16 fl oz/A 3.7-5.3 fl oz/100 gal	72	12		
	7,11	Merivon 4.17SC	4-5.5 fl oz/A	0	12		
Black Rot & White Rot	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		
	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		
	M4	Captan 50WP	8.0 lb/A 1.2-2.0 lb/100 gal	0	24		
	1	Topsin M 70WP	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[10.3,10.4]
	11	Sovran 50WDG	3.2-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		[2.14]
	7,11	Merivon 4.17SC	4-5.5 fl oz/A	0	12		
Blossom End Rot	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		[6.2]
	M4	Captan 50WP	8.0 lb/A 1.0-2.0 lb/100 gal	0	24		
	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		[6.2]
	1	Thiophanate Methyl 85WDG	0.6-0.8 lb/A 0.2-0.3 lb/100 gal	1	48		[6.2]
Cedar Apple Rust	M3	Ferbam Granuflo	3.5 lb/A 0.88 lb/100 gal	7	24		
	M3	Manzate ProStik	3.0 lb/A 1.0 lb/100 gal	BL, 77 (A)	24		[1.3,2.2]
	M3	Penncozeb 75DF	3.0 lb/A 1.0 lb/100 gal	BL, 77 (A)	24		[1.3,2.2]
	M3	Polyram 80DF	3.0 lb/A	BL, 77 (A)	24		[2.2]
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		
	3	Procure 480SC	8.0-16.0 fl.oz./A	14	12		
	3	Rally 40WSP	5.0-8.0 oz/A 1.6-2.0 oz/100 gal	14	24		
	3	Topguard	12 fl.oz./A	14	12		
	3	Rubigan EC	8 to 12 fl oz/A	30	12		
Codling moth		Cyd-X 0.06SC	1-6 fl.oz./A	0	4	Moderate	[14.1,14.3,14.3f]
		Carpovirusine 0.99SC	0.25-0.4 qt/A 0.5-1 pt/100 gal	0	4	Moderate	[14.1,14.3,14.3f]
		Checkmate CM-F 14.3S	2.4-4.8 fl.oz./A		4	Moderate	[14.2]
		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
Codling moth (continued)		Checkmate Puffer CM-OFM	1-2 units/ acre		0	Moderate	[14.2]
		Isomate-CM/OFM TT	200 ties/ acre		0	High	[14.2]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[14.1,14.3,14.3g]
	1A	Lannate LV 2.4L	1.5-3 pts/A 1.5 pts/100 gal	14	72	High	[14.1,14.3,14.3g]
	1A	Sevin 80 Solupak	1.25-3.75 lb/A	3	12	Moderate	[14.1,14.3,14.3j]
	1A	Sevin XLR Plus 4EC	1-3 qt/A	3	12	Moderate	[14.1,14.3,14.3j]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[14.1,14.3,14.3e]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	Moderate	[14.1,14.3]
	4A	Assail 30SG	4-8 oz/A	7	12	High	[14.1,14.3,14.3a, 14.3c]
	4A	Calypso 4F	4-8 fl.oz./A 1-2 fl.oz./100 gal	30	12	High	[14.1,14.3,14.3e]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[14.1,14.3]
	5	Entrust 2SC	6-10 fl.oz./A	7	4	Moderate	[14.1,14.3]
	5	Entrust 80WP	2-3 oz/A 0.67-1 oz/100 gal	7	4	Moderate	[14.1,14.3]
	6	Proclaim 5SG	4.8 oz/A 1.2 oz/100 gal	14	12	Moderate	[14.1,14.3,14.3h]
	11A	Deliver 18WG	0.5-2 lb/A	0	4	Moderate	[14.1,14.3]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	Moderate	[14.1,14.3,14.3e]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.1,14.3,14.3i]
	18	Intrepid 2F	12-16 fl.oz./A	14	4	Moderate	[14.1,14.3,14.3b]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[14.1,14.3,14.3a]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[14.1,14.3,14.3a, 14.3b]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[14.1,14.3]
	UN	Neemix	7-16 fl.oz./A	0	12	Moderate	[14.1,14.3]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,14.1,14.3, 14.3k]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,14.1,14.3]
	28,16	Tourismo	15 to 17 fl oz/A	14	12		
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,14.1,14.3, 14.3k]
Comstock mealybug	4A	Assail 30SG	4-8 oz/A	7	12	High	[15.2a,15.3a,15.3b]
	16	Centaur 0.7WDG	34.5 oz/A	14	12	High	[15.2a,15.3a,15.3b]
	21A	Portal 0.4EC	2 pts/A	14	12	High	[15.2a,15.3a,15.3b]
	23	Movento 240SC	6-9 fl.oz./A	7	24	High	[15.2a,15.3a,15.2b, 15.3b]
	4A/28	Voliam Flexi WDG	6-7 oz/A	35	12	High	[1.0,15.2a,15.3b, 15.4]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
Comstock mealybug (continued)	6/4A	*Agri-Flex SC <i>plus</i> oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal		12	High	[1.0,15.2a,15.3a, 15.3b,15.4]
Dogwood borer	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
	4A	Assail 30SG	8 oz/A	7	12	Moderate	[17.2]
European apple sawfly	1A	Lannate LV 2.4L	1.5-3 pts/A 1.5 pts/100 gal	14	72	Low	[18.1,18.1a]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[18.1]
	3A	Baythroid XL 1EC	2.4-2.8 fl.oz./A	7	12	Moderate	[18.1]
	4A	Actara 25WDG	4.5-5.5 oz/A	14/35 (A)	12	High	[15.4,18.1,18.2a]
	4A	Assail 30SG	5-8 oz/A	7	12	Moderate	[18.1]
	4A	Calypso 4F	4-8 fl.oz./A 1-2 fl.oz./100 gal	30	12	High	[18.1,18.2a]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[18.1,18.2a]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[18.1,18.2a]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0,18.1]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,15.4,18.1]
	4A/28	Voliam Flexi WDG	6-7 oz/A	35	12	High	[1.0,15.4,18.1]
	6/4A	*Agri-Flex SC <i>plus</i> oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal	35	12	High	[1.0,15.4,18.1]
European red mite	6	*Agri-Mek 8SC	2.25-4.25 fl.oz./A 0.5-1 fl.oz./100 gal	28	12	High	[20.8,20.9]
	10A	Apollo 4SC	4-8 fl.oz./A	45	12	High	[20.5,20.5a,20.6, 20.11,20.11a]
	25	Nealta	13.7 fl oz/A	7	12		
	10A	Onager 1 EC	12-24 fl.oz./A	28	12	High	[20.5,20.5b,20.11, 20.11a]
	10A	Savey 50DF	3 oz/A	28	12	High	[20.5,20.5b,20.6, 20.11,20.11a]
	10B	Zeal	2-3 oz/A	14	12	High	[20.5,20.5b,20.9, 20.11]
	12B	Vendex 50WP	1-2 lb/A 4-8 oz/100 gal	14	48	Low	[20.11,20.11c]
	20B	Kanemite 15SC	31 fl.oz./A	14	12	High	[20.9,20.9b,20.11, 20.11c]
	21A	Nexter 75WS	4.4-5.2 oz/A	25	12	High	[20.9,20.9a, 20.11]
	21A	Portal 0.4EC	2 pt/A	14	12	High	[20.9,20.9a,20.11]
	UN	Acramite 50WS	0.75-1 lb/A	7	12	High	[20.9,20.9a,20.11]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
European red mite (continued)	3A/6	*Gladiator EC	19 fl.oz./A 4.75 fl.oz./100 gal	28	12	High	[1.0,20.8,20.9]
	6/4A	*Agri-Flex SC <i>plus</i> oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal	35	12 12	High	[1.0,20.8,20.9]
Fire blight		Agri-mycin	24.0 oz/A 8.0 oz/100 gal	50	12		[8.3,8.10]
		Apogee 27.5%	4.5-9.0 oz/100 gal	45	12		[8.6]
	M1	Cueva	2 to 3 qt/100 gal	0	4		
	44	Double Nickel 55 WDG	0.5 to 1 lb/A	0	4		
	44	Double Nickel LC	1 to 1 qt/ A	0	4		
		Firewall	24.0 oz/A 8.0 oz/100 gal	50	12		[8.3,8.10]
	24	Kasumin 2L	64 fl oz/A	90	12		
		Streptrol 17WP	24.0 oz/A 8.0 oz/100 gal	50	4		[8.3,8.10]
Green fruitworms	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[21.1,21.1a]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[21.1,21.1a]
	2A	Thionex 3EC	2.6 qt/A 0.5 qt/100 gal	21	7 days	High	[21.1,35.1b]
	2A	Thionex 50WP	4 lb/A 0.75 lb/100 gal	21	20 days	High	[21.1,35.1b]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[21.1,21.1b]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[21.1,21.1b]
	3A	Baythroid XL 1EC	1.4-2 fl.oz./A	7	12	High	[21.1,21.1b]
	3A	Danitol 2.4EC	16 fl.oz./A	14	24	High	[21.1,21.1b]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	3A	Pounce 25 WP	6.4-16 oz/A	PF	12	High	[21.1,21.1b]
	6	Proclaim 5SG	3.2-4.8 oz/A 0.8-1.2 oz/100 gal	14	12	High	[21.1]
	28	Altacor 35WDG	2.5-4 oz/A	5	4	High	[21.1]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[21.1]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	High	[1.0,21.1]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0,21.1,21.1d]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0]
	28,16	Tourismo	12 to 17 fl oz/A	14	12		
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,21.1,21.1d]
Lesser appleworm		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]
		Isomate-CM/OFM TT	200 ties/ acre		0	High	[14.2]
	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[14.1a]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
Lesser appleworm (continued)	1A	Lannate LV 2.4L	1.5-3 pts/A 1.5 pts/100 gal	14	72	High	[14.1a]
	1A	Sevin 80 Solupak	1.25-3.75 lb/A	3	12	Moderate	[14.1a,14.3j]
	1A	Sevin XLR Plus 4EC	1-3 qt/A	3	12	Moderate	[14.1a,14.3j]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	Moderate	[14.1a]
	4A	Assail 30SG	4-8 oz/A	7	12	High	[14.1a,14.3a,14.3c]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[14.1a]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	6	Proclaim 5SG	4.8 oz/A 1.2 oz/100 gal	14	12	Moderate	[14.1a]
	11A	Deliver 18WG	0.5-2 lb/A	0	4	Moderate	[14.1a]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.1a,14.3i]
	18	Intrepid 2F	12-16 fl.oz./A	14	4	Moderate	[14.1a,14.3b]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[14.1a,14.3a]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[14.1a,14.3a,14.3b]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[14.1a]
	UN	Neemix	7-16 fl.oz./A	0	12	Moderate	[14.1a]
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0, 14.1a,14.3k]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,14.1a,14.3k]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,14.1a]
	28,16	Tourismo	12 to 17 fl oz/A	14	12		
Mullein plant bug	4A	Assail 30SG	4-8 oz/A	7	12	High	[23.3,23.3c]
	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[23.3,23.3b]
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,23.3]
Obliquebanded leafroller	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	Moderate	[24.2,24.2a,24.2c]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	Moderate	[24.2,24.2a,24.2c]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	Moderate	[24.2,24.3,24.3b, 24.3c]
	3A	Ambush 25WP	6.4-25.6 oz/A	PF	12	Moderate	[24.2]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	Moderate	[24.2,24.3,24.3b, 24.3c,24.3d]
	3A	Baythroid XL 1EC	2.4-2.8 fl.oz./A	7	12	Moderate	[24.2,24.3,24.3c]
	3A	Danitol 2.4EC	16 fl.oz./A	14	24	Moderate	[24.2,24.2d,24.3, 24.3b,24.3c]
	3A	Pounce 25 WP	6.4-16 oz/A	PF	12	Moderate	[24.2]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[24.2,24.3,24.3b]
	5	Entrust 2SC	6-10 fl.oz./A	7	4	High	[24.2,24.3,24.3b]
	5	Entrust 80WP	2-3 oz/A 0.67-1 oz/100 gal	7	4	High	[24.2,24.3,24.3b]
	6	Proclaim 5SG	3.2-4.8 oz/A 0.8-1.2 oz/100 gal	14	12	High	[24.2,24.2e,24.3, 24.3b]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	11A	Agree 3.8WS	1-2 lb/A	0	4	Moderate	[24.1,24.2,24.3, 24.3a]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
Obliquebanded leafroller (continued)	11A	Deliver 18WG	0.5-2 lb/A	0	4	Moderate	[24.1,24.2,24.3, 24.3a]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	High	[24.1,24.2,24.3, 24.3a]
	11A	Javelin 7.5WDG	0.5-4 lb/A 0.13-1 lb/100 gal	0	4	Moderate	[24.1,24.2,24.3, 24.3a]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.3i,24.2,24.3]
	18	Intrepid 2F	8-16 oz/A	14	4	High	[24.2,24.3, 24.3b]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[24.2,24.3, 24.3b]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[24.2,24.3,24.3b]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0,24.2,24.3, 24.3b,24.3c]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,24.2,24.3, 24.3b,24.3c,24.4]
	28,16	Tourismo	12 to 17 fl oz/A	14	12		
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,24.2,24.3, 24.3b,24.4]
Oriental fruit moth		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]
		Checkmate OFM-F 24.6S	1.32-2.93 fl.oz./A		0	Moderate	[14.2]
		Checkmate Puffer CM- OFM	1-2 units/ acre		0	Moderate	[14.2]
		Isomate-CM/OFM TT	200 ties/ acre		0	High	[14.2]
		Isomate OFM TT	100 ties/A		0	High	[14.2]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[14.1a]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	Moderate	[14.1a]
	4A	Assail 30SG	4-8 oz/A	7	12	High	[14.1a,14.3,14.3a, 14.3c]
	4A	Calypso 4F	4-8 fl.oz./A 1-2 fl.oz./100 gal	30	12	High	[14.1a]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[14.1a]
	5	Entrust 2SC	6-10 fl.oz./A	7	4	Moderate	[14.1a]
	5	Entrust 80WP	2-3 oz/A 0.67-1 oz/100 gal	7	4	Moderate	[14.1a]
	6	Proclaim 5SG	4.8 oz/A 1.2 oz/100 gal	14	12	Moderate	[14.1a]
	11A	Deliver 18WG	0.5-2 lb/A	0	4	Moderate	[14.1a]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	Moderate	[14.1a]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.3i]
	18	Intrepid 2F	12-16 fl.oz./A	14	4	Moderate	[14.1a, 14.3b]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[14.1a,14.3a,]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[14.1,14.3,14.3a, 14.3b]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[14.1a]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
Oriental fruit moth (continued)	UN	Neemix	7-16 fl.oz./A	0	12	Moderate	[14.1a]
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,14.1a,14.3k]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,14.1a,14.3k]
	28,16	Tourismo	15 to 17 fl oz/A	14	12		
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,14.1a]
Oystershell scale	1A	Sevin 4F	1.5-3 qt/A	3	12	High	[25.1]
	1A	Sevin 80 Solupak	1.88-3.75 lb/A	3	12	High	[25.1]
	1A	Sevin XLR Plus 4EC	1.5-3 qt/A	3	12	High	[25.1]
	16	Centaur 0.7WDG	34.5 oz/A	14	12	High	
Plum curculio		Surround 95WP	25-50 lb/A	0	4	Moderate	[12.2,26.2]
	1A	Sevin 4F	1.5-3 qt/A	3	12	Moderate	[26.2,26.4c]
	1A	Sevin 80 Solupak	1.88-3.75 lb/A	3	12	Moderate	[26.2,26.4c]
	1A	Sevin XLR Plus 4EC	1.5-3 qt/A	3	12	Moderate	[26.2,26.4c]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[26.2,26.4a]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	Moderate	[26.2]
	3A	Baythroid XL 1EC	2.4-2.8 fl.oz./A	7	12	Moderate	[26.2]
	3A	Danitol 2.4EC	16 fl.oz./A	14	24	Moderate	[26.2]
	4A	Actara 25WDG	4.5-5.5 oz/A	14/35 (A)	12	High	[26.2,26.4a,26.4b]
	4A	Calypso 4F	4-8 fl.oz./A 1-2 fl.oz./100 gal	30	12	High	[26.2,26.4a]
	22	Avaunt 30WDG	5-6 oz/A	14	12	High	[26.2,26.4a]
	28	Exirel	13.5 to 20.5 fl oz/A	3	12		
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0,26.2]
	4A/28	Voliam Flexi WDG	6-7 oz/A	35	12	High	[1.0,26.2,26.4b]
	6/4A	*Agri-Flex SC plus oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal		12	High	[1.0,26.2,26.4b]
Powdery Mildew		JMS Stylet-Oil	1.0-2.0 gal/100 gal	0	4		[9.3,9.4]
	1	Thiophanate Methyl 85WDG	0.6-0.8 lb/A 0.2-0.3 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M 70WP	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M WSB	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		
	3	Procure 480SC	8.0-16.0 fl.oz./A	14	12		
	3	Rally 40WSP	5.0-10.0 oz/A 1.6-3.3 oz/100 gal	14	24		
	3	Rubigan EC	8 to 12 fl oz/A	30	12		
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		
	11	Sovran 50WDG	4.0-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
Redbanded leafroller	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[12.1d,27.2]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[12.1d,27.2]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[27.1]
	3A	Baythroid XL 1EC	2.4-2.8 fl.oz./A	7	12	High	[27.2]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[27.2]
	6	Proclaim 5SG	3.2-4.8 oz/A 0.8-1.2 oz/100 gal	14	12	High	[27.2]
	11A	Agree 3.8WS	1-2 lb/A	0	4	High	[24.1,27.2]
	11A	Deliver 18WG	0.5-2 lb/A	0	4	High	[24.1,27.2]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	High	[24.1,27.2]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	11A	Javelin 7.5WDG	0.5-4 lb/A 0.13-1 lb/100 gal	0	4	High	[24.1,27.2]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.3i]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[27.2]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[27.2]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	High	[1.0,27.2]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0,27.2]
	28,16	Tourismo	12 to 17 fl oz/A	14	12	Mod.- High	
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,27.2]
Rosy apple aphid	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[12.1d,28.2]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[12.1d,28.2]
	2A	Thionex 3EC	2.6 qt/A 0.5 qt/100 gal	21	7 days	Moderate	[28.2,35.1b]
	2A	Thionex 50WP	4 lb/A 0.75 lb/100 gal	21	20 days	Moderate	[28.2,35.1b]
	4A	Admire Pro 4.6SC	2.8 fl.oz./A	7	12	High	[28.2]
	4A	Assail 30SG	2.5-4 oz/A	7	12	High	[28.2,28.3c]
	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[28.2,28.4a]
	9C	Beleaf 50SG	2.0-2.8 oz/A	21	12	Moderate	[28.2,28.2b]
	28	Exirel	13.5 to 20.5 fl oz/A	3	12		
	23	Movento 240SC	6-9 fl.oz./A	7	24	Moderate	[28.4b]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,28.2]
San Jose scale	4A/28	Voliam Flexi WDG	6-7 oz/A	35	12	High	[1.0,15.4]
	23	Movento 240SC	6-9 fl.oz./A	7	24	High	[29.4,29.4b]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
Spotted tentiform leafminer, Apple blotch leafminer	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[12.1d,30.2,30.2a, 30.2b,30.3]
	1A	Lannate LV 2.4L	1.5-3 pts/A 0.75 pt/100 gal	14	72	High	[12.1d,30.2,30.2a, 30.3]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[30.1,30.1a,30.2, 30.3]
	3A	Ambush 25WP	6.4-25.6 oz/A	PF	12	High	[30.1,30.1a,30.2]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[30.1,30.1a,30.1b, 30.2,30.3]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	High	[30.1,30.1a,30.2, 30.3]
	3A	Danitol 2.4EC	10.67-16 fl.oz./A	14	24	High	[30.1,30.1a,30.1b, 30.2,30.2a,30.2b, 30.3]
	4A	Actara 25WDG	4.5 oz/A	14/35 (A)	12	High	[15.4,30.1, 30.1d,30.2,30.2a, 30.2c,30.3]
	4A	Admire Pro 4.6SC	2.8 fl.oz./A	7	12	High	[30.2,30.2a,30.3]
	4A	Assail 30SG	2.5 oz/A	7	12	High	[30.1,30.2,30.2a, 30.3]
	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[30.1,30.2, 30.2a,30.2c,30.3]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[30.1,30.1e,30.2, 30.2a,30.3]
	5	Entrust 2SC	6-10 fl.oz./A		4	High	[30.2,30.3]
	5	Entrust 80WP	2-3 oz/A 0.67-1 oz/100 gal	7	4	High	[30.2,30.3]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	6	Proclaim 5SG	3.2-4.8 oz/A 0.8-1.2 oz/100 gal	14	12	High	[30.1,30.2,30.3]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.3i,30.2]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[30.1,30.1d,30.2, 30.2a,30.2c,30.3]
	28	Altacor 35WDG	2.5-4 oz/A	5	4	High	[30.1,30.2, 30.2d,30.3]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[30.1,30.2,30.2d, 30.3]
	UN	Aza-Direct 1.2L	11.5-42 fl.oz./A	0	4	High	[30.1,30.2,30.3]
	UN	Azatin XL 0.27EC	10-16 fl.oz./A	0	4	High	[30.1,30.2,30.3]
	3A/6	*Gladiator EC	19 fl.oz./A 4.75 fl.oz./100 gal	28	12	High	[1.0,30.1,30.1a, 30.2,30.3]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,15.4,30.2, 30.3]
	28,16	Tourismo	12 to 17 fl oz/A	14	12	Mod.- High	
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,15.4,30.2, 30.3]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
Spotted tentiform leafminer, Apple blotch leafminer (continued)	6/4A	*Agri-Flex SC <i>plus</i> oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal	35	12	High	[1.0,15.4,30.2]
Tarnished plant bug	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[33.1,33.1a,33.1b]
	3A	Ambush 25WP	6.4-25.6 oz/A	PF	12	High	[33.1,33.1a,33.1b]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[33.1,33.1a,33.1b]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	High	[33.1,33.1a,33.1b]
	3A	Danitol 2.4EC	10.67-16 fl.oz./A	14	24	High	[33.1,33.1a,33.1b]
	3A	Pounce 25 WP	6.4-16 oz/A	PF	12	High	[33.1,33.1a,33.1b]
	9C	Beleaf 50SG	2-2.8 oz/A	21	12	High	[33.1,33.1a,33.1d]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[33.1,33.1a,33.1c]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	High	[1.0,33.1,33.1a, 33.1b]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0,15.4,33.1]
White apple leafhopper, Potato leafhopper	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,33.1]
	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[12.1d,35.1]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[12.1d,35.1]
	1A	Sevin 4F	0.5-1.5 qt/A	3	12	High	[35.1,35.1a]
	1A	Sevin 80 Solupak	0.63-1.88 lb/A	3	12	High	[35.1,35.1a]
	1A	Sevin XLR Plus 4EC	0.5-1.5 qt/A	3	12	High	[35.1,35.1a]
	1A	Vydate 2L	2-4 pt/A 1-2 pt/100 gal	14	48	High	[35.1,35.1a]
	2A	Thionex 3EC	2.6 qt/A 0.5 qt/100 gal	21	7 days	High	[35.1,35.1b]
	2A	Thionex 50WP	4 lb/A 0.75 lb/100 gal	21	20 days	High	[35.1,35.1b]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[35.1]
	3A	Ambush 25WP	6.4-25.6 oz/A	PF	12	High	[35.1]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[35.1]
	3A	Baythroid XL 1EC	1.4-2 fl.oz./A	7	12	High	[35.1]
	3A	Danitol 2.4EC	10.67-16 fl.oz./A	14	24	High	[35.1]
	4A	Actara 25WDG	2-2.75 oz/A	14/35(A)	12	High	[15.4,35.1,35.1c]
	4A	Admire Pro 4.6SC	2.8 fl.oz./A	7	12	High	[35.1]
	4A	Assail 30SG	2.5-4 oz/A	7	12	High	[35.1]
	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[35.1,35.1c]
	6	*Agri-Mek 8SC	2.25-4.25 fl.oz./A 0.5-1 fl.oz./100 gal	28	12	High	[35.1]
	16	Centaur 0.7WDG	9-12 oz/A	14	12	Moderate	[35.1]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	21A	Portal 0.4EC	2 pt/A	14	12	High	[35.1]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Petal Fall (continued)							
White apple leafhopper, Potato leafhopper (continued)	22	Avaunt 30WDG	5-6 oz/A	14	12	High	[35.1,35.1c]
	UN	Aza-Direct 1.2L	12.5-42 fl.oz./A	0	4	Moderate	[35.1]
	UN	Neemix	7-16 fl.oz./A	0	4	Moderate	[35.1]
	3A/6	*Gladiator EC	19 fl.oz./A 4.75 fl.oz./100 gal	28	12	High	[1.0,35.1]
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,15.4,35.1]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0,15.4,35.1]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,35.1]
	6/4A	*Agri-Flex SC <i>plus</i> oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal	35	12	High	[1.0,15.4,35.1]
Additional Summer Sprays							
American plum borer	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
	4A	Assail 30SG	8 oz/A	7	12	Moderate	[17.2]
Apple aphid, Spirea aphid		M-Pede 49L	2 gal/100 gal		12	Moderate	[11.1]
	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[11.1]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[11.1]
	1A	Vydate 2L	2-8 pt/A 1-2 pt/100 gal	14	48	High	[11.1,11.1e]
	2A	Thionex 3EC	2.6 qt/A 0.5 qt/100 gal	21	7 days	High	[11.1,35.1b]
	2A	Thionex 50WP	4 lb/A 0.75 lb/100 gal	21	20 days	High	[11.1,35.1b]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[11.1]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[11.1]
	3A	Danitol 2.4EC	16 fl.oz./A	14	24	High	[11.1,11.1c]
	3A	Pyrenone 6L	12 fl.oz./A		12	Moderate	[11.1]
	4A	Admire Pro 4.6SC	2.8 fl.oz./A see label	7	12	High	[11.1]
	4A	Assail 30SG	2.5-4 oz/A	7	12	High	[11.1]
	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[11.1]
	9C	Beleaf 50SG	2-2.8 oz/A	21	12	High	[11.1]
	23	Movento 240SC	6-9 fl.oz./A	7	24	High	[11.1,11.1d]
	UN	Aza-Direct 1.2L	12.5-42 fl.oz./A	0	4	Moderate	[11.1]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	High	[1.0]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,11.1]
	4A/28	Voliam Flexi WDG	6-7 oz/A	35	12	High	[1.0,11.1]
	6/4A	*Agri-Flex SC <i>plus</i> oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal	35	12	High	[1.0,11.1,11.1a]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Apple maggot		Surround 95WP	25-50 lb/A	0	4	Moderate	[12.2,12.1]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	Moderate	[12.1,12.1c,12.1d]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[12.1,12.1a]
	3A	Baythroid XL 1EC	2.4-2.8 fl.oz./A	7	12	High	[12.1,12.1a]
	3A	Danitol 2.4EC	16 fl.oz./A	14	24	High	[12.1,12.1a,12.1b]
	4A	Assail 30SG	8 oz/A	7	12	High	[12.1,12.1a]
		Belay					
	4A	Calypso 4F	4-8 fl.oz./A 1-2 fl.oz./100 gal	30	12	High	[12.1,12.1a]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[12.1,12.1a]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0,12.1,12.1a, 15.4]
Apple rust mite	21A	Nexter 75WS	5.2-10.7 oz/A	25	12	Moderate	[13.2]
	21A	Portal 0.4EC	2 pts/A	14	12	High	[13.2]
Apple scab	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		[2.6,2.7]
	M4	Captan 50WP	8.0 lb/A 1.0-2.0 lb/100 gal	0	24		[2.6,2.7]
	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		[2.6,2.7]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		[2.13]
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		[2.13]
	3	Rally 40WSP	5-10 oz/A 2-3 oz/100 gal	14	24		
	3	Topguard	13 fl.oz./A	14	12		
	11	Cabrio EG	5.0-8.0 oz/A 4.0 oz/100 gal	0	12		[2.4,2.14]
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		[2.4,2.14]
	11	Sovran 50WDG	3.2-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		[2.4,2.14]
	7	Fontelis	16-20 fl.oz./A	28	12		
	7,11	Luna Tranquility 500SC	11.2-16 fl oz/A 3.7-5.3 fl oz/100 gal	72	12		
	7,11	Merivon 4.17SC	4-5.5 fl oz/A	0	12		
Bitter Rot	M4	Captan 80WDG	2.5-5.0 lb/A 0.625 lb/100 gal	0	24		
	M4	Captec 4L	1.0 pt/100 gal	0	24		
	M4	Captan 50WP	4.0 lb/A 1.0 lb/100 gal	0	24		
Black Rot & White Rot	M4	Captec 4L	0.5-1.0 qt/100 gal	0	24		
	M4	Captan 50WP	8.0 lb/A 1.2-2.0 lb/100 gal	0	24		
	M4	Captan 80WDG	5.0 lb/A 0.65-1.25 lb/100 gal	0	24		

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Black Rot & White Rot (continued)	11	Flint	1.5 oz/A 0.5 oz/100 gal	14	12		[2.14]
	11	Sovran 50WDG	3.2-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		[2.14]
	7,11	Pristine 38WDG	14.5-18.5 fl.oz./A	0	12		
Blister Spot	33	Aliette WDG	2.5-5.0 lb/A 0.5-1.0 lb/100 gal	14	12		[5.1]
Cedar Apple Rust	3	Topguard	12 fl.oz./A	14	12		
Climbing cutworms: Darksided, Dingy, Mottled, Spotted, Variegated	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[16.2,16.2a]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	Moderate	[16.2]
Codling moth		Carpovirusine 0.99SC	0.25-0.4 qt/A 0.5-1 pt/100 gal	0	4	Moderate	[14.1,14.3,14.3f]
		Checkmate CM-F 14.3S	2.4-4.8 fl.oz./A		4	Moderate	[14.2]
		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]
		Checkmate Puffer CM-OFM	1-2 units/ acre		0	Moderate	[14.2]
		Cyd-X 0.06SC	1-6 fl.oz./A	0	4	Moderate	[14.1,14.3,14.3f]
		Isomate-CM/OFM TT	200 ties/ acre		0	High	[14.2]
		Surround 95WP	25-50 lb/A	0	4	Moderate	[14.1,14.3,12.2]
	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[14.1,14.3,14.3g]
	1A	Lannate LV 2.4L	1.5-3 pts/A 1.5 pts/100 gal	14	72	High	[14.1,14.3,14.3g]
	1A	Sevin 80 Solupak	1.25-3.75 lb/A	3	12	Moderate	[14.1,14.3,14.3j]
	1A	Sevin XLR Plus 4EC	1-3 qt/A	3	12	Moderate	[14.1,14.3,14.3j]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[14.1,14.3,14.3e]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	Moderate	[14.1,14.3]
	4A	Assail 30SG	4-8 oz/A	7	12	High	[14.1,14.3,14.3a, 14.3c]
	4A	Calypso 4F	4-8 fl.oz./A 1-2 fl.oz./100 gal	30	12	High	[14.1,14.3,14.3e]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[14.1,14.3]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	5	Entrust 2SC	6-10 fl.oz./A	7	4	Moderate	[14.1,14.3]
	5	Entrust 80WP	2-3 oz/A 0.67-1 oz/100 gal	7	4	Moderate	[14.1,14.3]
	11A	Deliver 18WG	0.5-2 lb/A	0	4	Moderate	[14.1,14.3]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	Moderate	[14.1,14.3,14.3e]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.1,14.3,14.3i]
	18	Intrepid 2F	12-16 fl.oz./A	14	4	Moderate	[14.1,14.3,14.3b]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[14.1,14.3,14.3a]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Codling moth (continued)	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[14.1,14.3,14.3a,14.3b]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[14.1,14.3]
	UN	Neemix	7-16 fl.oz./A	0	4	Moderate	[14.1,14.3]
	28,16	Tourismo	15 to 17 fl oz/A	14	12	Mod.High	
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,14.1,14.3,14.3k]
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,14.1,14.3,14.3k]
Comstock mealybug	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,14.1,14.3]
	4A	Assail 30SG	4-8 oz/A	7	12	High	[15.2a,15.3a,15.3b]
	16	Centaur 0.7WDG	34.5 oz/A	14	12	High	[15.2a,15.3a,15.3b]
	21A	Portal 0.4EC	2 pts/A	14	12	High	[15.2a,15.3a,15.3b]
	23	Movento 240SC	6-9 fl.oz./A	7	24	High	[15.2a,15.2b,15.3a,15.3b]
	6/4A	*Agri-Flex SC plus oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal	35	12	High	[1.0,15.2a,15.3a,15.3b,15.4]
Dogwood borer	1B	Lorsban 4EC	1.5 qt/100 gal	PB/28 (A)	96	High	[17.1]
	1B	Lorsban 75WG	2 lb/100 gal	PB/28 (A)	96	High	[17.1]
	4A	Assail 30SG	8 oz/A	7	12	Moderate	[17.2]
European corn borer	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[19.2]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	Moderate	[19.2]
European red mite	6	*Agri-Mek 8SC	2.25-4.25 fl.oz./A 0.5-1 fl.oz./100 gal	28	12	High	[20.8,20.9]
	10A	Apollo 4SC	4-8 fl.oz./A	45	12	High	[20.5,20.5a,20.6,20.11,20.11a]
	25	Nealta	13.7 fl oz/A	7	12		
	10A	Onager 1 EC	12-24 fl.oz./A	28	12	High	[20.5,20.5b,20.11,20.11a]
	10A	Savey 50DF	3 to 6 oz/A	28	12	High	[20.5,20.5b,20.6,20.11,20.11a]
	10B	Zeal	2-3 oz/A	14	12	High	[20.5,20.5b,20.9,20.11]
	12B	Vendex 50WP	1-2 lb/A 4-8 oz/100 gal	14	48	Low	[20.11,20.11c]
	20B	Kanemite 15SC	31 fl.oz./A	14	12	High	[20.9,20.9b,20.11,20.11c]
	21A	Nexter 75WS	4.4-5.2 oz/A	25	12	High	[20.9,20.9a,20.11]
	21A	Portal 0.4EC	2 pt/A	14	12	High	[20.9,20.9a,20.11]
	UN	Acramite 50WS	0.75-1 lb/A	7	12	High	[20.9,20.9a,20.11]
	3A/6	*Gladiator EC	19 fl.oz./A 4.75 fl.oz./100 gal	28	12	High	[1.0,20.8,20.9]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Fire blight		Apogee 27.5%	4.5-9.0 oz/100 gal	45	12		[8.6]
	M1	Cueva	2 to 3 qt/100 gal	0	4		
	44	Double Nickel 55 WDG	0.5 to 1 lb/A	0	4		
	44	Double Nickel LC	1 to 1 qt/ A	0	4		
		Firewall	24.0 oz/A 8.0 oz/100 gal	50	12		[8.5]
Japanese beetle	1A	Sevin 4F	1.5-3 qt/A	3	12	High	[22.2]
	1A	Sevin 80 Solupak	1.88-3.75 lb/A	3	12	High	[22.2]
	1A	Sevin XLR Plus 4EC	1-5-3 qt/A	3	12	High	[22.2]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[22.2]
	4A	Assail 30SG	5-8 oz/A	7	12	High	[22.2]
	4A	Calypso 4F	4-8 fl.oz./A 1-2 fl.oz./100 gal	30	12	High	[22.2]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0,22.2]
		Danitol	16 to 21.33 fl oz/A	14	24		
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0,22.2]
		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]
Lesser appleworm		Checkmate Puffer CM-OFM	1-2 units/ acre		0	High	[14.2]
		Isomate-CM/OFM TT	200 ties/ acre		0	High	[14.2]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[14.1a]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	Moderate	[14.1a]
	4A	Assail 30SG	4-8 oz/A	7	12	High	[14.1a,14.3a,14.3c]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[14.1a]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.1a,14.3i]
	18	Intrepid 2F	12-16 fl.oz./A	14	4	Moderate	[14.1a,14.3b]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[14.1a,14.3a]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[14.1a,14.3a,14.3b]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[14.1a]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0,14.1a]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,14.1a,14.3k]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,14.1a]
	28,16	Tourismo	15 to 17 fl oz/A	14	12	Mod.High	
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,14.1a,14.3k]
Obliquebanded leafroller	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	Moderate	[24.2,24.2a,24.2c]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	Moderate	[24.2,24.2a,24.2c]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	Moderate	[24.2,24.3,24.3b, 24.3c]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Obliquebanded leafroller (continued)	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	Moderate	[24.2,24.3,24.3b, 24.3c,24.3d]
	3A	Baythroid XL 1EC	2.4-2.8 fl.oz./A	7	12	Moderate	[24.2,24.3,24.3c]
	3A	Danitol 2.4EC	16 fl.oz./A	14	24	Moderate	[24.2,24.2d,24.3, 24.3b,24.3c]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[24.2,24.3,24.3b]
	5	Entrust 2SC	6-10 fl.oz./A		4	High	[24.2,24.3,24.3b]
	5	Entrust 80WP	2-3 oz/A 0.67-1 oz/100 gal	7	4	High	[24.2,24.3,24.3b]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	6	Proclaim 5SG	3.2-4.8 oz/A 0.8-1.2 oz/100 gal	14	12	High	[24.2,24.2e,24.3, 24.3b]
	11A	Agree 3.8WS	1-2 lb/A	0	4	Moderate	[24.1,24.2,24.3, 24.3a]
	11A	Deliver 18WG	0.5-2 lb/A	0	4	Moderate	[24.1,24.2,24.3, 24.3a]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	High	[24.1,24.2,24.3, 24.3a]
	11A	Javelin 7.5WDG	0.5-4 lb/A 0.13-1 lb/100 gal	0	4	Moderate	[24.1,24.2,24.3, 24.3a]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.3i,24.2,24.3]
	18	Intrepid 2F	8-16 oz/A	14	4	High	[24.2,24.3, 24.3b]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[24.2,24.3,24.3b]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[24.2,24.3,24.3b]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0,24.2,24.3, 24.3b,24.3c]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,24.2,24.3, 24.3b,24.3c,24.4]
	28,16	Tourismo	12 to 17 fl oz/A	14	12	Mod.High	
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,24.2,24.3, 24.3b,24.4]
Oriental fruit moth		Checkmate CM-OFM Duel	150-200 dispensers/ acre		0	High	[14.2]
		Checkmate OFM-F 24.6S	1.32-2.93 fl.oz./A		0	Moderate	[14.2]
		Isomate-CM/OFM TT	200 ties/ acre		0	High	[14.2]
		Isomate OFM TT	100 ties/A		0	High	[14.2]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[14.1a]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	Moderate	[14.1a]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[14.1a]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	Moderate	[14.1a]
	4A	Assail 30SG	4-8 oz/A	7	12	High	[14.1a,14.3,14.3a, 14.3c]
	4A	Calypso 4F	4-8 fl.oz./A 1-2 fl.oz./100 gal	30	12	High	[14.1a]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[14.1a]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Oriental fruit moth (continued)	5	Entrust 2SC	6-10 fl.oz./A		4	Moderate	[14.1a]
	5	Entrust 80WP	2-3 oz/A 0.67-1 oz/100 gal	7	4	Moderate	[14.1a]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.3i]
	18	Intrepid 2F	12-16 fl.oz./A	14	4	Moderate	[14.1a,14.3b]
	22	Avaunt 30WDG	5-6 oz/A	14	12	Moderate	[14.1a,14.3a]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[14.1,14.3,14.3a, 14.3b]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[14.1a]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0,14.1a]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,14.1a,14.3k,]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,14.1a]
	28,16	Tourismo	15 to 17 fl oz/A	14	12	Mod.High	
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,14.1a,14.3k]
Oystershell scale	1A	Sevin 4F	1.5-3 qt/A	3	12	High	[25.1]
	1A	Sevin 80 Solupak	1.88-3.75 lb/A	3	12	High	[25.1]
	1A	Sevin XLR Plus 4EC	1.5-3 qt/A	3	12	High	[25.1]
	16	Centaur 0.7WDG	34.5 oz/A	14	12	High	
Plum curculio		Surround 95WP	25-50 lb/A	0	4	Moderate	[12.2,26.2]
	1A	Sevin 4F	1.5-3 qt/A	3	12	Moderate	[26.2,26.4c]
	1A	Sevin 80 Solupak	1.88-3.75 lb/A	3	12	Moderate	[26.2,26.4c]
	1A	Sevin XLR Plus 4EC	1.5-3 qt/A	3	12	Moderate	[26.2,26.4c]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[26.2,26.4a]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	Moderate	[26.2]
	3A	Baythroid XL 1EC	2.4-2.8 fl.oz./A	7	12	Moderate	[26.2]
	3A	Danitol 2.4EC	16 fl.oz./A	14	24	Moderate	[26.2]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	4A	Actara 25WDG	4.5-5.5 oz/A	14/35 (A)	12	High	[26.2,26.4a,26.4b]
	4A	Calypso 4F	4-8 fl.oz./A 1-2 fl.oz./100 gal	30	12	High	[26.2,26.4a]
	22	Avaunt 30WDG	5-6 oz/A	14	12	High	[26.2,26.4a]
	4A/28	Voliam Flexi WDG	6-7 oz/A	35	12	High	[1.0,26.2,26.4b]
	6/4A	*Agri-Flex SC <i>plus</i> oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal	35	12	High	[1.0,26.2,26.4b]
		JMS Stylet-Oil	1.0-2.0 gal/100 gal	0	4		[9.3,9.4]
Powdery Mildew	1	Thiophanate Methyl 85WDG	0.6-0.8 lb/A 0.2-0.3 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M 70WP	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	1	Topsin M WSB	0.75-1.0 lb/A 0.2-0.25 lb/100 gal	1	48		[2.12,9.4]
	3	Inspire Super	8.5-12.0 fl.oz./A	14	12		
	3	Indar 2F	6.0-8.0 fl.oz./A	14	12		
	3	Procure 480SC	8.0-16.0 fl.oz./A	14	12		

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Powdery Mildew (continued)	3	Rally 40WSP	5.0-10.0 oz/A 1.6-3.3 oz/100 gal	14	24		
	3	Rubigan EC	8 to 12 fl oz/A	30	12		
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		
	11	Sovran 50WDG	4.0-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		
Redbanded leafroller	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[12.1d,27.2]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[12.1d,27.2]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	High	[27.1]
	3A	Baythroid XL 1EC	2.4-2.8 fl.oz./A	7	12	High	[27.2]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[27.2]
	6	Proclaim 5SG	3.2-4.8 oz/A 0.8-1.2 oz/100 gal	14	12	High	[27.2]
	11A	Agree 3.8WS	1-2 lb/A	0	4	High	[24.1,27.2]
	11A	Deliver 18WG	0.5-2 lb/A	0	4	High	[24.1,27.2]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	High	[24.1,27.2]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	11A	Javelin 7.5WDG	0.5-4 lb/A 0.13-1 lb/100 gal	0	4	High	[24.1,27.2]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.3i]
	28	Altacor 35WDG	2.5-4.5 oz/A	5	4	High	[27.2]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[27.2]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	High	[1.0,27.2]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0,27.2]
	28,16	Tourismo	12 to 17 fl oz/A	14	12	Mod.High	
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,27.2]
San Jose scale	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	Moderate	[29.4]
	4A	Admire Pro 4.6SC	2.8 fl.oz./A	7	12	Moderate	[29.4]
	4A	Assail 30SG	8 oz/A	7	12	Moderate	[29.4,29.4a]
	7C	Esteem 35WP	4-5 oz/A	45	12	High	[29.4]
	16	Centaur 0.7WDG	34.5 oz/A	14	12	High	[29.3,29.4]
	23	Movento 240SC	6-9 fl.oz./A	7	24	High	[29.4,29.4b]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	Moderate	[1.0,15.4,29.4]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	Moderate	[1.0,29.4]
Sooty Blotch & Flyspeck	M3	Indar 2F	6.0-8.0 fl oz/A	14	12		
	M3	Inspire Super	8.5-12.0 fl oz/A	14	12		
	M3	Ziram 76DF, 76 WDG	1.0 lb/100 gal	14	48		
	M4	Captan 80WDG	2.5 lb/A 0.625 lb/100 gal	0	24		
	M4	Captec 4L	4 qt/A 0.5-1.0 qt/100 gal	0	24		

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Sooty Blotch & Flyspeck (continued)	M4	Captan 50WP	4.0 lb/A 1.0 lb/100 gal	0	24		
	1	Thiophanate Methyl 85WDG	0.6-0.8 lb/A 0.2-0.3 lb/100 gal	1	48		
	1	Topsin M 70WP	3.2-4.0 oz/100 gal	1	48		[10.1,10.2]
	1	Topsin M WSB	3.2-4.0 oz/100 gal	1	48		[10.1,10.2]
	1	Topsin M 70WP, WDG	0.75-1 lb/A 4-6 oz/100 gal	1	48	1	[10.1]
	1	or Thiophanate-methyl 85WDG <i>plus</i> :	.6-.8 lb/A .2-.3 lb/100 gal	1	48		[10.2]
	M4	Captan 50WP	4 lb/A 1 lb/100 gal	0	24		
	M4	or Captan 80WDG	2.5 lb/A 5/8 lb/100 gal	0	24		
	M4	or Captan 4L	1 pt/100 gal	0	24		
	M3	or Manzate/ Penncozeb 75DF or 80WP	3 lb/A 1 lb/100 gal	77	24		[2.8]
	M3	or Manzate/Dithane/ Penncozeb Flowable	2.4 qt/A see label	77	24		
	M3	or Polyram 80DF	3 lb/A 1 lb/100 gal	77	24		
	11	Flint	2.0-2.5 oz/A 0.67-0.8 oz/100 gal	14	12		
	11	Sovran 50WDG	4.0-6.4 oz/A 1.0-1.6 oz/100 gal	30	12		
	11	Cabrio EG	5.0-8.0 oz/A 4.0 oz/100 gal	0	12		
	7,11	Pristine 38WDG	14.5-18.5 oz/A	0	12		
Spotted tentiform leafminer, Apple blotch leafminer	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[12.1d,30.2,30.2a, 30.2b,30.3]
	1A	Lannate LV 2.4L	1.5-3 pts/A 0.75 pt/100 gal	14	72	High	[12.1d,30.2,30.2a, 30.3]
	1A	Vydate 2L	2-4 pts/A 1 pt/100 gal	14	48	High	[30.1,30.2, 30.2a,30.3,30.3a]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[30.1,30.1a,30.2, 30.3]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[30.1,30.1a,30.1b, 30.2,30.3]
	3A	Baythroid XL 1EC	2-2.4 fl.oz./A	7	12	High	[30.1,30.1a,30.2, 30.3]
	3A	Danitol 2.4EC	10.67-16 fl.oz./A	14	24	High	[30.1,30.1a,30.1b, 30.2,30.2a,30.2b, 30.3]
	4A	Actara 25WDG	4.5 oz/A	14/35 (A)	12	High	[15.4,30.1, 30.1d,30.2,30.2a, 30.2c,30.3]
	4A	Admire Pro 4.6SC	2.8 fl.oz./A	7	12	High	[30.2,30.2a,30.3]
	4A	Assail 30SG	2.5 oz/A	7	12	High	[30.1,30.2,30.2a, 30.3]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Spotted tentiform leafminer, Apple blotch leafminer (continued)	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[30.1,30.2, 30.2a,30.2c,30.3]
	5	Delegate 25WG	4.5-7 oz/A	7	4	High	[30.1,30.1e,30.2, 30.2a,30.3]
	5	Entrust 2SC	6-10 fl.oz./A	7	4	High	[30.2,30.3]
	5	Entrust 80WP	2-3 oz/A 0.67-1 oz/100 gal	7	4	High	[30.2,30.3]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
	6	*Agri-Mek 8SC	2.25-4.25 fl.oz./A 0.5-1 fl.oz./100 gal	28	12	High	[30.3]
	6	Proclaim 5SG	3.2-4.8 oz/A 0.8-1.2 oz/100 gal	14	12	High	[30.1,30.2,30.3]
	15	Rimon 0.83EC	20-40 fl.oz./A	14	12	High	[14.3i,30.2]
	28	Altacor 35WDG	2.5-4 oz/A	5	4	High	[30.1,30.2, 30.2d,30.3]
	28	Belt 4SC	3-5 fl.oz./A	14	12	High	[30.1,30.2,30.2d, 30.3]
	UN	Aza-Direct 1.2L	11.5-42 fl.oz./A	0	4	High	[30.1,30.2,30.3]
	UN	Azatin XL 0.27EC	10-16 fl.oz./A	0	4	High	[30.1,30.2,30.3]
	3A/6	*Gladiator EC	19 fl.oz./A 4.75 fl.oz./100 gal	28	12	High	[1.0,30.1,30.1a, 30.2,30.3]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0,15.4,30.2, 30.3]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,30.2,30.3]
Spotted wing Drosophila	28,16	Tourismo	12 to 17 fl oz/A	14	12	Mod.High	
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,15.4,30.2, 30.3]
	6/4A	*Agri-Flex SC <i>plus</i> oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal	35	12	High	[1.0,15.4,30.2]
	1B	Imidan 70W	2.13-5.75 lb/A 0.75-1.0 lb/100 gal	7	4 days	Moderate	[31.2]
	5	Delegate 25WG	4.5-7 oz/A	7	4	Moderate	[31.2,31.2a]
Stink bugs, incl. Brown marmorated stink bug	5	Entrust 2SC	6-10 fl.oz./A		4	High	[31.2,31.2b]
	5	Entrust 80WP	1.5-3 oz/A	7	4	High	[31.2,31.2b]
	28	Exirel	8.5 to 17 fl oz/A	3	12		
		Surround 95WP	25-50 lb/A	0	4	Moderate	[12.2,32.2a]
	1A	Lannate 90SP	0.75 lb/A	14	72	High	[32.2a,32.2b]
	1A	Lannate LV 2.4L	2.25 pt/A	14	72	High	[32.2a,32.2b]
	1A	Vydate 2L	1.5-3 pt/A	14	48	Moderate	[32.2a,32.2b]
	2A	Thionex 3EC	2.67 qt/A 0.5 qt/100 gal	21	7 days	High	[32.2a,32.2b,32.2c]
	2A	Thionex 50WP	4 lb/A 0.75 lb/100 gal	21	20 days	High	[32.2a,32.2b,32.2c]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	Moderate	[32.2a]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	Moderate	[32.2a]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Stink bugs, incl. Brown marmorated stink bug (continued)	3A	Baythroid XL 1EC	2.0-2.4 fl.oz./A	7	12	Moderate	[32.2a]
	3A	Danitol 2.4EC	10.7-21.3 fl.oz./A	14	24	Moderate	[32.2a,32.2b]
	4A	Actara 25WDG	4.5-5.5 oz/A	14/35 (A)	12	Moderate	[15.4,32.2a,32.2b]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	Moderate	[1.0,32.2a]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0, 15.4,32.2a]
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	Moderate	[1.0,32.2a]
	4A/28	Voliam Flexi WDG	6.0-7.0 oz/A	35	12	Moderate	[1.0,15.4,32.2a]
Twospotted spider mite	10B	Zeal	2-3 oz/A	14	12	High	
	12B	Vendex 50WP	1-2 lb/A 4-8 oz/100 gal	14	48	Moderate	
	20B	Kanemite 15SC	31 fl.oz./A	14	12	High	
	21A	Nexter 75WS	8.8-10.7 oz/A	25	12	Moderate	
	25	Nealta	13.7 fl oz/A	7	12		
	21A	Portal 0.4EC	2 pt/A	14	12	High	
	UN	Acramite 50WS	0.75-1 lb/A	7	12	High	
Variegated leafroller, Sparganothis fruitworm	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[12.1d,34.1]
	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[12.1d,34.1]
	11A	Deliver 18WG	0.5-2 lb/A	0	4	Moderate	[24.1,34.1,34.1a]
	11A	Dipel 10.3DF	0.5-2 lb/A	0	4	Moderate	[24.1,34.1,34.1a]
	11A	Javelin 7.5WDG	0.5-4 lb/A 0.13-1 lb/100 gal	0	4	Moderate	[24.1,34.1,34.1a]
	3A/6	*Gladiator EC	14-19 fl.oz./A 3.5-4.75 fl.oz./100 gal	28	12	High	[1.0,34.1]
	28,16	Tourismo	12 to 17 fl oz/A	14	12	Mod.High	
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,34.1,34.1a]
White apple leafhopper, Potato leafhopper	1A	Lannate LV 2.4L	1.5-3 pt/A 0.75 pt/100 gal	14	72	High	[12.1d,35.1]
	1A	Lannate 90SP	0.5-1 lb/A 0.25 lb/100 gal	14	72	High	[12.1d,35.1]
	1A	Sevin 4F	0.5-1.5 qt/A	3	12	High	[35.1,35.1a]
	1A	Sevin 80 Solupak	0.63-1.88 lb/A	3	12	High	[35.1,35.1a]
	1A	Sevin XLR Plus 4EC	0.5-1.5 qt/A	3	12	High	[35.1,35.1a]
	1A	Vydate 2L	2-4 pt/A 1-2 pt/100 gal	14	48	High	[35.1,35.1a]
	2A	Thionex 3EC	2.6 qt/A 0.5 qt/100 gal	21	7 days	High	[35.1,35.1b]
	2A	Thionex 50WP	4 lb/A 0.75 lb/100 gal	21	20 days	High	[35.1,35.1b]
	3	Warrior II 2.08CS	1.28-2.56 fl.oz./A	21	24	High	[35.1]
	3A	Asana XL 0.66EC	4.8-14.5 fl.oz./A 2-5.8 fl.oz./100 gal	21	12	High	[35.1]
	3A	Baythroid XL 1EC	1.4-2 fl.oz./A	7	12	High	[35.1]
	3A	Danitol 2.4EC	10.67-16 fl.oz./A	14	24	High	[35.1]

Table 11.5.1 Pesticide Spray Table – Apples.

Refer to back of book for key to abbreviations and footnotes.

Rate key: /A = per acre; /100 gal = per 100 gal water

Pest	IRAC & FRAC	Product	Rates	PHI (days)	REI (hrs)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
White apple leafhopper, Potato leafhopper (continued)	4A	Actara 25WDG	2-2.75 oz/A	14/35 (A)	12	High	[15.4,35.1,35.1c]
	4A	Admire Pro 4.6SC	2.8 fl.oz./A	7	12	High	[35.1]
	4A	Assail 30SG	2.5-4 oz/A	7	12	High	[35.1]
	4A	Calypso 4F	2-4 fl.oz./A 0.5-1 fl.oz./100 gal	30	12	High	[35.1,35.1c]
	16	Centaur 0.7WDG	9-12 oz/A	14	12	Moderate	[35.1]
	21A	Portal 0.4EC	2 pt/A	14	12	High	[35.1]
	22	Avaunt 30WDG	5-6 oz/A	14	12	High	[35.1,35.1c]
	UN	Aza-Direct 1.2L	12.5-42 fl.oz./A	0	4	Moderate	[35.1]
	UN	Neemix	7-16 fl.oz./A	0	4	Moderate	[35.1]
	4A/3A	Endigo ZC	5-6 fl.oz./A	35	24	High	[1.0,15.4,35.1]
	28	Exirel	8.5 to 17 fl oz/A	3	12	28	
	4A/3A	Leverage 360	2.4-2.8 fl.oz./A	7	12	High	[1.0,35.1]
	4A/28	Voliam Flexi WDG	4-7 oz/A	35	12	High	[1.0,15.4,35.1]
	28,16	Tourismo	12 to 17 fl oz/A	14	12	Mod.High	
	6/4A	*Agri-Flex SC <i>plus</i> oil	5.5-8.5 fl.oz./A or 1.5-2 fl.oz./100 gal 1 gal/A or 1 qt/100 gal	35	12	High	[1.0,15.4,35.1]
Woolly apple aphid	1B	Diazinon 50WP	1 lb/100 gal	21/PF (A)	96	High	[36.1,36.1b]
	2A	Thionex 3EC	2.6 qt/A 0.5 qt/100 gal	21	7 days	Moderate	[35.1b,36.1]
	2A	Thionex 50WP	4 lb/A 0.75 lb/100 gal	21	20 days	Moderate	[35.1b,36.1]
	4A	Admire Pro 4.6SC	7-10.5 fl.oz./A	7	12	Moderate	[36.2]
	4A	Assail 30SG	2.5-4 oz/A	7	12	Moderate	[36.1,36.1a]
	9C	Beleaf 50SG	2.0-2.8 oz/A	21	12	Moderate	[36.1]
	23	Movento 240SC	6-9 fl.oz./A	7	24	High	[29.4b,36.1]
Postharvest							
Crown rot	4	Ridomil Gold SL	2 qt/A 0.5 pt/100 gal		48		[7.2]
Control of Storage Disorders							
Apple scab	M3	Penncozeb 75DF	3.0-6.0 lb/A 1.0-2.0 lb/100 gal	BL, 77(A)	24		[2.7]
Control of Storage Disorders							
Storage rots	1	Mertect 340F <i>plus</i>	1 pt/100 gal				[37.1]
	M4	Captan 50WP <i>or</i>	2.5 lb/100 gal				
	M4	Captan 80WP <i>or</i>	1.6 lb/100 gal				
	M4	Captec 4L	1.25 qt/100 gal				
		Penbotec	16-32 fl oz/100 gal				[37.1]
	12	Scholar SC	10-16 fl oz/100 gal 16-32 fl oz/200,000 lb fruit				[37.1]
Storage scald		No Scald DPA-EC-283	2.5-5 pt/100 gal				[38.1]
Senescent break- down (McIntosh)		Dowflake Process Grade	25 lb/100 gal				[39.1]