



12 Pears

12.1 Insecticides and Fungicides for Pears

See Sections 12.2 and 12.3 for comments related to this table.

Table 12.1.1. Pesticide Spray Table – Pears

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

Pest	IRAC/ FRAC Code	Product	Rate(s)	REI (hrs)	PHI (days)	Efficacy	Comments (see text)
Dormant							
Pseudomonas spur blight (Fire blight)		Bordeaux mixture, 8-8-100 (copper sulfate) (spray lime)	8 lb/100 gal 8 lb/100 gal	24	BL		[2.3]
		<i>plus:</i> oil	1 qt/100 gal				
		C-O-C-S	12-15.6 lbs/A	48	–		
		Kocide 3000 or other coppers	5.25-7.0 lb/A see comments and labels	48	HIG		
Pear psylla, European red mite		oil	3 gal/100 gal	12	0		[12.1]
Pearleaf blister mite		oil <i>plus:</i>	1-1.5 gal/100 gal	12	0		[14.1]
	1B	*Diazinon 50WP	1 lb/100 gal	96	21	high	
San Jose scale	4A	Assail 30SG	8 oz/A	12	7	moderate	[20.1]
	16	Centaur 0.7WDG	34.5-46.0 oz/A	12	14	high	
	7C	Esteem 35WP	4-5 oz/A	12	45	high	
	1B	*Lorsban Advanced 3.76EC	1.5-4 pt/A	96	PB	high	
	1B	Lorsban 75WG	2-2.67 lb/A	96	PB	high	
Swollen Bud							
Pear Midge	–	Aza-Direct 1.2L	11.5-42 fl oz/A	4	0	moderate	[11.1]
	3A	PyGanic 1.4EC	16-64 fl oz/A	12	0	moderate	
Pear psylla	4A	Actara 25WDG	5.5 oz/A	12	35	high	[12.2]
	3A	*Ambush 25WP	12.8-25.6 oz/A	12	PB	moderate	[12.2]
	3A	*Asana XL 0.66EC	7.3-12.8 fl oz/100 gal or 9.6-19.12 fl oz/A	12	28	moderate	[12.2]
	4A	Assail 30SG	4-8 oz/A	12	7	moderate	
	4A	Calypso 4F	1-2 fl oz/100 gal or 4-8 fl oz/A	12	30	high	
	16	Centaur 0.7WDG	34.5-46 oz/A	12	14	high	
	3A	*Danitol 2.4EC	16-21.3 fl oz/A	24	14	moderate	[12.2]
	5	Delegate 25WG	4.5-7 oz/A	4	7	high	[12.2]
	7C	Esteem 35WP	4-5 oz/A	12	45	high	[12.2]
	–	M-Pede 49L	2 gal/100 gal	12	0	moderate	[12.3]
	–	oil	1-2 gal/100 gal	12	0	high	[12.4]
	21A	Portal 0.4 EC	2 pt/Acre	12	14		
	3A	*Pounce 25WP	12.8-25.6 oz/A	12	PB	moderate	[12.2]
	–	Surround 95WP	50 lb/A	4	0	moderate	[12.6]
3A	*Warrior II 2.08 CS	1.28-2.56 fl oz/A	24	21	moderate	[12.2]	

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Pest	IRAC/ FRAC Code	Product	Rate(s)	REI (hrs)	PHI (days)	Efficacy	Comments (see text)
Green Cluster							
Fabraea leaf spot	Same materials as recommended for pear scab						[1.2]
Pear scab		Topsin M WSB, 70WP	0.25 lb/100 gal or 1 lb/A	48	1		[3.2]
		or Thiophanate-methyl 85WDG	.2 lb/100 gal or .8 lb/A	48	1		
		or Inspire Super	8.5-12 fl oz/A	12	14		
		<i>plus:</i> Manzate Max/Penncozeb 75DF	1 lb/100 gal or 3 lb/A	24	BL, 77 (A)		[3.3]
		Manzate Max/ Penncozeb 75DF	2 lb/100 gal or 6 lb/A	24	BL, 77 (A)		[3.3]
		Topsin M WSB, 70WP	0.25 lb/100 gal or 1 lb/A	48	1		[3.2]
		Fontelis	16-20 fl oz/A	28	12		[3.7]
		Merivon	4-5.5 fl oz/acre				
Pear Midge	–	Aza-Direct 1.2L	11.5-42 fl oz/A	4	0	moderate	[11.1]
	3A	PyGanic 1.4EC	16-64 fl oz/A	12	0	moderate	
Tarnished plant bug,	3A	*Baythroid XL 1EC	2-2.4 fl oz/A	12	7	high	[19.1]
Pear plant bug	9C	Beleaf 50SG	2-2.8 oz/A	12	21	high	
	3A	*Brigade 10WSB or *Brigade 2EC	6.4-32 oz/A 2.6-12.8 fl oz/A	12	14	high	
	3A	*Danitol 2.4EC	16-21.3 fl oz/A	24	14	high	
	3A	*Warrior II 2.08 CS	1.28-2.56 fl oz/A	24	21	high	
The following pre-mix products are also labeled for use against these pests; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species present are appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	3A/6	*Gladiator EC	3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	high	
	3A/4A	*Leverage 360	2.4-2.8 fl oz/A	12	7	high	
	3A/28	*Voliam Xpress	6-12 fl oz/A	24	21	high	
White Bud							
Fabraea leaf spot	See Green Cluster sprays						
Pear scab	Choose from materials listed under Green Cluster						
		Flint 50WG	0.67-0.8 oz/100 gal or 2-2.5 fl oz/A	12	14		[3.4]
		Sovran 50WG	1.0-1.6 oz/100 gal or 3.2-6.4 oz/A	12	30		
		Fontelis	16-20 fl oz/A	28	12		[3.7]
Pear psylla	See Swollen Bud sprays						[12.2],[12.4]
Bloom							
Fire blight		Agrimycin 17WP, Streptrol 17WP, or Firewall 17WP	8 oz/100 gal or 24oz/A	12	30		[2.1], [2.8]
		Agrimycin 17WP, Streptrol 17WP, or Firewall 17WP	8 oz/100 gal or 24oz/A	12	30		[2.1], [2.8]
		<i>plus:</i>					

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Pest	IRAC/ FRAC Code	Product	Rate(s)	REI (hrs)	PHI (days)	Efficacy	Comments (see text)
Bloom (continued)							
Fire blight (continued)		Glycerine (CP or USP grade) or Regulaid	2 qt/100 gal 1 pt/100 gal				
		Mycoshield	1.0 lb/100 gal	12	60		[2.6]
		Serenade ASO	2-6 qt/A	4	0		[2.7]
		Bloomtime Biological FE	.33 lb/A	4	PF		[2.5]
Pear scab, Fabrea leaf spot	Choose from materials listed previously						
Petal Fall							
Pear scab, Fabrea leaf spot	Choose from materials listed previously						
		Manzate Max/ Penncozeb 75DF	1 lb/100 gal or 3 lb/A	24	BL, 77(A)		[3.3]
		Pristine 38WG	14.5-18.5 oz/A	12	0		
		Ziram 76DF	24-32 oz/100 gal	48	14		
Fire blight		Agrimycin 17WP, Streptrol 17WP, or Firewall 17WP	8 oz/100 gal or 24oz/A	12	30		[2.1], [2.8]
		Agrimycin 17WP, Streptrol 17WP, or Firewall 17WP <i>plus:</i> Glycerine (CP or USP grade) or Regulaid	8 oz/100 gal or 24oz/A 2 qt/100 gal 1 pt/100 gal	12	30		[2.1], [2.8]
Aphids, including Spirea aphid	4A	Admire Pro 4.6SC	2.8 fl oz/A	12	7	high	
	4A	Assail 30SG	2.5-4 oz/A	12	7	high	
	–	Aza-Direct 1.2L	11.5-42 fl oz/A	4	0	moderate	
	9C	Beleaf 50SG	2-2.8 oz/A	12	21	high	
	4A	Calypso 4F	1-2 fl oz/100 gal or 4-8 fl oz/A	12	30	high	[5.1]
	1B	*Dimethoate 4EC	0.5-1 pt/100 gal or 1-2 qt/A	240 (10 days)	28	moderate	
	–	M-pede 49L	1- 2 gal/100gal	12	0	moderate	[5.2]
	23	Movento 240SC	6-9 fl oz/A	24	7	high	[5.1]
	–	Neemix 4.5L	5-7 fl oz/A	4	0	moderate	
The following pre-mix products are also labeled for use against these pests; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
4A/6	*Agri-Flex SC		1.5-2.0 fl oz/100 gal or 5.5-8.5 fl oz/A	12	35	high	[5.1]
	<i>plus:</i> Horticultural spray oil		1 qt/100 gal or 1 gal/A				
3A/6	*Gladiator EC		3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	high	
3A/4A	*Leverage 360		2.4-2.8 fl oz/A	12	7	high	

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Pest	IRAC/ FRAC Code	Product	Rate(s)	REI (hrs)	PHI (days)	Efficacy	Comments (see text)
Petal Fall (continued)							
Codling moth		Pheromone disruption: Checkmate CM-F	2.4-4.8 fl oz/A	4	0		[6.2]
Comstock mealybug	4A	Admire Pro 4.6SC	7 fl oz/A	12	7	high	[7.1]
	4A	Actara 25WDG	4.5-5.5 oz/A	12	35	high	[7.3]
	4A	Assail 30SG	4-4.8 oz/A	12	7	high	
	4A	Calypso 4F	1-2 fl oz/100 gal or 4-8 fl oz/A	12	30	high	
	16	Centaur 0.7WDG	34.5-46 oz/A	12	14	high	
	1B	*Diazinon 50WP	1 lb/100 gal	96	21	high	
	23	Movento 240SC	6-9 fl oz/A	24	7	high	
	21A	Portal 0.4EC	2 pt/A	12	14	high	
The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	4A/6	*Agri-Flex SC	1.5-2.0 fl oz/100 gal or 5.5-8.5 fl oz/A	12	35	high	[7.3]
		<i>plus:</i> Horticultural spray oil	1 qt/100 gal or 1 gal/A				
	4A/28	Voliam Flexi WDG	7 oz/A	12	35	high	
Green fruitworms	28	Altacor 35WDG	2.5-4 oz/A	4	5	high	[9.1]
	3A	*Asana XL 0.66EC	2-5.8 fl oz/100 gal or 4.8-14.5 fl oz/A	12	28	high	
	3A	*Baythroid XL 1EC	1.4-2 fl oz/A	12	7	high	
	28	Belt 4SC	3-5 fl oz/A	12	14	high	
	1A	*Lannate 2.4LV	0.75 pt/100 gal or 1.5-3 pt/A	48	7	high	
	1A	or *Lannate 90SP	0.5-1 lb/A			high	
	6	*Proclaim 5SG	0.8-1.2 oz/100 gal or 3.2-4.8 oz/A	12 or 48 (E)	14	high	
	3A	*Warrior II 2.08 CS	1.28-2.56 fl oz/A	24	21	high	[12.2]
The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	3A/4A	*Endigo ZC	5-6 fl oz/A	24	35	high	
	3A/6	*Gladiator EC	3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	high	
	3A/4A	*Leverage 360	2.4-2.8 fl oz/A	12	7	high	
	28/16	Tourismo	12-17 fl oz/acre	12	14	high	
	4A/28	Voliam Flexi WDG	4-7 oz/A	12	35	high	
	3A/28	*Voliam Xpress	6-12 fl oz/A	24	21	high	
Pear psylla	4A	Actara 25WDG	5.5 oz/A	12	35	high	[12.5]
	4A	Admire Pro 4.6SC	7 fl oz/A	12	7	moderate	
	6	*Agri-Mek 8SC	0.5-1 fl oz/100 gal or 2.25-4.25 fl oz/A	12	28	high	[12.5]

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Pest	IRAC/ FRAC Code	Product	Rate(s)	REI (hrs)	PHI (days)	Efficacy	Comments (see text)
Petal Fall (continued)							
Pear psylla (continued)	3A	*Asana XL 0.66EC	2-5.8 fl oz/100 gal or 4.8-14.5 fl oz/A	12	28	moderate	
	4A	Assail 30SG	4-8 oz/A	12	7	moderate	
	4A	Calypso 4F	1-2 fl oz/100 gal or 4-8 fl oz/A	12	30	high	[12.5]
	16	Centaur 0.7WDG	34.5-46 oz/A	12	14	high	
	3A	*Danitol 2.4EC	16-21.3 fl oz/A	24	14	moderate	
	5	Delegate 25WG	4.5-7 oz/A	4	7	high	[12.5]
	7C	Esteem 35WP	4-5 oz/A	12	45	high	[12.5]
	–	M-Pede 49L	2 gal/100 gal	12	0	moderate	[12.3]
	23	Movento 240SC	6-9 fl oz/A	24	7	high	[12.5]
	21	Portal 0.4EC	2 pt/A	12	14	high	[12.5]
	21	Nexter 75WS	6.6-10.67 oz/A	12	7	moderate	[12.5]
	–	Surround 95WP	50 lb/A	4	0	moderate	
	3A	*Warrior II 2.08 CS	1.28-2.56 fl oz/A	24	21	moderate	[12.2]
The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	4A/6	*Agri-Flex SC	1.5-2.0 fl oz/100 gal or 5.5-8.5 fl oz/A	12	35	high	[12.5]
		<i>plus:</i> Horticultural spray oil	1 qt/100 gal or 1 gal/A				
	3A/6	*Gladiator EC	3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	high	
	4A/28	Voliam Flexi WDG	7 oz/A	12	35	high	
Pear rust mite	6	*Agri-Mek 8SC	0.5-1 fl oz/100 gal or 2.25-4.25 fl oz/A	12	28	high	[13.1], [8.1]
	21	Nexter 75WS	5.2-10.67 oz/A	12	7	moderate	
	21	Portal 0.4EC	2 pt/A	12	14	high	
	12B	*Vendex 50WP	6-8 oz/100 gal or 1- 2 lb/A	48	14	moderate	
	The following pre-mix product is also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, its use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.						
	4A/6	*Agri-Flex SC	1.5-2.0 fl oz/100 gal or 5.5-8.5 fl oz/A	12	35	high	[13.1]
		<i>plus:</i> Horticultural spray oil	1 qt/100 gal or 1 gal/A				
Plum curculio	4A	Actara 25WDG	4.5-5.5 oz/A	12	35	high	[15.1]
	3A	*Asana XL 0.66EC	2-5.8 fl oz/100 gal or 4.8-14.5 fl oz/A	12	28	moderate	
	3A	*Baythroid XL 1EC	2.4-2.8 fl oz/A	12	7	moderate	
	3A	*Brigade 10WSB or *Brigade 2EC	6.4-32 oz/A 2.6-12.8 fl oz/A	12	14	moderate	

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Pest	IRAC/ FRAC Code	Product	Rate(s)	REI (hrs)	PHI (days)	Efficacy	Comments (see text)
Petal Fall (continued)							
Plum curculio (continued)	4A	Calypso 4F	1-2 fl oz/100 gal or 4-8 fl oz/A	12	30	high	
	1B	Imidan 70W	0.75-1 lb/100 gal or 2.13-5.75 lb/A	7 days	7	high	
	–	Surround 95WP	50 lb/A	4	0	moderate	[12.6]
	3A	*Warrior II 2.08 CS	1.28-2.56 fl oz/A	24	21	moderate	
The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	4A/6	*Agri-Flex SC	1.5-2.0 fl oz/100 gal or 5.5-8.5 fl oz/A	12	35	high	[15.1]
		<i>plus:</i> Horticultural spray oil	1 qt/100 gal or 1 gal/A				
	3A/6	*Gladiator EC	3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	moderate	
	3A/4A	*Leverage 360	2.4-2.8 fl oz/A	12	7	high	
	4A/28	Voliam Flexi WDG	6-7 oz/A	12	35	high	
	3A/28	*Voliam Xpress	6-12 fl oz/A	24	21	moderate	
Obliquebanded leafroller	11A	Agree WG 3.8WS	1-2 lb/A	4	0	high	[10.1]
	28	Altacor 35WDG	2.5-4.5 oz/A	4	5	high	
	28	Belt 4SC	3-5 fl oz/A	12	14	high	
	5	Delegate 25WG	4.5-7 oz/A	4	7	high	
	11A	Deliver 18WG	0.5-2 lb/A	4	0	high	
	11A	Dipel 10.3DF	0.5-2 lb/A	4	0	high	
	5	Entrust 80WP	0.67-1 oz/100 gal or 2-3 oz/A	4	7	high	
	5	or Entrust 2SC	6-10 fl oz/A				
	18A	Intrepid 2F	8-16 fl oz/A	4	14	high	
	11A	Javelin 7.5 WDG	0.5-4 lb/A	4	0	high	
	1A	*Lannate 2.4LV	0.75 pt/100 gal or 1.5-3 pt/A	48	7	moderate	
	1A	or *Lannate 90SP	0.25 lb/100 gal or 0.5-1 lb/A				
	6	*Proclaim 5SG	0.8-1.2 oz/100 gal or 3.2-4.8 oz/A	12/48 (E)	14	high	
	The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.						
	3A/4A	*Endigo ZC	5-6 fl oz/A	24	35	moderate	[10.3]
	3A/6	*Gladiator EC	3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	moderate	
	4A/28	Voliam Flexi WDG	4-7 oz/A	12	35	high	
	3A/28	*Voliam Xpress	6-12 fl oz/A	24	21	high	

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Pest	IRAC/ FRAC Code	Product	Rate(s)	REI (hrs)	PHI (days)	Efficacy	Comments (see text)
Additional Summer Sprays							
Fire blight (ONLY after a hailstorm)		Agrimycin 17WP, Streptrol 17WP, or Firewall 17WP	0.5 lb/100 gal or 24- 48 oz/A	12	30		[2.4]
Pear scab, Fabraea leaf spot, Sooty blotch, Black rot	See Petal Fall sprays						
Codling moth	28	Altacor 35WDG	2.5-4.5 oz/A	4	5	high	[6.1]
	4A	Assail 30SG	4-8 oz/A	12	7	high	
	22	Avaunt 30WDG	5-6 oz/A	12	28	moderate	
	3A	*Baythroid XL 1EC	2-2.4 fl oz/A	12	7	moderate	
	28	Belt 4SC	3-5 fl oz/A	12	14	high	
	4A	Calypso 4F	1-2 fl oz/100 gal or 4-8 fl oz/A	12	30	high	
	–	Carpovirusine 0.99SC	0.5-1 pt/100 gal	4	0	moderate	
	–	Cyd-X 0.06SC	1-6 floz/A	4	0	moderate	
	3A	*Danitol 2.4EC	16-21.3 fl oz/A	24	14	moderate	
	5	Delegate 25WG	4.5-7 oz/A	4	7	high	
	11A	Deliver 18WG	0.5-2 lb/A	4	0	moderate	
	11A	Dipel 10.3DF	0.5-2 lb/A	4	0	moderate	
	5	Entrust 80WP	0.67-1 oz/100 gal or 2-3 oz/A	4	7	moderate	
	5	or Entrust 2SC	6-10 fl oz/A			moderate	
	1B	Imidan 70W	0.75-1 lb/100 gal or 2.13-5.75 lb/A	7 days	7	high	
	11A	Javelin 7.5WDG	0.5-4 lb/A	4	0	moderate	
	–	Pheromone disruption: Checkmate CM-F	2.4-4.8 fl oz/A	4	0	moderate	[6.2]
The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	3A/4A	*Endigo ZC	5-6 fl oz/A	24	35	moderate	[6.1]
	3A/6	*Gladiator EC	3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	moderate	
	3A/4A	*Leverage 360	2.4-2.8 fl oz/A	12	7	high	
	28/16	Tourismo	12-17 fl oz/acre	12	14	high	
	4A/28	Voliam Flexi WDG	4-7 oz/A	12	35	high	
	3A/28	*Voliam Xpress	6-12 fl oz/A	24	21	high	
Comstock mealybug	4A	Actara 25WDG	4.5-5.5 oz/A	12	35	high	[7.2],[7.3]
	4A	Admire Pro 4.6SC	7.0 fl oz/A	12	7	high	
	4A	Assail 30SG	4-8 oz/A	12	7	high	
	4A	Calypso 4F	1-2 fl oz/100 gal or 4-8 fl oz/A	12	30	high	
	16	Centaur 0.7WDG	34.5-46 oz/A	12	14	high	
	1B	*Diazinon 50WP	1 lb/100 gal	96	21	high	
	23	Movento 240SC	6-9 fl oz/A	24	7	high	
	21A	Portal 0.4EC	2 pt/A	12	14	high	

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Additional Summer Sprays (continued)							
Comstock mealy bug (continued)	The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.						
	4A/6	*Agri-Flex SC	1.5-2.0 fl oz/100 gal or 5.5-8.5 fl oz/A	12	35	high	[7.3]
		<i>plus:</i> Horticultural spray oil	1 qt/100 gal or 1 gal/A				
	4A/28	Voliam Flexi WDG	7 oz/A	12	35	high	
European red mite, Twospotted spider mite, Pear rust mite	6	*Agri-Mek 8SC	0.5-1 fl oz/100 gal or 2.25-4.25 fl oz/A	12	28	high/mod (ERM/ TSSM)	[8.1],[13.1]
	10A	Apollo 4SC	4-8 oz/A	12	21	high/poor	
	3A	*Brigade 10WSB or *Brigade 2EC	12.8-32 oz/A 5.12-12.8 fl oz/A	12	14	moderate	
	23	Envidor 2 SC	16-18 fl oz/acre	12	7	high	
	20B	Kanemite 15SC	21-31 fl oz/A	12	14	high	
	21	Nexter 75WS	4.4-10.67 oz/A	12	7	high/mod	
	10A	Onager 1EC	12-24 fl oz/A	12	28	high/poor	
	21	Portal 0.4EC	2 pt/A	12	14	high	
	10A	Savey 50DF	3-6 oz/A	12	28	high/poor	
	12B	*Vendex 50WP	6-8 oz/100 gal or 1- 2 lb/A	48	14	moderate	
	10B	Zeal 72WS	2-3 oz/A	12	14	high	
The following pre-mix product is also labeled for use against these pests; however, for best effectiveness and insecticide resistance management, its use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	4A/6	*Agri-Flex SC	1.5-2.0 fl oz/100 gal or 5.5-8.5 fl oz/A	12	35	high/ moderate	[8.1]
		<i>plus:</i> Horticultural spray oil	1 qt/100 gal or 1 gal/A				
	3A/6	*Gladiator EC	4.75 fl oz/100 gal or 19 fl oz/A	12	28	high/poor	
Obliquebanded leafroller	11A	Agree WG 3.8WS	1-2 lb/A	4	0	high	[10.2]
	28	Altacor 35WDG	2.5-4.5 oz/A	4	5	high	
	3A	*Baythroid XL 1EC	2.4-2.8 fl oz/A	12	7	moderate	
	28	Belt 4SC	3-5 fl oz/A	12	14	high	
	5	Delegate 25WG	4.5-7 oz/A	4	7	high	
	11A	Deliver 18WG	0.5-2 lb/A	4	0	high	
	11A	Dipel 10.3DF	0.5-2 lb/A	4	0	high	
	5	Entrust 80WP	0.67-1 oz/100 gal or 2-3 oz/A	4	7	high	
	5	or Entrust 2SC	6-10 fl oz/A			high	
	18A	Intrepid 2F	8-16 fl oz/A	4	14	high	
	11A	Javelin 7.5WDG	0.5-4 lb/A	4	0	high	

Table 12.1.1. Pesticide Spray Table – Pears

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

Pest	IRAC/ FRAC Code	Product	Rate(s)	REI (hrs)	PHI (days)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
Obliquebanded leafroller (continued)	1B	*Lannate 2.4LV	0.75 pt/100 gal or 1.5-3 pt/A	48	7	moderate	
	1B	or *Lannate 90SP	0.25 lb/100 gal or 0.5-1 lb/A			moderate	
	6	*Proclaim 5SG	0.8-1.2 oz/100 gal or 3.2-4.8 oz/A	12 or 48 (E)	14	high	
The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	3A/4A	*Endigo ZC	5-6 fl oz/A	24	35	moderate	[10.3]
	3A/6	*Gladiator EC	3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	moderate	
	3A/4A	*Leverage 360	2.4-2.8 fl oz/A	12	7	moderate	
	4A/28	Voliam Flexi WDG	4-7 oz/A	12	35	high	
	3A/28	*Voliam Xpress	6-12 fl oz/A	24	21	high	
Pear psylla	Choose from materials listed under Petal Fall, except for Esteem						[12.5]
Pearleaf blister mite	1A	Sevin XLR Plus, 4F	1.5-3 qt/A	12	3	high	[14.2]
	1A	or Sevin 80S	1.88-3.75 lb/A			high	
Redbanded leafroller	11A	Agree WG 3.8WS	1-2 lb/A	4	0	high	[16.1]
	28	Altacor 35WDG	2.5-4.5 oz/A	4	5	high	
	3A	*Baythroid XL 1EC	2.4-2.8 fl oz/A	12	7	high	
	28	Belt 4SC	3-5 fl oz/A	12	14	high	
	5	Delegate 25WG	4.5-7 oz/A	4	7	high	
	11A	Deliver 18WG	0.5-2 lb/A	4	0	high	
	11A	Dipel 10.3DF	0.5-2 lb/A	4	0	high	
	1B	Imidan 70W	0.75-1 lb/100 gal or 2.13-5.75 lb/A	7 days	7	high	
	11A	Javelin 7.5WDG	0.5-4 lb/A	4	0	high	
	6	*Proclaim 5SG	0.8-1.2 oz/100 gal or 3.2-4.8 oz/A	48	14	high	
The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	3A/6	*Gladiator EC	3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	high	
	3A/4A	*Leverage 360	2.4-2.8 fl oz/A	12	7	high	
	3A/28	*Voliam Xpress	6-12 fl oz/A	24	21	high	
San Jose scale	4A	Admire Pro 4.6SC	2.8 fl oz/A	12	7	moderate	[20.2]
	4A	Assail 30SG	8 oz/A	12	7	moderate	
	16	Centaur 0.7WDG	34.5-46 oz/A	12	14	high	
	7C	Esteem 35WP	4-5 oz/A	24	45	high	
	23	Movento 240SC	6-9 fl oz/A	24	7	high	
	The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.						
	3A/4A	*Endigo ZC	5-6 fl oz/A	24	35	moderate	

Table 12.1.1. Pesticide Spray Table – Pears

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

Pest	IRAC/ FRAC Code	Product	Rate(s)	REI (hrs)	PHI (days)	Efficacy	Comments (see text)
Additional Summer Sprays (continued)							
San Jose Scale (continued)	3A/4A	*Leverage 360	2.4-2.8 fl oz/A	12	7	moderate	
	3A/28	*Voliam Xpress	6-12 fl oz/A	24	21	moderate	
Spotted wing Drosophila	5	Delegate 25WG	4.5-7 oz/A	4	7	moderate	[17.2]
	5	Entrust 80WP	1.5-3 oz/A	4	7	high	[17.2]
	5	or Entrust 2SC	4-10 fl oz/A			high	
	1B	Imidan 70W	0.75-1 lb/100 gal or 2.13-5.75 lb/A	7 days	7	moderate	
Stink bugs, including Brown marmorated stink bug	4A	Actara 25WDG	4.5-5.5 oz/A	12	35	moderate	[18.2]
	3A	*Baythroid XL 1EC	2-2.4 fl oz/A	12	7	moderate	
	3A	*Brigade 2EC	2.6-12.8 fl oz/A	12	14	high	
	3A	or *Brigade 10WSB	6.4-32 oz/A	12	14	high	
	3A	*Danitol 2.4EC	10.7-21.3 fl oz/A	24	14	moderate	[18.2]
	1A	*Lannate 2.4LV	2.25 pt/A	96	7	high	[18.2]
	1A	or *Lannate 90SP	0.75 lb/A	96	7	high	
	–	Surround 95WP	25-50 lb/A	4	0	moderate	
	1A	*Vydate 2L	1.5-3 pt/A	48	14	moderate	[18.2]
	3A	*Warrior II 2.08CS	1.28-2.56 fl oz/A	24	21	moderate	
The following pre-mix products are also labeled for use against this pest; however, for best effectiveness and insecticide resistance management, their use should be reserved for situations when multiple pest species are present and appropriately matched to the combination of active ingredients and modes of action contained in the product.							
	3A/4A	*Endigo ZC	5-6 fl oz/A	24	35	high	
	3A/6	*Gladiator EC	3.5-4.75 fl oz/100 gal or 14-19 fl oz/A	12	28	moderate	
	3A/4A	*Leverage 360	2.4-2.8 fl oz/A	12	7	moderate	
	4A/28	Voliam Flexi WDG	6-7 oz/A	12	35	moderate	
	3A/28	*Voliam Xpress	6-12 fl oz/A	24	21	moderate	

12.2 Pear Disease Notes

12.2.1 Fabraea Leaf Spot

• Biology & Cultural

[1.1] Bosc and Seckel are much more susceptible than Bartlett.

• Pesticide Application Notes

[1.2] It is important to prevent the establishment of early primary infections. Sprays should start at green cluster if the year is wet and disease was prevalent last year; otherwise, wait until white bud. Continue sprays at 10- to 14-day intervals through 1st or 2nd cover. In orchards with high inoculum, apply a mancozeb spray at 7-day intervals after petal fall until reaching either the 77-day PHI or the limit on the number of sprays per season. A 3-wk summer spray schedule will normally maintain control if early infections have been prevented. Summer applications of Sovran or Flint to control scab or sooty blotch will also control Fabraea leaf spot. Pear psylla can facilitate the spread of leafspot during summer, so controlling psylla is

important in high-pressure orchards. Using summer oils to suppress pear psylla may also suppress spread of Fabraea leaf spot during late summer.

12.2.2 Fire Blight

• Biology & Cultural

[2.1] Fire blight is an even more serious disease on pears than it is on apples. In general, the control strategies recommended for apples apply equally to pears. Bartlett, Bosc, Clapps Favorite, and Gorham are all extremely susceptible varieties. D'Anjou is slightly less susceptible, but comparable to the most highly susceptible apple variety; Seckel is considered moderately susceptible. Refer to the discussion of this disease in the "General Pest Management Considerations for Apples" section. For more details on optimizing streptomycin blossom blight sprays, see footnote 8.3 in the apple section

[2.2] The best program for reducing summer spread of fire blight is good psylla control.