Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes						
	Product Choices	-				(days)							
Ambrosia Beetle							. Good sanitation is the best management strategy. Remove						
	weakened by drought	large wood piles and prunings from the orchard.Cultural control by maintaining optimum tree vigour is important as ambrosia beetles are attracted to trees weakened by drought, transplanting, disease, etc. See description of ambrosia beetles for more information on the life cycle and methods to intercept female beetles flying into orchard.											
Fire Blight	hydrogen peroxide + peroxyacetic acid (Oxidate 2.0) 32907	NC	1 L/100 L of water (1% solution)	1 L/1000 L of water (1% solution)	4 h	0	Partial suppression. Start foliar/branch/stem applications before the disease occurs or at the first sign of disease and/or when weather conditions are favourable for diseas development. Apply diluted spray to the point of run-off to achieve full and even coverage.						
	bacillus mycoides isolate J (LifeGard WG) 32526	P 06	0.33 g per L of water	0.33 g per L of water	4 h	0	Do not apply less than 70 grams or more than 333 grams p hectare. Begin applications when green tissue is present, prior to infection period. For suppression of shoot blight, sta applications after petal fall. Foliar applications only. Do no apply during the bloom period (from pink stage to petal fall Do not apply to apple by chemigation.						
	garlic powder (Buran) 30601	NC	1.4% (500 to 800 L of water)	1.4% (202 to 323 L of water)		0	Apply before wetting events when conditions are conducive to infection; reapply as needed. The addition of a registered non-ionic surfactant such as Agral 90 or AgSurf at a rate 0.1% could help to improve the spreading.						
	Copper hydroxide (Parasol) 25901	M1	4.7 L	1.9 L	48 hrs	2 days	Apply in sufficient water for complete coverage. Max. two applications per year.						
	copper octanoate (Cueva Commercial) 31825	M1	Prepare 0.5-2% solution (5-20 L/1000 L water)		4 h	1	Apply 470-940 L of mixture/ha (190-380 L/acre) as a dormant spray as buds begin to swell, repeating at the bu burst stage, and weekly thereafter as needed, up to six sprays. Remove cankers by March 31. See fire blight description. The higher rate for dormant sprays is more like to be effective.						
	copper oxychloride (Copper Spray 19146)	M1	4kg	1.6kg	48 h	n/a	Remove cankers by March 31. See fire blight description						

Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes
	Product Choices		0.04.4.00.1	0.04.0 70.1	10.1	(days)	
Apple Scab	copper hydroxide (Kocide 2000-O) 33441	M	0.84-1.96 kg	0.34-0.79 kg	48 h	2 days	Apply as a full cover spray for early season disease suppression. Use the higher rate when conditions favour disease progression. Moderate to severe crop injury may occur from late application; discontinue use when green-tip reaches 1/2 inch. Requires pesticide applicator certificate.
Fire Blight	copper hydroxide (Kocide 2000-O) 33441	M	0.56-0.84 kg	0.23-0.34 kg	48 h	2 days	Apply as a full cover spray for early season disease suppression. Use the higher rate when conditions favour disease progression. Moderate to severe crop injury may occur from late application; discontinue use when green-tip reaches 1/2 inch. Requires pesticide applicator certificate.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
Rosy Apple Aphid	afidopyropen (Versys) 33266	9D	0.1 L	0.04 L	12 hrs	7 days	Allow 7 days between applications. Do not apply more than 4 times per season. For resistance management, rotate with another insecticide group after 2 applications.
	sulfoxaflor (Closer) 30826	4C	100-200 mL	40-80 mL	12 h	7	Do not apply more than 2 times/season. Spray interval: minimum 7 days.
Apple Aphid	afidopyropen (Versys) 33266	9D	0.1 L	0.04 L	12 hrs	7 days	Allow 7 days between applications. Do not apply more than 4 times per season. For resistance management, rotate with another insecticide group after 2 applications.
	sulfoxaflor (Closer) 30826	4C	100-200 mL	40-80 mL	12 h	7	Do not apply more than 2 times/season. Spray interval: minimum 7 days.
Woolly Apple Aphid	sulfoxaflor (Closer) 30826	4C	400 mL	162 mL	12 h	7	Suppression only. Do not apply more than 2 times/season. Spray interval: minimum 7 days.
Apple Leaf Curling Midge	spinetoram (Delegate) 28778	5	420 g	170 g	12 h	7	Toxic to bees. Do not apply to flowering crops or weeds if bees are visiting the treatment area. Maximum 3 applications per year. Application interval: 17 days.
San Jose Scale	mineral oil (Superior 70) 14981	NC	60 L	24 L	12 h	n/a	Apply once at green tip to 1 cm green stage. Do not use prio to or during freezing temperatures or rain. May cause bark damage on Red Delicious.
	mineral oil (Guardsman) 23370	NC	90 L	36 L	12 h	n/a	Apply once at green tip to 1 cm green stage. Do not use prior to or during freezing temperatures or rain. May cause bark damage on Red Delicious.
	mineral oil (Purespray Green)	NC	20L/1000 L of Water	20L/1000 L of Water	12 h	0	Apply once at green tip to 1 cm green stage. Do not use prior to or during freezing temperatures or rain. May cause bark

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	27666						damage on Red Delicious.
European Red Mite	mineral oil (Superior 70) 14981	NC	60 L	24 L	12 h	n/a	Apply once at green tip to 1 cm green stage. Do not use prior to or during freezing temperatures or rain. May cause bark damage on Red Delicious.
	mineral oil (Guardsman) 23370	NC	90 L	36 L	12 h	n/a	Apply once at green tip to 1 cm green stage. Do not use prio to or during freezing temperatures or rain. May cause bark damage on Red Delicious.
	mineral oil (Purespray Green) 27666	NC	20L/1000 L of Water		12 h	0	Apply once at green tip to 1 cm green stage. Do not use prio to or during freezing temperatures or rain. May cause bark damage on Red Delicious.
	Notes: Dormant oil is	s very im	portant for integrated	mite control program.			
Apple Scab	ipflufenoquin (Migiwa 20 SC) 35443	52	165 - 220 ml	66.8 - 89 ml	12 h	7 days	Make first application at green tip stage. The retreatment interval is 7 to 10 days. Do not make more than two sequential applications.
	mancozeb (Dithane Rainshield) 20553	M3	2-6 kg	0.81 - 2.4 kg	12 h - 35 d	77	Do not apply more than 24 kg/ha/year (18 kg a.i./ha//year of Dithane Rainshield Fungicide (e.g., 4 applications per year a 6.0/kg/ha or 8 applications at 3.0 kg/ha OR 12 applications a 2.0 kg/ha).
	impyrfluxam (Excalia Fungicide)	7	146 - 219 ml/ha	59 - 88.6 ml/ac	12 h	Petal fall	Green tip to petal fall only.
	hydrogen peroxide + peroxyacetic acid (Oxidate 2.0) 32907	NC	1 L/100 L of water (1% solution)	1 L/1000 L of water (1% solution)	4 h	0	Partial suppression. Start foliar/branch/stem applications before the disease occurs or at the first sign of disease and/or when weather conditions are favourable for disease development. Apply diluted spray to the point of run-off to achieve full and even coverage.
	extract of Swinglea glutinosa (EcoSwing) 35206	BM 01	1.75 - 2.35 L	0.71 - 0.95 L	4 h	0	Repeat application if measurable rain occurs within 2 to 3 hours of spraying.
	garlic powder (Buran) 30601	NC	9 L/500 L of water	9 L/500 L of water		0	The maximum rate of product in a single application is 18 L/ha. This product does not have protectant activity. It should be used as a post-infection treatment, applied after rainfall of when conditions are conducive to disease development. Application interval: before 350 degree hours (base 0 degrees C) after the beginning of the infection.
	pyraziflumid (Parade) 34526	7	227-340 ml	92-138 ml	12 h	7 days	Do not apply more than 2 consecutive applications of Parade or other group 7 fungicides before switching to a non-group fungicide.
	pyraclostrobin +	7 + 11	0.3 - 0.4 L	0.12 - 0.16 L	12 h -	5 days	Limit sprays of Group 11 fungicides to 2 sprays/season.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	fluxapyroxad (Merivon) 33951				12 days	(hand harvest)	REI's: hand thinning - 12 days, hand harvesting - 5 days, mechanical harvesting and all other activities - 12 hours.
	mefentrifluconazole (Cevya) 33405	3	0.25 - 0.375 L	0.1 - 0.15 L	12 hours	0	Do not make more than 2 sequential applications before alternating to a non-group 3 fungicide registered for the same use. Begin applications prior to disease development Apply an additional applic. at an interval of 7 - 10 days if disease persists or weather conditions are favourable for disease development.
	Isofetamid (Kenja) 31758	7	913 ml	369 ml	12 hours	20	Do not apply more than 2 consecutive Group 7 applications Application interval: 10 to 14 days.
	benzovindiflupyr + difenoconazole (Aprovia Top) 31526	3 + 7	386 - 643 mL	156 - 260 mL		30	Tank mix with protectant fungicide for improved fruit scab control. Use high rate for mildew. Rotate with other fungicid groups for resistance management. Do not apply more thar 2.57 L/ha/season.
	copper octanoate (Cueva Commercial) 31825	M1	Prepare 0.5-2% solution (5-20 L/1000 L water)		4 h	1	Apply 470-940 L of mixture/ha (190-380 L/acre). Do not exceed 1% rate for varieties susceptible to russeting. Repea every 7-10 days as long as weather conditions favour disease development.
	benzovindiflupyr (Aprovia) 31981	7	300-500 mL	121-202 mL	12 h	30	For improved fruit scab control, tank mix with a protectant fungicide (see label). Rotate with other non-Group 7 products. Do not apply in two consecutive sprays nor more than 2 L/ha (1.0 L/acre) per season.
	fluxapyroxad (Sercadis) 31697	7	167-333 mL	68-135 mL	12 h	0	The use of a non-ionic surfactant (0.125%) is recommended Begin treatment when conditions favour disease development. Apply a second spray 7-14 days up to blossol if conditions for disease development persist. Maximum amount per season: 1.33 L/ha (538 mL/acre). Maximum 4 applications per season.
	fluazinam (Allegro) 27517	29	0.50-1.0 L	202-404 mL	24 h-3 days	28	Use highest rates and shortest intervals for high disease pressure. Will also suppress European red mite, apple rust mite and two spotted spider mites. 3 days REI for thinning.
	difenoconazole + cyprodinil (Inspire Super) 30827	3+9	560 - 836 mL	227 - 338 mL	12 h	14	Limit sprays of Group 3 fungicides (Nova, Inspire, Fullback to 2 times/season. Tank mix with a protectant fungicide (Dithane, Manzate, Polyram, captan) for resistance management.
	pyrimethanil (Scala) 28011	9	0.75 - 1.0 L	304 - 405 mL	12 h-24 h	14	Do not use for apple scab after bloom. 24 hour REI for thinning.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	31679						Manzate, Polyram, Captan, Maestro). Limit sprays of group 3 fungicides (Nova, Inspire, Fullback) to 2 times/season for resistance management.
	myclobutanil (Nova 40WP) 22399	3	340 g	140 g	12 h-12 days	14	Tank mix with the full rate of Dithane, Manzate, Polyram, Captan, or Maestro. Limit sprays of group 3 fungicides (Nova, Inspire, Fullback) to 2/season for resistance management. 12 days REI for thinning.
	kresoxim-methyl (Sovran) 26257	11	360 g	150 g	48 h	30	Caution: drift may injure cherries. Limit sprays of group 11 fungicides (Flint, Sovran, Pristine) to 2 per season.
	trifloxystrobin (Flint) 30619	11	140 - 175g	57 - 71 g	12 h – 4 days	14	Avoid more than 2 consecutive sprays. Limit sprays of Group 11 fungicides (Flint, Sovran, Pristine) to 2/season. 4 days REI for thinning.
	boscalid + pyraclostrobin (Pristine WG) 27985		1.0 - 1.2 kg	405 g - 485 g	dry – 12 days	5	Avoid more than 2 consecutive applications. Limit sprays of Group 11 fungicides (Flint, Sovran, Pristine) to 2 per season. 12 days REI for thinning.
	penthiopyrad (Fontelis) 30331	7	1.0-1.5 L	405-607 mL	12 h	28	Do not apply more than 3 times per season, or more than twice sequentially. Use high rate for high disease pressure.
	fluopyram pyrimethanil (Luna Tranquility) 30510	7 + 9	800 mL	323 mL	12 h	14	Do not apply more than 2 times per season.
	mancozeb (Manzate 28217, Penncozeb 30241 and 25397)	M3	6.0kg	2.4 kg	12 h - 35 d	77	Do not apply more than 4 applications per year. Apply at a minimum of the 7-day interval.
	copper oxychloride (Copper Spray 19146)	M1	300 - 500 g/ha	121 - 202 g/ha	48 h	2 days	Maximum number of applications: 6. Reapply if needed as indicated by monitoring.
	captan (Captan Supra 33641, Maestro 33488)	M4	3 kg	1.2 kg	2 - 24 d	7	Do not apply Captan in combination with, immediately before, or closely following oil sprays. Do not use it during bloom. Early-season sprays may cause necrotic spotting to foliage of sensitive varieties. Apply at a minimum of a 7-day interval.
							soon after an infection period and still provide control.
	more information.						s if wet weather is forecast. See apple scab description for
Powdery Mildew (Apples)	ipflufenoquin (Migiwa 20 SC) 35443	52	165 - 220 ml	66.8 - 89 ml	12 h	7 days	The 165 ml/ha rate provides suppression of powdery mildew. If disease pressure is moderate or high or if control is required, use the 220 ml/ha rate. The retreatment interval is 7 to 10 days. Do not make more than two sequential

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
							applications.
	impyrfluxam (Excalia Fungicide)	7	146 - 219 ml/ha	59 - 88.6 ml/ac	12 h	Petal fall	Green tip to petal fall only. Application must include a 100% organosilicone adjuvant, such as Xiameter, at 31.3 - 62.5 ml/100 L water.
	hydrogen peroxide + peroxyacetic acid (Oxidate 2.0) 32907	NC	1 L/100 L of water (1% solution)	1 L/100 L of water (1% solution)	4 h	0	Start foliar/branch/stem applications before the disease occurs or at the first sign of disease and/or when weather conditions are favourable for disease development. Apply diluted spray to the point of run-off to achieve full and even coverage.
	garlic powder (Buran) 30601	NC	9 L/500 to 800 L of water	9 L/500 to 800 L of water		0	Disease control can be achieved under low to moderate disease pressure. Begin applications when conditions are conducive to disease development. The addition of a registered non-ionic surfactant such as Agral 90 or AgSurf a a rate of 0.1% could help to improve the spreading.
	pyraziflumid (Parade) 34526	7	227-340 ml	92-138 ml	12 h	7 days	Do not apply more than 2 consecutive applications of Parade or other group 7 fungicides before switching to a non-group fungicide.
	fenazaquin (Magister SC) 34544	21 + 39	1.75 - 2.63 L	0.7 - 1.1 L	12 h - 17 days	10 days	Toxic to bees. Avoid application during bloom. Maximum number of applications: 1
	sulphur (Cosavet DF Edge 31869, Kumulus 18836, Microthiol 29487	M2	7.0 kg	2.8 kg	24 h	1	Do not apply sulphur in combination with, immediately before, or closely following oil sprays.
	flutianil (Gatten) 34297	U 13	440 - 590 ml	178 - 239 ml	24 hours	14 days	Use a higher rate and shorter spray interval under high disease pressure. Use water volumes of 280 - 935 litres per hectare for concentrate sprays and 936 - 1870 litres per hectare for dilute sprays. Max number of applications per year: 4. Apply to foliage during the fruiting stage.
	pyraclostrobin + fluxapyroxad (Merivon) 33951	7 + 11	0.3 - 0.4 L	0.12 - 0.16 L	12 h - 12 days	5 days (hand harvest)	Limit sprays of Group 11 fungicides to 2 sprays/season. REI's: hand thinning - 12 days, hand harvesting - 5 days, mechanical harvesting and all other activities - 12 hours.
	Mineral oil (Suffoil- X) 33099	NC	10 L/1000 L of water	10 L/1000 L of water	12 hours	0	Test for crop tolerance before widespread use. Apply at tigh cluster and continue every 10-14 days. Avoid application during bloom. Do not use within 14 days before or after captan fungicide. Do not apply more than 8 applications per vear.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	(Cevya) 33405				hours		alternating to a non-group 3 fungicide registered for the same use. Begin applications prior to disease development. Apply an additional applic. at an interval of 7 - 10 days if disease persists or weather conditions are favourable for disease development.
	Polyoxin D Zinc Salt (Diplomat 5SC) 32918		259 - 926 ml	104 - 374 ml		0 days	Suppression of powdery mildew. Begin as a preventative application when conditions favour disease development, 7 14 day spray interval. Number of applications: 3-10 depending on rate.
	benzovindiflupyr + difenoconazole (Aprovia Top) 31526		643 mL	260 mL	12 h	30	Rotate with other fungicides that do not contain Group 3 or Group 7 fungicides for resistance management. Do not apply more than 2 consecutive applications.
	benzovindiflupyr (Aprovia) 31981	7	500 mL	202 mL	12 h	30	Rotate with other non-Group 7 products. Do not apply in two consecutive sprays nor more than 2 L/ha (1.0 L/acre) per season.
	fluxapyroxad (Sercadis) 31697	7	167-333 mL	68-135 mL	12 h	0	The use of a non-ionic surfactant (0.125%) is recommended Begin treatment when conditions favour disease development. Apply a second spray 7-14 days up to blossor if conditions for disease development persist. Maximum amount per season: 1.33 L/ha (538 mL/acre). Maximum 4 applications per season.
	difenoconazole + cyprodinil (Inspire Super) 30827	3+9	836 mL	338 mL	12 h	14	Suppression of powdery mildew. Limit use of group 3 fungicides (Nova, Inspire, Fullback) to 2 sprays/season.
	flutriafol (Fullback) 31679	3	585 - 877 mL	237 - 355 mL	12 h	14	Limit use of group 2 fungicides (Nova, Inspire, Fullback) to 2 sprays/season. Rotate with fungicides from other groups.
	myclobutanil (Nova 40WP) 22399	3	340 g	140 g	12 h-12 days	14	Limit use of Group 3 fungicides (nova, Inspire) to 2 sprays per season. Rotate with fungicides from other groups. 12 days REI for thinning.
	kresoxim-methyl (Sovran) 26257	11	240 - 450 g	100 - 182 g	48 h	30	Use high rate for high disease pressure. Limit sprays of group 11 fungicides to 2 per season. Caution: drift may injur- cherries.
	trifloxystrobin (Flint) 30619	11	140 - 210 g	57 - 85 g	12 h–4 days	14	Use the higher rate during pink to bloom stages. Limit spray of group 11 fungicides (Flint, Sovran, Pristine) to 2 per season. 4 days REI for thinning.
	thiophanate-methyl (Senator 50SC) 32096	1	3.15 L	1.27 L	24 h*	1	May harm predatory mites. Maximum 2 applications per season.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	mineral oil (Purespray Green) 27666	NC	10 L	4 L	12 h	0	For suppression of powdery mildew, apply in a minimum of 1000 L water/ha at tight cluster and repeat at 10-14 day intervals. Do not use in combination with or within 14 days o sulphur, Kumulus, Microthiol or captan. Do not apply during freezing temperatures.
	boscalid + pyraclostrobin (Pristine WG) 27985	7 + 11	1.0 - 1.2 kg	405 - 485 g	dry to 12 days	5	Avoid more than 2 consecutive applications. Limit sprays of Group 11 fungicides (Flint, Sovran, Pristine) to 2 per season 12 days REI for thinning.
	penthiopyrad (Fontelis) 30331	7	1.0-1.5 L	405-607 mL		28	Do not apply more than 3 times per season, or more than twice sequentially. Use high rate for high disease pressure.
	fluopyram pyrimethanil (Luna Tranquility) 30510	7 + 9	600 mL	242 mL	12 h	14	Use as preventative treatment. Do not apply more than 2 times/season.

Stage	of Developmen	t [.] Pink

Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes
	Product Choices					(days)	
Eyespotted Bud Moth	Chlorantraniliprole (Altacor MaX) 34654	28	73 - 143 g	30 - 58 g	12 h	5	Apply at pink to petal fall when larvae are active. Do not apply more than 3 times per season. Spray interval - 10 to 14 days.
	cyantraniliprole (Exirel) 30895	28	500- 1000 mL	202- 404 mL	12 h	3	Apply when larvae are active. Do not apply more than 4 times per season. Do not tank mix with Flint, Sovran, Pristine, copper or captan. Toxic to bees. Spray interval: 10 to 14 days.
	spinetoram (Delegate) 28778	5	210-420 g	85-170 g	12 h	7	Apply when larvae are active. Use the higher rate under high pest pressure and/or larger larvae. Spray interval: 14 days.
	chlorantraniliprole (Altacor) 28981	28	145-285 g	59-115 g	12 h	5	Apply at pink to petal fall when larvae are active. Do not apply more than 3 times per season. Spray interval - 10 to 14 days.
Green Fruitworms	Chlorantraniliprole (Altacor MaX) 34654	28	73 - 108 g	30 - 44 g	12 h	5	Repeat if necessary at petal fall. Do not apply more than 3 times per season. Spray interval - 10 to 14 days.
	Bacillus thuringiensis (Bioprotec PLUS) 32425	11	1.8-2.5 L	0.73-1.0 L	24 h*	0	Will also control other leaf-feeding larvae present. See Notes.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	chlorantraniliprole (Altacor) 28981	28	145-215 g	59-87 g	12 h	5	Repeat if necessary at petal fall. Do not apply more than 3 times per season. Spray interval - 10 to 14 days.
Obliquebanded and Threelined Leafrollers	cyclaniliprole (Harvanta 50SL) 32889	28	1.2 - 1.6 L	485 - 647 ml	12	7 days	Toxic to bees. Do not make more than 3 applications per crop year. Where possible, rotate the use of Harvanta or other Group 28 insecticides with different groups that contro the same pests.
	Bacillus thuringiensis (Bioprotec PLUS) 32425	11	1.8-2.5 L	0.73-1.0 L	24 h*	0	Will also control other leaf-feeding larvae present. See Notes.
	Bacillus thuringiensis (Dipel 2X DF) 26508	11	1.125 - 1.675 kg	455 - 678 g	24 h*	0	Will also control other leaf-feeding larvae present.
	tebufenozide (Confirm) 24503	18	1.0 L	405 mL	dry - 12 h	14	Confirm should only be used if leafroller damage was low to moderate at harvest the previous season. Spray interval: 1 to 14 days.
Codling Moth	pheromone (Isomate CM Flex) 31589	NC	1000	400	n/a	0	Dispensers must be hung before expected first emergence moths.
	pheromone (Isomate CM/LR TT) 28814	NC	750	300	n/a	0	Also controls leafrollers.
	pheromone (Isomate C+) 22899	NC	1000	400	n/a	0	Dispensers must be hung before expected first emergence moths.
							ions for dispenser rates and application to trees.
Apple Scab	ipflufenoquin (Migiwa 20 SC) 35443	52	165 - 220 ml	66.8 - 89 ml	12 h	7 days	Make first application at green tip stage. The retreatment interval is 7 to 10 days. Do not make more than two sequential applications.
	mancozeb (Dithane Rainshield) 20553	М3	2-6 kg	0.81 - 2.4 kg	12 h - 35 d	77	Do not apply more than 24 kg/ha/year (18 kg a.i./ha//year c Dithane Rainshield Fungicide (e.g., 4 applications per year 6.0/kg/ha or 8 applications at 3.0 kg/ha OR 12 applications a 2.0 kg/ha).
	impyrfluxam (Excalia Fungicide)	7	146 - 219 ml/ha	59 - 88.6 ml/ac	12 h	Petal fall	Green tip to petal fall only.
	hydrogen peroxide + peroxyacetic acid (Oxidate 2.0) 32907	NC	1 L/100 L of water (1% solution)	1 L/1000 L of water (1% solution)	4 h	0	Partial suppression. Start foliar/branch/stem applications before the disease occurs or at the first sign of disease and/or when weather conditions are favourable for disease development. Apply diluted spray to the point of run-off to

Stage of Develo Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
							achieve full and even coverage.
	extract of Swinglea glutinosa (EcoSwing) 35206	BM 01	1.75 - 2.35 L	0.71 - 0.95 L	4 h	0	Repeat application if measurable rain occurs within 2 to 3 hours of spraying.
	garlic powder (Buran) 30601	NC	9 L/500 L of water	9 L/500 L of water		0	The maximum rate of product in a single application is 18 L/ha. This product does not have protectant activity. It should be used as a post-infection treatment, applied after rainfall of when conditions are conducive to disease development. Application interval: before 350 degree hours (base 0 degrees C) after the beginning of the infection.
	pyraclostrobin +	7 + 11	0.3 - 0.4 L	0.12 - 0.16 L	12 h -	5 days	Limit sprays of Group 11 fungicides to 2 sprays/season.
	fluxapyroxad				12	(hand	REI's: hand thinning - 12 days, hand harvesting - 5 days,
	(Merivon) 33951				days	harvest)	mechanical harvesting and all other activities - 12 hours.
	mefentrifluconazole (Cevya) 33405	3	0.25 - 0.375 L	0.1 - 0.15 L	12 hours	0	Do not make more than 2 sequential applications before alternating to a non-group 3 fungicide registered for the same use. Begin applications prior to disease development. Apply an additional applic. at an interval of 7 - 10 days if disease persists or weather conditions are favourable for disease development.
	Isofetamid (Kenja) 31758	7	913 ml	369 ml	12 hours	20	Do not apply more than 2 consecutive Group 7 applications. Application interval: 10 to 14 days.
	benzovindiflupyr + difenoconazole (Aprovia Top) 31526	3 + 7	386 - 643 mL	156 - 260 mL	12 h	30	Tank mix with protectant fungicide for improved fruit scab control. Use high rate for mildew. Rotate with other fungicide groups for resistance management. Do not apply more than 2.57 L/ha/season.
	copper octanoate (Cueva Commercial) 31825	M1	Prepare 0.5-2% solution (5-20 L/1000 L water)		4 h	1	Apply 470-940 L of mixture/ha (190-380 L/acre). Do not exceed 1% rate for varieties susceptible to russeting. Repeat every 7-10 days as long as weather conditions favour disease development.
	benzovindiflupyr (Aprovia) 31981	7	300-500 mL	121-202 mL	12 h	30	For improved fruit scab control, tank mix with a protectant fungicide (see label). Rotate with other non-Group 7 products. Do not apply in two consecutive sprays nor more than 2 L/ha (1.0 L/acre) per season.
	fluxapyroxad (Sercadis) 31697	7	167-333 mL	68-135 mL	12 h	0	The use of a non-ionic surfactant (0.125%) is recommended. Begin treatment when conditions favour disease development. Apply a second spray 7-14 days up to blossom if conditions for disease development persist. Maximum amount per season: 1.33 L/ha (538 mL/acre). Maximum 4

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
							applications per season.
	fluazinam (Allegro) 27517	29	0.50 - 1.0 L	202 - 404 mL	24 h-3 days	28	Use highest rates and lowest intervals for high disease pressure. Will also suppress European red mite, two-spotted spider mite, and apple rust mite. 3 days REI for thinning.
	difenoconazole + cyprodinil (Inspire Super) 30827	3 + 9	560 - 836 mL	227 - 338 mL	12 h	14	Limit sprays of group 3 fungicides (Nova, Inspire, Fullback) to 2/season. Tank mix with a protectant fungicide (e.g. Dithane, Manzate, Polyram, Captan, maestro) for resistance management.
	pyrimethanil (Scala) 28011	9	0.75-1.0 L	304-405 mL	12 h-24 h	14	Do not use after bloom for for apple scab. 24 hour REI for thinning.
	flutriafol (Fullback) 31679	3	950 mL	385 mL	12 h	14	Tank mix with full rate of a protectant (e.g. Dithane, Manzate Polyram, Captan, Maestro). Limit sprays of group 3 fungicides (Nova, Inspire, Fullback) to 2 sprays/season for resistance management.
	myclobutanil (Nova 40WP) 22399	3	340 g	140 g	12 h-12 days	14	Tank mix with the full rate of Dithane, Manzate, Polyram, Captan or Maestro. Limit sprays of group 3 fungicides (Nova Inspire) to 2/season for resistance management. 12 days REI for thinning.
	kresoxim-methyl (Sovran) 26257	11	360 g	150 g	48 h	30	CAUTION: Drift may injure cherries. Limit sprays of group 11 fungicides (Flint, Sovran, Pristine) to 2/season.
	trifloxystrobin (Flint) 30619	11	140 - 175 g	57 - 71 g	12 h – 4 days	14	Avoid more than 2 consecutive sprays. Limit sprays of Group 11 fungicides (Flint, Sovran, Pristine) to 2/season.
	boscalid + pyraclostrobin (Pristine WG) 27985	7 + 11	1.0 - 1.2 kg	405 g - 485 g	dry to 12 days	5	Avoid more than 2 consecutive applications. Limit sprays of Group 11 fungicides (Flint, Sovran, Pristine) to 2/season. 12 days REI for thinning.
	penthiopyrad (Fontelis) 30331	7	1.0-1.5 L	405-607 mL	12 h	28	Do not apply more than 3 times per season, or more than twice sequentially. Use high rate for high disease pressure.
	fluopyram pyrimethanil (Luna Tranquility) 30510	7+9	800 mL	323 mL	12 h	14	Do not apply more than 2 times per season.
	mancozeb (Manzate 28217, Penncozeb 30241 and 25397)	М3	6.0 kg	2.4 kg	12 h - 35 d	77	Do not apply more than 4 applications per year. Apply at a minimum of the 7-day interval.
	copper oxychloride (Copper Spray 19146)	M1	300 - 500 g/ha	121 - 202 g/ha	48 h	2 days	Maximum number of applications: 6. Reapply if needed as indicated by monitoring.
	captan (Captan	M4	3 kg	1.2 kg	2 - 24	7	Do not apply Captan in combination with, immediately

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	Supra 33641, Maestro 33488)				days		before, or closely following oil sprays. Do not use it during bloom. Early-season sprays may cause necrotic spotting to foliage of sensitive varieties. Apply at a minimum of a 7-day interval.
	period. Notes: Eradicant spr	ays are	best used in a prevent	ative program. Howev		-	eping trees covered with protectant fungicides during this ed soon after an infection period and still provide control. See
Powdery Mildew (Apples)	apple scab in Diseas ipflufenoquin (Migiwa 20 SC) 35443	e Sectio 52	n for more information 165 - 220 ml	66.8 - 89 ml	12 h	7 days	The 165 ml/ha rate provides suppression of powdery mildew If disease pressure is moderate or high or if control is required, use the 220 ml/ha rate. The retreatment interval is 7 to 10 days. Do not make more than two sequential applications.
	impyrfluxam (Excalia Fungicide)	7	146 - 219 ml/ha	59 - 88.6 ml/ac	12 h	Petal fall	Green tip to petal fall only. Application must include a 100% organosilicone adjuvant, such as Xiameter, at 31.3 - 62.5 ml/100 L water.
	hydrogen peroxide + peroxyacetic acid (Oxidate 2.0) 32907	NC	1 L/100 L of water (1% solution)	1 L/100 L of water (1% solution)	4 h	0	Start foliar/branch/stem applications before the disease occurs or at the first sign of disease and/or when weather conditions are favourable for disease development. Apply diluted spray to the point of run-off to achieve full and even coverage.
	garlic powder (Buran) 30601	NC	9 L/500 to 800 L of water	9 L/500 to 800 L of water		0	Disease control can be achieved under low to moderate disease pressure. Begin applications when conditions are conducive to disease development. The addition of a registered non-ionic surfactant such as Agral 90 or AgSurf a a rate of 0.1% could help to improve the spreading.
	fenazaquin (Magister SC) 34544	21 + 39	1.75 - 2.63 L	0.7 - 1.1 L	12 h - 17 days	10 days	Toxic to bees. Avoid application during bloom. Maximum number of applications: 1
	sulphur (Cosavet DF Edge 31869, Kumulus 18836, Microthiol 29487	M2	7.0 kg	2.8 kg	24 h	1	Do not apply sulphur in combination with, immediately before, or closely following oil sprays. See description of powdery mildew.
	flutianil (Gatten) 34297	U 13	440 - 590 ml	178 - 239 ml	24 hours	14 days	Use a higher rate and shorter spray interval under high disease pressure. Use water volumes of 280 - 935 litres pe hectare for concentrate sprays and 936 - 1870 litres per hectare for dilute sprays. Max number of applications per year: 4. Apply to foliage during the fruiting stage.

Stage of Develo	pment: Pink						
Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes
	Product Choices					(days)	
	pyraclostrobin +	7 + 11	0.3 - 0.4 L	0.12 - 0.16 L	12 h -	5 days	Limit sprays of Group 11 fungicides to 2 sprays/season.
	fluxapyroxad				12	(hand	REI's: hand thinning - 12 days, hand harvesting - 5 days,
	(Merivon) 33951				days	harvest)	mechanical harvesting and all other activities - 12 hours.
	Mineral oil (Suffoil-	NC	10 L/1000 L of water	10 L/1000 L of water	12	0	Test for crop tolerance before widespread use. Apply at tight
	X) 33099				hours		cluster and continue every 10-14 days. Avoid application
							during bloom. Do not use within 14 days before or after
							captan fungicide. Do not apply more than 8 applications per
	mefentrifluconazole	3	0.25 - 0.375 L	0.1 - 0.15 L	12	0	year. Do not make more than 2 sequential applications before
	(Cevya) 33405	3	0.25 - 0.375 L	0.1 - 0.15 L	hours	0	alternating to a non-group 3 fungicide registered for the
	(Cevya) 33405				nours		same use. Begin applications prior to disease development.
							Apply an additional applications phot to disease development.
							disease persists or weather conditions are favourable for
							disease development.
	Polyoxin D Zinc Salt	19	259 - 926 ml	104 - 374 ml		0 days	Suppression of powdery mildew. Begin as a preventative
	(Diplomat 5SC)		200 020111			o dayo	application when conditions favour disease development, 7 -
	32918						14 day spray interval. Number of applications: 3-10
							depending on rate.
	benzovindiflupyr +	3+7	643 mL	260 mL	12 h	30	Rotate with other fungicides that do not contain Group 3 or
	difenoconazole						Group 7 fungicides for resistance management. Do not apply
	(Aprovia Top) 31526						more than 2 consecutive applications.
	benzovindiflupyr	7	500 mL	202 mL	12 h	30	Rotate with other non-Group 7 products. Do not apply in two
	(Aprovia) 31981						consecutive sprays nor more than 2 L/ha (1.0 L/acre) per
							season.
	fluxapyroxad	7	167-333 mL	68-135 mL	12 h	0	The use of a non-ionic surfactant (0.125%) is recommended.
	(Sercadis) 31697						Begin treatment when conditions favour disease
							development. Apply a second spray 7-14 days up to blossom
							if conditions for disease development persist. Maximum
							amount per season: 1.33 L/ha (538 mL/acre). Maximum 4
							applications per season.
	difenoconazole +	3 + 9	836 mL	338 mL	12 h	14	Suppression of powdery mildew. Limit use of group 3
	cyprodinil (Inspire						fungicides (Nova, Inspire, Fullback, Inspire Super) to 2
	Super) 30827		505 077 1	007.055.			sprays/season.
	flutriafol (Fullback)	3	585 - 877 mL	237 - 355 mL	12 h	14	Rotate with fungicides from other groups. Limit use of group
	31679		47001	0.00.4.0.1.5	01.5*		3 fungicides (Nova, Inspire, Fullback) to 2 sprays/season.
	Bacillus subtilis	44	1.7-3.3 kg	0.69-1.3 kg	24 h*	0	Suppression only. Apply preventatively at 7- to 10-day
	(Serenade Opti)						intervals.
	31666	ļ					ļ

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	calcium polysulphide (Lime sulphur 30%) 16465	M2	9 L/1000 L	9 L/1000 L	48 h	n/a	Lime sulphur may injure "sulphur shy" varieties. May cause injury during hot temperatures. May harm predatory mites.
	myclobutanil (Nova 40WP) 22399	3	340 g	140 g	12 h - 12 days	14	Rotate with fungicides from other group. Limit use of group 3 fungicides (Nova, Inspire, Fullback) to 2 sprays/season.
	kresoxim-methyl (Sovran) 26257	11	240 - 450 g	100 - 182 g	48 h	30	CAUTION: Sovran drift may injure cherries.Use higher rate during pink stage. Limit sprays of group 11 fungicides (Flint, Sovran, Pristine) to 2/season.
	trifloxystrobin (Flint) 30619	11	140 - 210 g	57 - 85 g	12 h – 4 days	14	Use the higher rate from pink to Bloom stages. Limit sprays of group 11 fungicides (Flint, Sovran, pristine) to 2 sprays/season. 4 days REI for thinning.
	thiophanate-methyl (Senator 50SC) 32096	1	3.15 L	1.27 L	24 h*	1	May harm predatory mites. Maximum 2 applications per season.
	mineral oil (Purespray Green) 27666	NC	10L	4 L	12 h	0	For suppression of powdery mildew, apply in a minimum of 1000 L water/ha at tight cluster and repeat at 10-14 day intervals. Do not use in combination with or within 14 days o sprays containing sulphur or captan.
	boscalid + pyraclostrobin (Pristine WG) 27985	7 + 11	1.0 - 1.2 kg	405 g - 485 g	dry to 12 days	5	Avoid more than 2 consecutive applications. Limit sprays of Group 11 fungicides (Flint, Sovran, Pristine) to 2 per season Caution: Sovran drift may injure cherries. 12 days REI for thinning.
	penthiopyrad (Fontelis) 30331	7	1.0-1.5 L	405-607 mL	12 h	28	Do not apply more than 3 times per season, or more than twice sequentially. Use high rate for high disease pressure.
	fluopyram pyrimethanil (Luna Tranquility) 30510	7 + 9	600 mL	242 mL	12 h	14	Use preventatively. Do not apply more than 2 times per season.

Stage of Develop	oment: Blossom						
Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes
	Product Choices					(days)	
Fruittree and	Bacillus	11	1.8-2.5 L	0.7-1.3 kg	24 h*	0	Will also control other leaf-feeding larvae present. See
European	thuringiensis						Notes. Spray interval: 7 days under optimal conditions.
Leafrollers	(Bioprotec PLUS) 32425						

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	Bacillus thuringiensis (Bioprotec CAF) 26854	11	4.0 L	1.6 L	24 h*	0	See Notes. Will also control other leaf-feeding larvae present. Spray interval: 7 days under optimal conditions.
	Bacillus thuringiensis (Dipel 2X DF) 26508	11	1.125 - 1.675 kg	455 - 678 g	24 h*	0	Will also control other leaf-feeding larvae present.
	Bacillus thuringiensis (Foray) 24978	11	4.0 L	1.6 L	24 h*	0	Will also control bud moth.
	hours. If there is more	e than 2	mm rainfall within 24		oly produ		ernoon or on a cloudy day when no rain is forecast for 24 days (in the absence of rain) before applying a second
Green Fruitworms	Bacillus thuringiensis (Bioprotec PLUS) 32425	11	1.8-2.5 L	0.7-1.3 L	24 h*	0	Will also control other leaf-feeding larvae present. See Notes.
	Bacillus thuringiensis (Bioprotec CAF) 26854	11	4.0 L	1.6 L	24 h*	0	Will also control bud moth. Spray interval: 7 days under optimal conditions.
	Bacillus thuringiensis (Dipel 2X DF) 26508	11	1.125 - 1.675 kg	455 - 678 g	24 h*	0	Will also control bud moth.
	Bacillus thuringiensis (Foray) 24978	11	4.0 L	1.6 L	24 h*	0	Will also control bud moth.
Obliquebanded and Threelined Leafrollers	Bacillus thuringiensis (Bioprotec PLUS) 32425	11	1.8-2.5 L	0.73-1.0 L	24 h*	0	Will also control other leaf-feeding larvae present. See Notes.
	Bacillus thuringiensis (Bioprotec CAF) 26854	11	4.0 L	1.6 L	24 h*	0	Will also control bud moth.
	Bacillus thuringiensis (Dipel 2X DF) 26508	11	1.125 - 1.675 kg	455 - 678 g	24 h*	0	Will also control other leaf-feeding larvae present.

Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes						
	Product Choices					(days)							
	Bacillus	11	4 L	1.6 L	24 h*	0	Will also control other leaf-feeding larvae present.						
	thuringiensis (Foray) 24978												
		Intes: Apply Bacillus thuringiensis (Bt) products when bloom is 80% or more during late afternoon or on a cloudy day when no rain is forecast for 24											
			mm rainfall within 24 I oduct. Optimum solutio			ict. Wait 7	days (in the absence of rain) before applying a second						
Fire Blight	copper octanoate	M1	Prepare 0.5-2%		30. 4 h	1	Apply 470-940 L of mixture/ha (190-380 L/acre). Repeat						
r no Bright	(Cueva Commercial)		solution (5-20				every 7-10 days as long as weather conditions favour						
	31825		L/1000 L water)				disease development (maximum 6 sprays/season). See Fi						
	51025						blight description.						
	Bacillus	44	1-1.5 kg	405-607 g		0	Suppression only. Apply at blossom to end of flowering at						
	amyloliquefaciens						to 7-day intervals. Can be mixed with copper sprays. Can						
	(Double Nickel 55)						applied post-bloom for shoot blight management.						
	31888												
	prohexadione	n/a	1350 g	546 g	12 h	45	For suppression of shoot blight, apply at 2.5 to 7.5 cm of n						
	calcium (Apogee)						shoot growth. Will also reduce shoot growth.						
	28042												
	Aureobasidium	NC	See Label	See Label	dry	n/a	Apply up to 4 times from 10-90% bloom if weather condition						
	pullulans (Blossom						favour blossom infection. Do not tank mix with other						
	Protect) 30552						fungicides.						
	streptomycin	25	1.8 kg or 100 ppm	729 g or 100 ppm	24	50	Apply at blossom stage if weather conditions favour blosso						
	sulphate		(see notes)	(see notes)	h-14		infection. Maximum 3 applications (5.4 kg/ha/season). 10						
	(Streptomycin 17)				days		ppm rate (600 g of Streptomycin per 1000 L of water) is						
	10305						based on high volume spray. Use sufficient water volume						
							thorough blossom wetting. 14 day REI for thinning.						
	kasugamycin	24	5.0 L	2.0 L	12 h	90	Apply at 20-30% bloom or when conditions favour diseas						
	(Kasumin) 30591						development. Do not apply after petal fall.						
	Bacillus subtilis	44	1.1-1.7 kg	445-688 g	24 h*	0	Suppression only. Apply at 1-5% blossom and repeat as						
	(Serenade Opti)		-	_			needed during the blossom period.						
	31666												
			ed by rain favours blos	som infection. See fire	e blight s	ection of t	the Guide (page 7-13) for information on risk assessment						
	based on temperature												
Crown and Root	fosetyl-al (Aliette)	33	5.0 kg	2.0 kg	dry	30	See description of crown rot for more information.						
Rot	27688												

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes					
European Red Mite	pyridaben (Nexter SC) 33433	21	500 ml	202 ml	24 h	25 days	Do not apply more than twice per year. Controls rust mite. Residual control: 7-10 days.					
	fenazaquin (Magister SC) 34544	21 + 39	1.75 - 2.34 L	0.7 - 0.95 L	12 h - 17 days	10 days	Toxic to bees. Avoid application during bloom. Maximum number of applications: 1					
	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Apply before a threshold of five spider mites per leaf is reached. Add 0.25 - 1% spray oil/ spray mixture. Also controls leafroller and mites. Maximum 1 application per season.					
	cyflumetofen (Nealta) 31284	25	1 L	405 mL	12 h	7	Do not apply more than 2 times per season. Spray interval: 14 days.					
	acequinocyl (Kanemite) 28641	20B	2.1 L	850 mL	12 h	14	Do not apply more than twice/season. Controls all life stages Does not control rust mite. Spray interval: 21 days.					
	pyridaben (Nexter) 25135	21	300 g	120-240 g	24 h	25	Use higher rate. Do not apply more than twice per season. Controls rust mite. Residual control: 7-10 days.					
	spirodiclofen (Envidor) 28051	23	750 mL	300 mL	12 h	7	Only once per season. Controls rust mite. Spray interval: minimum 7 days.					
	clofentezine (Apollo) 21035	10	300-600 mL	120-240 mL	4-12 h	21	Do not apply more than once per season or beyond 14 days after petal fall. Controls eggs and young mites. Does not control rust mite. Residual control: 45 days.					
	bifenazate (Acramite) 27925	20D	851 g	344 g	12 h	7	Does not control rust mite. Residual control: 21 days.					
	Notes: It is important to rotate products with different group numbers to avoid development of pesticide resistance. Do not apply products from the same group more than once per season. The presence and number of predatory mites should first be determined using a mite counting service before spraying Apply the products in sufficient water to ensure thorough and uniform coverage.											
McDaniel, Twospotted Spider	pyridaben (Nexter SC) 33433	21	500 - 1000 ml	202 404 ml	24 h	25 days	Do not apply more than twice per year. Controls rust mite. Residual control: 7-10 days.					
Mites	fenazaquin (Magister SC) 34544	21 + 39	1.75 - 2.34 L	0.7 - 0.95 L	12 h - 17 days	10 days	Toxic to bees. Avoid application during bloom. Maximum number of applications: 1					
	Mineral oil (Suffoil- X) 33099	NC	10 L/1000 L of water		12 hours	0	Test for crop tolerance before widespread use. Apply every 10 - 14 days,depending on level of pest pressure. Do not use within 14 days before or after captan fungicide. Do not apply more than 8 applications per year.					
	Mineral oil (Suffoil- X) 33099	NC	10 L/1000 L of water	10 L/1000 L of water	12 hours	0	Test for crop tolerance before widespread use. Apply every 10 - 14 days,depending on level of pest pressure. Do not use within 14 days before or after captan fungicide. Do not apply more than 8 applications per year.					

Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes
	Product Choices	6 + 28	400 ml	201 ml	10 h	(days)	Annhy before a thread-old of five an idea without a loof in
	abamectin + cyantraniliprole	0 + 28	496 mL	201 mL	12 h	28	Apply before a threshold of five spider mites per leaf is reached. Add 0.25 - 1% spray oil/ spray mixture. Also
	(Minecto Pro) 33023						controls leafrollers. Maximum 1 application per season.
	cyflumetofen	25	1 L	405 mL	12 h	7	Do not apply more than 2 times per season. Spray interval:
	(Nealta) 31284						14 days.
	acequinocyl (Kanemite) 28641	20B	2.1 L	850 mL	12 h	14	Do not apply more than 2 times/season. Does not control rust mites. Spray interval: 21 days.
	pyridaben (Nexter) 25135	21	300 - 600 g	120 - 240 g	24 h	25	Use highest rate. Do not apply more than 2 times/season. Controls rust mite. Residual control: 7-10 days.
	spirodiclofen (Envidor) 28051	23	750 mL	300 mL	12 h	7	Apply only once/season. Controls rust mite. Spray interval: minimum 7 days.
	clofentezine (Apollo) 21035	10	300 - 600 mL	120 - 240 mL	4 - 12 h	21	Do not apply more than once/season or beyond more than 14 days after petal fall. Controls eggs and young mites. Dos not control rust mite. Residual control: 45 days.
	bifenazate (Acramite) 27925	20D	568 g	229 g	12 h	7	Does not control rust mite. Residual control: 21 days.
Rust Mites and Pearleaf Blister	pyridaben (Nexter SC) 33433	21	500 ml	202 ml	24 h	25 days	Do not apply more than twice per year. Residual control: 7-10 days.
Mite	fenazaquin (Magister SC) 34544	21 + 39	1.75 L	0.7 L	12 h - 17 days	10 days	Toxic to bees. Avoid application during bloom. Maximum number of applications: 1
	pyridaben (Nexter) 25135	21	300 g	120 g	24 h	25	Do not apply more than twice per season. Residual control: 7-10 days.
	spirodiclofen (Envidor) 28051	23	750 mL	300 mL	12 h	7	Apply only once per season. Spray interval: minimum 7 days.
Eyespotted Bud Moth	Chlorantraniliprole (Altacor MaX) 34654	28	73 - 143 g	30 - 58 g	12 h	5	Apply at pink to petal fall when larvae are active. Do not apply more than 3 times per season. Spray interval - 10 to 14 days.
	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Add 0.25 - 1% spray oil/ spray mixture. Also controls leafroller and mites. Maximum 1 application per season.
	spinosad (Success) 26835	5	182 mL	74 mL	dry	7	Do not apply more than 3 times/season. Will reduce pansy spot. Spray interval: 7 to 10 days.
	cyantraniliprole (Exirel) 30895	28	500- 1000 mL	202- 404 mL	12 h	3	Apply when larvae are active. Do not apply more than 4 times per season. Do not tank mix with Sovran, Flint, Pristine, copper or captan fungicides. Toxic to bees. Spray interval: 10 to 14 days.
	spinosad (Entrust)	5	364 mL	147 mL	dry	7	Do not apply more than 3 times per season. Will reduce

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	30382						pansy spot. Will also control any leafroller present. Spray interval: 7 to 10 days.
	spinetoram (Delegate) 28778	5	210-420 g	85-170 g		7	Do not apply more than 3 times per season for all labeled uses. Spray interval: 14 days.
	chlorantraniliprole (Altacor) 28981	28	145-285 g	59-115 g	12 h	5	Apply when larvae are active. Do not apply more than 3 times per season.
Freen Fruitworms	Chlorantraniliprole (Altacor MaX) 34654	28	73 - 108 g	30 - 44 g	12 h	5	Repeat if necessary at petal fall. Do not apply more than times per season. Spray interval - 10 to 14 days.
	acetamiprid + novaluron (Cormoran) 33353	4 + 15	1050 ml	425 ml	12 hrs to 7 days	14 days	Do not apply more than 6.9 L/ha. Spray interval - 12 days REIs: 7 days for thinning, 12 hours for all other activities
	Bacillus thuringiensis (Bioprotec PLUS) 32425	11	1.8-2.5 L	0.73-1.0 L	24 h*	0	Will also control other leaf-feeding larvae present. See Notes. Spray interval: 7 days under optimal conditions.
	Bacillus thuringiensis (Bioprotec CAF) 26854	11	4.0 L	1.6 L	24 h*	0	Thorough coverage is very important. Will also control bu moth and leafroller larvae present.Spray interval: 7 days under optimal conditions.
	Bacillus thuringiensis (Dipel 2X DF) 26508	11	1.125 - 1.675 kg	455 - 678 g	24 h*	0	Thorough coverage is very important. Will also control bu moth and leafroller larvae present. Spray interval: 7 days under optimal conditions.
	Bacillus thuringiensis (Foray) 24978	11	4.0 L	1.6 L	24 h*	0	Thorough coverage is very important. Will also control bu moth and leafroller larvae present. Spray interval: 7 days under optimal conditions.
	chlorantraniliprole (Altacor) 28981	28	145-215 g	59-87 g	12 h	5	Do not apply more than 3 times/season. Spray interval - 1 to 14 days. Spray interval - 10 to 14 days.
Obliquebanded and Threelined	Chlorantraniliprole (Altacor MaX) 34654	28	73 - 143 g	30 - 58 g	12 h	5	Apply when larvae become active. Do not apply more than times/ season. Spray interval: 10 to 14 days (see label).
Leafrollers	GS-omega/kappa- Hxtx-Hv1a (Spear Lep) 34678	32	1.2 - 2.3 L	486 - 931 mL	4 h	0	Tank mix with the low labelled rate of a Bacillus thuringien (Bt) product registered on the same crop for control of caterpillars such as Bioprotec, Dipel or Foray. Use a spreader/sticker or non-ionic surfactant (0.125%) to enhar the adhesion of Spear Lep.
	tetraniliprole (Vayego 200 SC) 33711	28	225 ml	91 ml	12 hours	7 days	Max 3 applications per year. Toxic to bees. Do not apply during pre-bloom or blooming period. Apply post-bloom or

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	cyantraniliprole (Minecto Pro) 33023						wintering larvae become active. Add 0.25 - 1% spray oil/ spray mixture. Also controls mites. Maximum 1 application per season.
	cyclaniliprole (Harvanta 50SL) 32889	28	1.2 - 1.6 L	485 - 647 ml	12	7 days	Toxic to bees. Do not make more than 3 applications per crop year. Where possible, rotate the use of Harvanta or other Group 28 insecticides with different groups that control the same pests.
	Bacillus thuringiensis (Bioprotec PLUS) 32425	11	1.8-2.5 L	0.73-1.0 L	24 h*	0	Will also control other leaf-feeding larvae present. See Notes. Spray interval: 7 days under optimal conditions.
	spinosad (Success) 26835	5	182 g	74 g	dry	7	Do not apply more than 3 times/season. Spray interval: 7 to 10 days.
	Bacillus thuringiensis (Bioprotec CAF) 26854	11	4.0 L	1.6 L	24 h*	0	Will also control bud moth. Spray interval: 7 days under optimal conditions.
	Bacillus thuringiensis (Dipel 2X DF) 26508	11	1.125 - 1.675 kg	455 - 678 g	24 h*	0	Will also control bud moth. Spray interval: 7 days under optimal conditions.
	cyantraniliprole (Exirel) 30895	28	500- 1000 mL	202- 404 mL	12 h	3	Apply when larvae are active. Do not apply more than 4 times/ season. Do not tank mix with Sovran, Flint, Pristine, copper or captan fungicides. Toxic to bees. Spray interval: 10 to 14 days.
	spinosad (Entrust) 30382	5	364 mL	147 mL	dry	7	Do not apply more than 3 times per season. Will reduce pansy spot. Spray interval: 7 to 10 days.
	spinetoram (Delegate) 28778	5	210-420 g	85-170 g	12 h	7	Apply when larvae are actively feeding but before they roll up in leaves. Do not apply more than 3 times per season. Use the higher rate under pest pressure and/or larger larvae. Spray interval: 14 days.
	methoxyfenozide (Intrepid) 27786	18	0.75 L	304 mL	12 h	14	Do not apply more than 2 times per season. Spray interval: 14 to 21 days.
	Bacillus thuringiensis (Foray) 24978	11	4.0 L	1.6 L	24 h*	0	Will also control bud moth. Spray interval: 7 days under optimal conditions.
	chlorantraniliprole (Altacor) 28981	28	145-285 g	59-115 g	12 h	5	Do not apply more than 3 times/season. For rates above 215 g/ha (87 g/ac), do not apply more than twice/season. Spray interval - 10 to 14 days.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	tebufenozide (Confirm) 24503	18	1 L	405 mL	dry- 12 h	14	Do not apply more than 4 times per season. Spray interva 10 to 14 days.
	pheromone (Isomate CM/LR TT) 28814	NC	750	300	n/a	0	Install before first moth flight. Will also aid in control of second generation codling moth.
							bmach poisons so complete coverage is important for Entrust and Delegate will suppress thrips.
Tentiform Leafminer	acetamiprid + novaluron (Cormoran) 33353	4 + 15	700 ml	283		14 days	Do not apply more than 6.9 L/ha. Spray interval - 12 days REIs: 7 days for thinning, 12 hours for all other activities.
	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Apply against egg (to control new hatch) and early sap feeder stages of first and second generation tentiform leafminers when locally established thresholds have beer reached. Add 0.25 - 1% spray oil/ spray mixture. Also controls leafroller and mites. Maximum 1 application per season.
	abamectin (Agri- Mek SC) 31607	6	170 mL	69 mL	dry	28	Apply with 0.25% superior oil. Do not apply more than once/season. Will also control rust mites and leafminer larvae. Residual control: 21 days.
	acetamiprid (Assail) 27128	4	80-120 g	32-48 g	12 h-6 days	7	Do not apply more than twice per season alone or alternate with Admire. Spray interval - 12 days. REIs of 2 days for scouting and 6 days is for thinning.
	spinetoram (Delegate) 28778	5	210-420 g	85-170 g	12 h	7	Apply at egg hatch or first sign of sap-feeder larvae. Do no apply more than 3 times per season. use higher rate unde high pest pressure. Spray interval: 7 days.
	methoxyfenozide (Intrepid) 27786	18	500 mL	200 mL	12 h	14	Apply at first egg hatch of first generation.Spray interval: 1 to 21 days.
	Spray interval: minim	um 10 da	ays. Admire and Alias	will no longer be regis	stered for	r use by gi	nes/season alone or alternately with other Group 4 products rowers as of April 11, 2021.
							nomic thresholds. Do not apply more than twice/season alon utch will no longer be registered for use by growers as of Ap
	control of leafminers	for the re		emical control is need			t generation tissue-feeder larvae in the spring will provide for resistance management. Avoid using Group 4 products
Mullein Bug (Campylomma)	acetamiprid + novaluron (Cormoran) 33353	4 + 15	840 - 1260 ml	340 - 510 ml	12 hrs to 7 days	14 days	Do not apply more than 6.9 L/ha. Spray interval - 12 days REIs: 7 days for thinning, 12 hours for all other activities.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	tetraniliprole (Vayego 200 SC) 33711	28	300 ml	121 ml	12 hours	7 days	Suppression only. Max 3 applications per year. Toxic to bees. Do not apply during pre-bloom or blooming period. Apply post-bloom only.
	sulfoxaflor (Closer) 30826	4C	400 mL	162 mL	12 h	7	Do not apply during bloom or when flowering weeds are present. Do not apply more than 2 times per season. Spra interval: minimum 7 days.
	acetamiprid (Assail) 27128	4	80-160 g	32-64 g	12 h-6 days	7	Will also control aphids. Do not apply more than once/season. See note below regarding repeated use. Do not apply during bloom. Spray interval - 12 days. REIs of a days for scouting and 6 days is for thinning.
	thiacloprid (Calypso) 28429	4	145-290 mL	59-117 mL	12 h	30	Do not apply more than once/season. See note below regarding repeated use. Spray interval: 14 to 21 days.
	10 days. Admire and Notes: Avoid using 0 problems. Ensure the	Alias wil Group 4 p prough co	I no longer be register products more than on overage. Fruit greater	ed for use by growers ce/season for Campy	as of Ap omma a are not a	oril 11, 202 nd more th affected by	note below regarding repeated use. Spray interval: minimur 21. nan twice/season for all other registered uses to prevent mit / campylomma feeding. Apply as early in petal fall as possib
Fruittree and European Leafrollers	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Add 0.25 - 1% spray oil/ spray mixture. Also controls mite Maximum 1 application per season.
	Bacillus thuringiensis (Bioprotec PLUS) 32425	11	1.8-2.5 L	0.73-1.0 L	24 h*	0	Will also control other leaf-feeding larvae present. See Notes.
	spinosad (Success) 26835	5	182 mL	74 mL	dry	7	Do not use more than 3 times/season. Will reduce pansy spot. Spray interval: 7 to 10 days.
	Bacillus thuringiensis (Bioprotec CAF) 26854	11	4.0 L	1.6 L	24 h*	0	Will also control other leaf-feeding larvae present. Spray interval: 7 days under optimal conditions.
	Bacillus thuringiensis (Dipel 2X DF) 26508	11	1.125 - 1.675 kg	455 - 678 g	24 h*	0	Will also control other leaf-feeding larvae present. Spray interval: 7 days under optimal conditions.
	cyantraniliprole (Exirel) 30895	28	500 - 1000 mL	202 - 404 mL	12 h	3	Apply when larvae are active. Do not apply more than 4 ti,es/season. Do not tank mix with Sovran, Flint, Pristine copper or captan fungicides. TOXIC to bees. Spray interva 10 to 14 days.
	spinosad (Entrust)	5	364 mL	147 mL	dry	7	Do not apply more than 3 times/season. Will reduce pans

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	30382						spot. Spray interval: 7 to 10 days.
	spinetoram (Delegate) 28778	5	210-420 g	85-170 g		7	Do not apply more than 3 times per year for all labeled uses. Spray interval: 14 days.
	Bacillus thuringiensis (Foray) 24978	11	4.0 L	1.6 L	24 h*	0	Will also control other leaf-feeding larvae present. Spray interval: 7 days under optimal conditions.
Western Flower Thrips	cyclaniliprole (Harvanta 50SL) 32889	28	1.2 - 1.6 L	485 - 647 ml	12	7 days	Toxic to bees. For suppression only. Do not make more than 3 applications per crop year. Where possible, rotate the use of Harvanta or other Group 28 insecticides with different groups that control the same pests.
San Jose Scale	spirotetramat (Movento 240 SC) 28953	23	365-585 mL	148-237 mL	12 h	7	Toxic to bees. Apply Movento with an adjuvant such as Agra 90 after petal fall. Do not exceed 1120 mL/ha/season. Also controls apple leaf curling midge. Spray interval: minimum 14 days.
Apple Leaf Curling Midge	spirotetramat (Movento 240 SC) 28953	23	365-585 mL	148-237 mL	12 h	7	Toxic to bees. Apply Movento with an adjuvant such as Agra 90 after petal fall. Do not exceed 1120 mL/ha/season. Spray interval: minimum 14 days. Do not apply until after petal fall. Apple leaf curling midge is not a problem in healthy bearing trees but control is essential in nursery and young plantings.
	spinetoram (Delegate) 28778	5	420 g	170 g	12 h	7	Toxic to bees. Do not apply to flowering crops or weeds if bees are visiting the treatment area. Maximum 3 applications per year. Application interval: 17 days.
White Apple Leafhopper	acetamiprid (Assail) 27128	4	80-120 g	32-48 g	12 h-6 days	7	Will also suppress aphids and leafminers. Do not apply this products alone or alternately with other Group 4 products more than twice/season (see additional notes). Spray interva - 12 days. REI of 2 days for scouting and 6 days is for thinning.
	thiacloprid (Calypso) 28429	4	145 mL	59 mL	12 h	30	Spray interval: 14 to 21 days.
	(see additional notes) longer be registered f). Spray for use b	interval: minimum 7 da y growers as of April 2	ays. Admire will no lor 11, 2021.	ger be re	egistered	rnately with other Group 4 products more than twice/season for use by growers as of April 11, 2021. Admire & Alias will no ucts/season. Spray interval: 10 to 14 days. Clutch will no
	longer be registered f	for use b	y growers as of April	11, 2021.			Alias, Clutch) more than twice/season for all registered uses.
Apple Clearwing Moth	novaluron (Rimon) 28515	15	1.4 L/1000 L of water	1.4 L/1000 L of water	12	14	Target larvae in the spring, apply when there is a lot of frass development. Direct spray on tree trunk with a hand gun or backpack sprayer. Do not apply more than 2 times/season.

nsect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
							Not recommended for summer applications as it may disrupt biological control of mites. Spray interval: 14 days.
Apple Scab	ipflufenoquin (Migiwa 20 SC) 35443	52	165 - 220 ml	66.8 - 89 ml	12 h	7 days	Make first application at green tip stage. The retreatment interval is 7 to 10 days. Do not make more than two sequential applications.
	mancozeb (Dithane Rainshield) 20553	M3	2-6 kg	0.81 - 2.4 kg	12 h - 35 d	77	Do not apply more than 24 kg/ha/year (18 kg a.i./ha//year of Dithane Rainshield Fungicide (e.g., 4 applications per year a 6.0/kg/ha or 8 applications at 3.0 kg/ha OR 12 applications a 2.0 kg/ha).
	impyrfluxam (Excalia Fungicide)	7	146 - 219 ml/ha	59 - 88.6 ml/ac	12 h	Petal fall	Green tip to petal fall only.
	hydrogen peroxide + peroxyacetic acid (Oxidate 2.0) 32907	NC	1 L/100 L of water (1% solution)	1 L/1000 L of water (1% solution)	4 h	0	Partial suppression. Start foliar/branch/stem applications before the disease occurs or at the first sign of disease and/or when weather conditions are favourable for disease development. Apply diluted spray to the point of run-off to achieve full and even coverage.
	extract of Swinglea glutinosa (EcoSwing) 35206	BM 01	1.75 - 2.35 L	0.71 - 0.95 L	4 h	0	Repeat application if measurable rain occurs within 2 to 3 hours of spraying.
	garlic powder (Buran) 30601	NC	9 L/500 L of water	9 L/500 L of water		0	The maximum rate of product in a single application is 18 L/ha. This product does not have protectant activity. It should be used as a post-infection treatment, applied after rainfall of when conditions are conducive to disease development. Application interval: before 350 degree hours (base 0 degrees C) after the beginning of the infection.
	pyraclostrobin + fluxapyroxad (Merivon) 33951	7 + 11	0.3 - 0.4 L	0.12 - 0.16 L	12 h - 12 days	5 days (hand harvest)	Limit sprays of Group 11 fungicides to 2 sprays/season. REI's: hand thinning - 12 days, hand harvesting - 5 days, mechanical harvesting and all other activities - 12 hours.
	mefentrifluconazole (Cevya) 33405	3	0.25 - 0.375 L	0.1 - 0.15 L	12 hours	0	Do not make more than 2 sequential applications before alternating to a non-group 3 fungicide registered for the same use. Begin applications prior to disease development. Apply an additional applic. at an interval of 7 - 10 days if disease persists or weather conditions are favourable for disease development.
	Isofetamid (Kenja) 31758	7	913 ml	369 ml	12 hours	20	Do not apply more than 2 consecutive Group 7 applications. Application interval: 10 to 14 days.
	benzovindiflupyr + difenoconazole	3+7	386 - 643 mL	156 - 260 mL	12 h	30	Tank mix with protectant fungicide for improved fruit scab control. Use high rate for mildew. Rotate with other fungicide

nsect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	(Aprovia Top) 31526						groups for resistance management. Do not apply more than 2.57 L/ha/season.
	copper octanoate (Cueva Commercial) 31825	M1	Prepare 0.5-2% solution (5-20 L/1000 L water)		4 h	1	Apply 470-940 L of mixture/ha (190-380 L/acre). Do not exceed 1% rate for varieties susceptible to russeting. Repea every 7-10 days as long as weather conditions favour disease development.
	benzovindiflupyr (Aprovia) 31981	7	300-500 mL	121-202 mL	12 h	30	For improved fruit scab control, tank mix with a protectant fungicide (see label). Rotate with other non-Group 7 products. Do not apply in two consecutive sprays nor more than 2 L/ha (1.0 L/acre) per season.
	fluazinam (Allegro) 27517	29	0.50 - 1.0 L	202 - 404 mL	25 h-3 days	28	Use highest rate and shortest interval for high disease pressure. Will also suppress mites. 3 days REI for thinning.
	difenoconazole + cyprodinil (Inspire Super) 30827	3+9	560 - 836 mL	227 - 338 mL	12 h	14	Limit sprays of group 3 fungicides (Nova, Inspire, Fullback) to 2 per season. Tank mix with a protectant fungicide (Dithane, Manzate, Polyram, Captan, Maestro)) for resistance management.
	flutriafol (Fullback) 31679	3	950 mL	385 mL	12 h	14	Tank mix with a full rate of a protectant such as Dithane, Manzate, Polyram, Captan or Maestro. Note that Dithane, Manzate and Polyram have a 45-day PHI. Limit sprays of group 3 fungicides (Nova, Inspire, Fullback) to 2/season for resistance management.
	myclobutanil (Nova 40WP) 22399	3	340 g	140 g	12 h - 12 days	14	Do not use as an eradicant treatment after bloom. Tank mix with the full rate of a protectant such as Dithane, Manzate, Polyram, Captan or Maestro. Note that Dithane, Manzate and Polyram have a 45-day PHI. Limit sprays of group 3 fungicides (Nova, Inspire, Fullback) to 2/season for resistance management. 12 days REI for thinning.
	kresoxim-methyl (Sovran) 26257	11	360 g	150 g	48 h	30	CAUTION: Sovran drift may injure cherries. Limit sprays of group 11 fungicides (Flint, Sovran, Pristine) to 2/season.
	trifloxystrobin (Flint) 30619	11	140 - 175 g	57 - 71 g	12 h – 4 days	14	Limit sprays of group 11 fungicides (Flint, Sovran, Pristine) to 2/season. 4 days REI for thinning.
	boscalid + pyraclostrobin (Pristine WG) 27985		1.0 - 1.2 kg	405 g - 485 g	dry to 12 days	5	Avoid more than 2 consecutive applications. Limit sprays of group 11 fungicides (Flint, Sovran, Pristine) to 2 per season 12 days REI for thinning.
	penthiopyrad (Fontelis) 30331	7	1.0-1.5 L	405-607 mL	12 h	28	Do not apply more than 3 times per season, or more than twice sequentially. Use high rate for high disease pressure.
	fluopyram	7 + 9	800 mL	323 mL	12 h	14	Do not apply more than 2 times per season.

nsect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	pyrimethanil (Luna						
	Tranquility) 30510						
	mancozeb (Manzate 28217, Penncozeb 30241 and 25397)	М3	6.0 kg	2.4 kg	12 h - 35 d	77	Do not apply more than 4 applications per year. Apply at a minimum of the 7-day interval.
	copper oxychloride (Copper Spray 19146)	M1	300 - 500 g/ha	121 - 202 g/ha	48 h	2 days	Maximum number of applications: 6. Reapply if needed a indicated by monitoring.
	captan (Captan Supra 33641, Maestro 33488)	M4	3 kg	1.2 kg	2 - 24 days	7	Do not apply Captan in combination with, immediately before, or closely following oil sprays. Do not use it during bloom. Early-season sprays may cause necrotic spotting to foliage of sensitive varieties. Apply at a minimum of a 7-da interval.
	this period.		č .				by keeping trees covered with protectant fungicides during
							soon after an infection period and still provide control.
Powdery Mildew (Apples)	ipflufenoquin (Migiwa 20 SC) 35443	52	165 - 220 ml	66.8 - 89 ml	12 h	7 days	The 165 ml/ha rate provides suppression of powdery milde If disease pressure is moderate or high or if control is required, use the 220 ml/ha rate. The retreatment interval 7 to 10 days. Do not make more than two sequential applications.
	impyrfluxam (Excalia Fungicide)	7	146 - 219 ml/ha	59 - 88.6 ml/ac	12 h	Petal fall	Green tip to petal fall only. Application must include a 100 organosilicone adjuvant, such as Xiameter, at 31.3 - 62.5 ml/100 L water.
	hydrogen peroxide + peroxyacetic acid (Oxidate 2.0) 32907	NC	1 L/100 L of water	1 L/1000 L of water	4 h	0	Start foliar/branch/stem applications before the disease occurs or at the first sign of disease and/or when weathe conditions are favourable for disease development. Apply diluted spray to the point of run-off to achieve full and eve coverage.
	garlic powder (Buran) 30601	NC	9 L/500 to 800 L of water	9 L/500 to 800 L of water		0	Disease control can be achieved under low to moderate disease pressure. Begin applications when conditions ar conducive to disease development. The addition of a registered non-ionic surfactant such as Agral 90 or AgSurf a rate of 0.1% could help to improve the spreading.
	fenazaquin (Magister SC) 34544	21 + 39	1.75 - 2.63 L	0.7 - 1.1 L	12 h - 17 days	10 days	Toxic to bees. Avoid application during bloom. Maximum number of applications: 1

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	Edge 31869, Kumulus 18836, Microthiol 29487						
	pyraclostrobin + fluxapyroxad (Merivon) 33951	7 + 11	0.3 - 0.4 L	0.12 - 0.16 L	12 h - 12 days	5 days (hand harvest)	Limit sprays of Group 11 fungicides to 2 sprays/season. REI's: hand thinning - 12 days, hand harvesting - 5 days, mechanical harvesting and all other activities - 12 hours.
	Mineral oil (Suffoil- X) 33099	NC	10 L/1000 L of water	10 L/1000 L of water	12 hours	0	Test for crop tolerance before widespread use. Apply at tight cluster and continue every 10-14 days. Avoid application during bloom. Do not use within 14 days before or after captan fungicide. Do not apply more than 8 applications per year.
	mefentrifluconazole (Cevya) 33405	3	0.25 - 0.375 L	0.1 - 0.15 L	12 hours	0	Do not make more than 2 sequential applications before alternating to a non-group 3 fungicide registered for the same use. Begin applications prior to disease development. Apply an additional applic. at an interval of 7 - 10 days if disease persists or weather conditions are favourable for disease development.
	Polyoxin D Zinc Salt (Diplomat 5SC) 32918	19	259 - 926 ml	104 - 374 ml		0 days	Suppression of powdery mildew. Begin as a preventative application when conditions favour disease development, 7 14 day spray interval. Number of applications: 3-10 depending on rate.
	benzovindiflupyr + difenoconazole (Aprovia Top) 31526	3+7	643 mL	260 mL	12 h	30	Rotate with other fungicides that do not contain Group 3 or Group 7 fungicides for resistance management. Do not apply more than 2 consecutive applications.
	benzovindiflupyr (Aprovia) 31981	7	500 mL	202 mL	12 h	30	Rotate with other non-Group 7 products. Do not apply in two consecutive sprays nor more than 2 L/ha (1.0 L/acre) per season.
	difenoconazole + cyprodinil (Inspire Super) 30827	3 + 9	836 mL	338 mL	12 h	14	Suppression of powdery mildew. Limit use of Group 3 fungicides (Nova, Inspire, Fullback) to 2 sprays/season.
	flutriafol (Fullback) 31679	3	585 - 877 mL	237 - 355 mL	12 h	14	Limit use of Group 3 fungicides (Nova, Inspire, Fullback) to 2 sprays/season. Rotate with fungicides from other groups.
	Bacillus subtilis (Serenade Opti) 31666	44	1.7-3.3 kg	0.69-1.3 kg	24 h*	0	Suppression only. Apply preventatively at 7- to 10-day intervals.
	calcium polysulphide (Lime sulphur 30%) 16465	M2	9 L/1000 L	9 L/1000 L	48 h	n/a	Lime sulphur may injure "sulphur shy" varieties or may cause injury during hot temperatures. May harm predatory mites.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	myclobutanil (Nova 40WP) 22399	3	340 g	140 g	12 h - 12 days	14	Limit use of Group 3 fungicides (Nova, Inspire, Fullback) to 2 sprays/season. Rotate with fungicides from other groups. 12 days REI for thinning.
	kresoxim-methyl (Sovran) 26257	11	240 - 450 g	100 - 182 g	48 h	30	CAUTION: Sovran drift may injure cherries. Limit sprays of Group 11 fungicides (Flint, Sovran, Pristine) to 2/season for resistance management. Rotate with fungicides from other groups.
	trifloxystrobin (Flint) 30619	11	140 - 210 g	57 - 85 g	12 h – 4 days	14	Limit sprays of Group 11 fungicides (Flint, Sovran, Pristine) to 2/season for resistance management. Rotate with fungicides from other groups. CAUTION: Sovran may injure cherries. 4 days REI for thinning.
	thiophanate-methyl (Senator 50SC) 32096	1	3.15 L	1.27 L	24 h*	1	May harm predatory mites. Maximum 2 applications per season.
	mineral oil (Purespray Green) 27666	NC	10 L	4 L	12 h	0	For suppression of powdery mildew, apply in a minimum of 1000 L water/ha at tight cluster and repeat at 10-14 day intervals. Do not use in combination with or within 14 days of sprays containing sulphur or captan.
	boscalid + pyraclostrobin (Pristine WG) 27985	7 + 11	1.0 - 1.2 kg	405 g - 485 g	dry to 12 days	5	Limit sprays of Group 11 fungicides (Flint, Sovran, Pristine) to 2/season for resistance management. Rotate with other fungicides. Use the higher rate during pink to bloom stages. Caution: Sovran drift may injure cherries. 12 days REI for thinning.
	penthiopyrad (Fontelis) 30331	7	1.0-1.5 L	405-607 mL	12 h	28	Do not apply more than 3 times per season, or more than twice sequentially. Use high rate for high disease pressure.
	fluopyram pyrimethanil (Luna Tranquility) 30510	7+9	600 mL	242 mL	12 h	14	Use preventatively. Do not apply more than 2 times per season.
	Notes: Additional not			ferent groups for resist	ance ma	anagemen	
Fire Blight	copper octanoate (Cueva Commercial) 31825	M1	Prepare 0.5-2% solution (5-20 L/1000 L water)		4 h	1	Apply 470-940 L of mixture/ha. Repeat every 7-10 days as long as weather conditions favour disease development (maximum 6 applications per season). See Fire blight description.
	prohexadione calcium (Apogee) 28042	n/a	1350 g	546 g	12 h	45	For suppression of shoot blight, apply at 2.5 to 7.5 cm of new shoot growth with subsequent applications at 14-21 day intervals. Max. 4 sprays/yr. Will also reduce shoot growth.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
European Red Mite	pyridaben (Nexter SC) 33433	21	500 ml	202 ml	24 h	25 days	Do not apply more than twice per year. Controls rust mite. Residual control: 7-10 days.
	fenazaquin (Magister SC) 34544	21 + 39	1.75 - 2.34 L	0.7 - 0.95 L	12 h - 17 days	10 days	Toxic to bees. Avoid application during bloom. Maximum number of applications: 1
	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Apply before a threshold of five spider mites per leaf is reached. Add 0.25 - 1% spray oil/ spray mixture. Also controls leafroller and mites. Maximum 1 application per season.
	cyflumetofen (Nealta) 31284	25	1 L	405 mL	12 h	7	For control of all life stages. Do not apply more than 2 times/season. Not for rust mite control. Spray interval: 14 days.
	abamectin (Agri- Mek SC) 31607	6	170 mL	69 mL	dry	28	Apply with 0.25% superior oil. Do not apply more than once/season. Will also control rust mites and leafminer larvae. Residual control: 21 days.
	acequinocyl (Kanemite) 28641	20B	2.1 L	850 mL	12 h	14	Do not apply more than twice per season. For control of al life stages. Spray interval: 21 days.
	pyridaben (Nexter) 25135	21	300 g	120-240 g	24 h	25	Maximum 2 applications per season. Residual control: 7-10 days.
	spirodiclofen (Envidor) 28051	23	750 mL	300 mL	12 h	7	Use Envidor only once per season. Spray interval: minimur 7 days.
	mineral oil (Purespray Green) 27666	NC	10 L	4 L	12 h	0	For suppression only. Begin applications when mites first appear, allow 10-14 days between applications. Do not us within 14 days of captan or sulphur. Post harvest sprays ma be made to reduce over-wintering pressure.
	bifenazate (Acramite) 27925	20D	851 g	344 g	12 h	7	Not for rust mite control. Residual control: 21 days.
	once per season. The	e presen		latory mites should fire			stance. Do not apply products from the same group more that sing a mite counting service before spraying. Apply the
McDaniel, wospotted Spider	pyridaben (Nexter SC) 33433	21	500 - 1000 ml	202 404 ml	24 h	25 days	Do not apply more than twice per year. Controls rust mite Residual control: 7-10 days.
Mites	fenazaquin (Magister SC) 34544	21 + 39	1.75 - 2.34 L	0.7 - 0.95 L	12 h - 17 days	10 days	Toxic to bees. Avoid application during bloom. Maximum number of applications: 1
	Mineral oil (Suffoil- X) 33099	NC	10 L/1000 L of water	10 L/1000 L of water	12 hours	0	Test for crop tolerance before widespread use. Apply ever 10 - 14 days,depending on level of pest pressure. Do not us within 14 days before or after captan fungicide. Do not app

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
							more than 8 applications per year.
	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Apply before a threshold of five spider mites per leaf is reached. Add 0.25 - 1% spray oil/ spray mixture. Also controls leafrollers. Maximum 1 application per season.
	cyflumetofen (Nealta) 31284	25	1 L	405 mL	12 h	7	For control of all life stages. Do not apply more than 2 times/season. Not for rust mite control. Spray interval: 14 days.
	abamectin (Agri- Mek SC) 31607	6	170 mL	69 mL	dry	28	Apply with 0.25% superior oil. Do not apply more than once/season. Will also control rust mites and leafminer larvae. Residual control: 21 days.
	acequinocyl (Kanemite) 28641	20B	2.1 L	850 mL	12 h	14	Do not apply more than 2 times/season. Spray interval: 21 days.
	pyridaben (Nexter) 25135	21	300 - 600 g	120 - 240 g	24 h	25	Maximum two applications per season. Residual control: 7-10 days.
	spirodiclofen (Envidor) 28051	23	750 mL	300 mL	12 h	7	Use only once/season. Spray interval: minimum 7 days.
	bifenazate (Acramite) 27925	20D	851 g	344 g	12 h	7	Does not control rust mites. Residual control: 21 days.
		ne preval	ence of predatory mit	es should first be dete			istance. Do not apply products from the same group more counting services before spraying. Apply the products in
Rust Mites and Pearleaf Blister	pyridaben (Nexter SC) 33433	21	500 ml	202 ml	24 h	25 days	Do not apply more than twice per year. Residual control: 7-10 days.
Mite	fenazaquin (Magister SC) 34544	21 + 39	1.75 L	0.7 L	12 h - 17 days	10 days	Toxic to bees. Avoid application during bloom. Maximum number of applications: 1
	abamectin (Agri- Mek SC) 31607	6	170 mL	69 mL	dry	28	Apply with 0.25% superior oil. Do not apply more than once/season. Will also control leaf mites and leafminer larvae. Residual control: 21 days.
	pyridaben (Nexter) 25135	21	300 g	120 - 240 g	24 h	25	Maximum 2 applications per season. Residual control: 7-10 days.
	spirodiclofen (Envidor) 28051	23	750 mL	300 mL	12 h	7	Apply only once per season. Spray interval: minimum 7 day
Apple Clearwing Moth	Chlorantraniliprole (Altacor MaX) 34654	28	143 g	58 g	12 h	5	Apply specified amount as a spray to wet application to the bottom 60 cm of tree trunk, at the first sign of apple clearwir moth feeding. Apply at first egg hatch based on pheromon- trap catches and degree days after biofix. Apply to eggs o

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
							322 g/ha (130 g/ac) per season. Do not apply more than 3 times per season for all labeled uses. Spray interval: 10 - 1 days.
	spinosad (Success) 26835	5	125 mL	50 mL	dry	7	Thoroughly spray lower trunk using a hand-gun sprayer. Apply within 10 days of first moth emergence, and repeat a 7 - 10 day intervals up to a maximum of 7 applications/season.
	spinosad (Entrust) 30382	5	364 mL	147 mL	dry	7	Thoroughly spray lower trunk using a hand gun sprayer. Apply within 10 days of first adult emergence, and repeat a 7-10 day intervals up to a maximum of 7 applications.
	spinetoram (Delegate) 28778	5	420 g	170 g	12 h	7	For suppression only. Apply 1-2 applications 14 days apart targeting young larvae. Direct spray on trunk particularly o graft unions and pruning cuts using a handgun or backpac sprayer. Use spray volume of 1500-2000 L/ha to ensure thorough coverage. Do not apply more than 3 times per season for all labeled uses. Spray interval: 14 days.
	chlorantraniliprole (Altacor) 28981	28	285 g	115 g	12 h	5	Apply specified amount as a spray to wet application to the bottom 60 cm of tree trunk, at the first sign of apple clearwin moth feeding. Apply at first egg hatch based on pheromon trap catches and degree days after biofix. Apply to eggs o first instar larvae to control each generation. Do not excee 645 g/ha (261 g/ac) per season. Do not apply more than 3 times per season for all labeled uses. Spray interval: 10 - 1 days.
	Notes: Use pheromo required to ensure pro			ng of adult emergence	. Adult a	ctivity may	occur from early June to mid August, but monitoring is
Codling Moth	Chlorantraniliprole (Altacor MaX) 34654	28	73 - 108 g	30 - 44 g	12 h	5	Apply at first egg hatch based on pheromone trap catches and degree days after biofix. Controls eggs and larvae. Als controls leafroller. Do not exceed 322 g/ha (130 g/ac) per season. Will provide control of apple clearwing moth.
	GS-omega/kappa- Hxtx-Hv1a (Spear Lep) 34678	32	1.2 - 2.3 L	486 - 931 mL	4 h	0	Tank mix with the low labelled rate of a Bacillus thuringiens (Bt) product registered on the same crop for control of caterpillars such as Bioprotec, Dipel or Foray. Use a spreader/sticker or non-ionic surfactant (0.125%) to enhan the adhesion of Spear Lep.
	Cydia pomonella granulovirus (CpGV) isolate V-22 (Madex	NC	50 - 100 ml	20 - 40 ml	4 hours	0	The pH of tank solution should range between 5 and 8.5. Use the high rate under high pest pressure or when reapplication interval is longer than 6 days. Max 5

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	HP) 34116						applications per year.
	acetamiprid + novaluron (Cormoran) 33353	4 + 15	1050 - 1260 ml	425 - 510 ml	12 hrs to 7 days	14 days	Do not apply more than 6.9 L/ha. Spray interval - 12 days. REIs: 7 days for thinning, 12 hours for all other activities.
	tetraniliprole (Vayego 200 SC) 33711	28	225 ml	91 ml	12 hours	7 days	Max 3 applications per year. Toxic to bees. Do not apply during pre-bloom or blooming period. Apply post-bloom only Apply before egg hatch for first and second generation codling moth based on pheremone trap captures and degree days after biofix. Also controls leafroller.
	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Apply before egg hatch for first generation and at first egg hatch for second generation codling moth based on pheromone trap catches and degree days after biofix. Add 0.25 - 1% spray oil/ spray mixture. Also controls leafroller and mites. Maximum 1 application per season.
	cyclaniliprole (Harvanta 50SL) 32889	28	1.2 - 1.6 L	485 - 647 ml	12	7 days	Toxic to bees. Do not make more than 3 applications per crop year. Where possible, rotate the use of Harvanta or other Group 28 insecticides with different groups that contro the same pests.
	cyantraniliprole (Exirel) 30895	28	500- 750 mL	202- 304 mL	12 h	3	Apply before egg hatch for first generation and at first egg hatch for second generation codling moth based on pheromone trap catches and degree days after biofix. Also controls leafroller. Do not tank mix with Sovran, Flint, Pristine, copper or captan fungicides. Toxic to bees. Spray interval: 10 to 14 days.
	phosmet (Imidan 70% WP) 29064	1B	2.68 kg	1.08 kg	12 h - 9 days	22	Controls larvae. Highly toxic to bees. Minimum interval between sprays: 14 days. Max applications per season: 2. A hand thinning must occur prior to application.
	granulovirus (Virosoft) 26533	NC	250 mL	100 mL	24 h*	0	Slow acting, with no leafroller control. Virus must be ingeste to be effective. Apply product in late afternoon or on a cloud day to avoid direct exposure to sunlight. Spray interval: 14 days.
	acetamiprid (Assail) 27128	4	240 g	97 g	12 h-6 days	7	Do not apply more than twice per season. Will also control aphids, leafminer & leafhoppers. Toxic to bees. Spray interval - 12 days. REI of 6 days is for thinning.
	thiacloprid (Calypso) 28429	4	290-440 mL	117-178 mL	12 h	30	Controls larvae, will also control aphids. Does not control leafrollers. Low toxicity to bees, but high toxicity to lacewings. Use low rate for first brood if low to moderate pressure. Do not exceed a total of 870 mL/ha (352 mL/ac)

Insect or Disease	pment: Summer Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
							per season. Spray interval: 14 to 21 days.
	novaluron (Rimon)	15	0.93 - 1.4 L / 1000 L	0.376 - 0.566 L /	12 h	14	Controls eggs and larvae. Will also control leafroller eggs. Do
	28515		water	1000 L water			not apply more than 4 times or 11 L/ha/season. May disrupt
							biological control of mites. Spray interval: 10 to 14 days.
	spinosad (Entrust)	5	364 mL	147 mL	4 h	7	Suppression only. Approved for organic fruit production.
	30382						Spray interval: 7 to 10 days.
	spinetoram	5	420 g	170 g	12 h	7	Apply at first egg hatch based on pheromone trap catches
	(Delegate) 28778						and degree days after biofix. Control larvae before they enter
							fruit. Do not apply more than 3 times per season. Use higher
							rate under high pest pressure. Also controls leafroller. Spray
							interval: 14 days.
	methoxyfenozide (Intrepid) 27786	18	1 L	405 mL	12 h	14	Controls eggs and larvae. Do not apply more than 2 times per season. Spray interval: 14 to 21 days.
	chlorantraniliprole (Altacor) 28981	28	145-215 g	58-86 g	12 h	5	Apply at first egg hatch based on pheromone trap catches and degree days after biofix. Controls eggs and larvae. Also controls leafroller. Do not exceed 645 g/ha (261 g/ac) per season. Will provide control of apple clearwing moth.
	tebufenozide	18	1 L	405 mL	dry-	14	Do not use if there is resistance to Group 1 insecticides or if
	(Confirm) 24503				12 h		pest pressure is moderate to high. Do not apply more than 4 times/season. Spray interval: 10 to 14 days.
	mineral oil (Purespray Green) 27666	NC	10 L	4 L	12 h	0	Apply at or just before egg laying. Apply in a minimum of 1000L water/ha. Do not use in combination with or within 14 days of sulphur or captan. Also provides control of aphids and suppression of mites and powdery mildew.
	Notes: For suppress	ion only	Do not apply more that	an a total of 420 g/ha/	(170 g/a	c)/season	. Spray interval: 14 days. Clutch will no longer be registered
	for use by growers as			J	(J.	,	
	Notes: Thorough and bud moth larvae pres	d timely ent. Avo	spray coverage is esse bid using Group 4 prod	ucts more than twice/s	season fo	or all regis	ot in Groups 1B and 4-4A will also control any leafroller and stered uses to prevent mite problems. Group 4 products will a product was used in the spring, do not use again in the
Eyespotted Bud	Chlorantraniliprole	28	73 - 143 g	30 - 58 g	12 h	5	Apply at pink to petal fall when larvae are active. Do not
Moth	(Altacor MaX) 34654		10 170 9	00 00 g			apply more than 3 times per season. Spray interval - 10 to 14 days.
	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Add 0.25 - 1% spray oil/ spray mixture. Also controls leafroller and mites. Maximum 1 application per season.
	spinosad (Success) 26835	5	182 mL	74 mL	dry	7	Do not apply more than 3 times/season. Spray interval: 7 to 10 days.

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	cyantraniliprole (Exirel) 30895	28	500- 1000 mL	202- 404 mL	12 h	3	Do not apply more than 4 times per season. Do not tank mix with Sovran, Flint, Pristine, copper or captan fungicides. Toxic to bees. Spray interval: 10 to 14 days.
	spinosad (Entrust) 30382	5	364 mL	147 mL	dry	7	Do not apply more than 3 times per season. Spray interval: to 10 days.
	spinetoram (Delegate) 28778	5	210-420 g	85-170 g	12 h	7	Apply at first egg hatch. Use the higher rate under high pes pressure and/or larger larvae. Spray interval: 14 days.
	chlorantraniliprole (Altacor) 28981	28	145-285 g	59-115 g	12 h	5	Apply when larvae are active. Do not apply more than 3 times per season.
	leafroller will also cor	trol bud	moth larvae present.	An effective spring cor	ntrol prog	ram will r	ed by a petal fall spray. Blossom sprays applied against educe the need to control the summer generation.
Obliquebanded and Threelined	Chlorantraniliprole (Altacor MaX) 34654		73 - 143 g	30 - 58 g	12 h	5	Apply when larvae become active. Do not apply more than 3 times/ season. Spray interval: 10 to 14 days (see label).
Leafrollers	GS-omega/kappa- Hxtx-Hv1a (Spear Lep) 34678	32	1.2 - 2.3 L	486 - 931 mL	4 h	0	Tank mix with the low labelled rate of a Bacillus thuringiensis (Bt) product registered on the same crop for control of caterpillars such as Bioprotec, Dipel or Foray. Use a spreader/sticker or non-ionic surfactant (0.125%) to enhance the adhesion of Spear Lep.
	tetraniliprole (Vayego 200 SC) 33711	28	225 ml	91 ml	12 hours	7 days	Max 3 applications per year. Toxic to bees. Do not apply during pre-bloom or blooming period. Apply post-bloom only
	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Add 0.25 - 1% spray oil/ spray mixture. Also controls mites Maximum 1 application per season.
	cyclaniliprole (Harvanta 50SL) 32889	28	1.2 - 1.6 L	485 - 647 ml	12	7 days	Toxic to bees. Do not make more than 3 applications per crop year. Where possible, rotate the use of Harvanta or other Group 28 insecticides with different groups that contro the same pests.
	spinosad (Success) 26835	5	182 mL	74 mL	dry	7	Do not apply Group 5 products (Success, Entrust, Delegate more than 3 times/season. Will also control eyespotted buc moth larvae present. Spray interval: 7 to 10 days.
	cyantraniliprole (Exirel) 30895	28	500- 1000 mL	202- 404 mL	12 h	3	Monitor adult moth flight and apply at first egg hatch. Do no tank mix with Sovran, Flint, Pristine, copper or captan fungicides. Toxic to bees. Spray interval: 10 to 14 days.
	spinosad (Entrust) 30382	5	364 mL	147 mL	dry	7	Do not apply more than 3 times per season. Will also control eyespotted bud moth. Will reduce pansy spot. Spray interva 7 to 10 days.
	spinetoram	5	210-420 g	85-170 g	12 h	7	Do not apply more than 3 times per season. Use the higher

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes									
	(Delegate) 28778						rate under high pest pressure and/or larger larvae. Will also control eyespotted bud moth present. Spray interval: 14 days.									
	methoxyfenozide (Intrepid) 27786	18	0.75 L	304 mL	12 h	14	Do not apply more than 2 time/season. Will also control eyespotted bud moth. Spray interval: 14 to 21 days.									
	chlorantraniliprole (Altacor) 28981	28	145-285 g	59-115 g	12 h	5	Monitor adult moth flight and apply at first egg hatch. Do no apply more than 3 times/season, for rates above 215 g/ha (87 g/ac), do not apply more than twice/season.									
	tebufenozide (Confirm) 24503	18	1 L	405 mL	dry- 12 h		Do not apply more than 4 times/season. Will also control eyespotted bud moth.									
	pheromone (Isomate CM/LR TT) 28814	NC	750	300	n/a	0	Install before first moth flight. Will also aid in control of summer generation of codling moth.									
	Notes: Altacor, Confi satisfactory control.	irm, Intre	pid, Delegate, Exirel,	Success, Bt products			e stomach poisons so complete coverage is important for									
Tentiform Leafminer	acetamiprid + novaluron (Cormoran) 33353	4 + 15	700 ml	283	12 hrs to 7 days	14 days	Do not apply more than 6.9 L/ha. Spray interval - 12 days. REIs: 7 days for thinning, 12 hours for all other activities.									
	abamectin + cyantraniliprole (Minecto Pro) 33023	6 + 28	496 mL	201 mL	12 h	28	Apply against egg (to control new hatch) and early sap feeder stages of first and second generation tentiform leafminers when locally established thresholds have been reached. Add 0.25 - 1% spray oil/ spray mixture. Also controls leafroller and mites. Maximum 1 application per season.									
	abamectin (Agri- Mek SC) 31607	6	170 mL	69 mL	dry	28	Apply with 0.25% superior oil. Do not apply more than once/season. Will also control leaf and rust mites. Residua control: 21 days.									
	acetamiprid (Assail) 27128	4	80-120 g	32-48 g	12 h-6 days	7	Will also control aphids and leafhoppers. Do not apply more than twice per season alone or alternately. Spray interval - 12 days. REIs of 2 days for scouting and 6 days is for thinning.									
	spinetoram (Delegate) 28778	5	210-420 g	85-170 g	12 h	7	Apply at egg hatch or first sign of sap-feeder larvae. Do not apply more than 3 times per season. Use higher rate under high pest pressure. Spray interval: 14 days.									
	and Alias will no long	er be reg	istered for use by gro	owers as of April 11, 20)21.		lone or alternately. Spray interval: minimum 10 days. Admire									
					Notes: The leafminer parasite is an effective biological control agent. 30% parasitism of first generation tissue-feeder larvae in the spring will provide control of leafminers for the rest of the season. If chemical control is needed rotate products for resistance management.											

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
Apple Grain Aphid	acetamiprid + novaluron (Cormoran) 33353	4 + 15	700 - 1050 ml	283 - 425 ml	12 hrs to 7 days	14 days	Do not apply more than 6.9 L/ha. Spray interval - 12 days. REIs: 7 days for thinning, 12 hours for all other activities.
	tetraniliprole (Vayego 200 SC) 33711	28	150 ml	61 ml	12 hours	7 days	Suppression only. Max 3 applications per year. Toxic to bees. Do not apply during pre-bloom or blooming period. Apply post-bloom only.
	Mineral oil (Suffoil- X) 33099	NC	10 L/1000 L of water	10 L/1000 L of water	12 hours	0	Test for crop tolerance before widespread use. Apply every 10 - 14 days,depending on level of pest pressure. Do not use within 14 days before or after captan fungicide. Do not apply more than 8 applications per year.
	flupyradifurone (Sivanto Prime) 31452	4D	500-750 mL	202-304 mL	12 h	14	Minimum interval between applications: 10 days. Maximum amount per season: 2000 mL/ha (810 mL/acre). Chemical control is rarely needed.
Apple Aphid	acetamiprid + novaluron (Cormoran) 33353	4 + 15	700 - 1050 ml	283 - 425 ml	12 hrs to 7 days	14 days	Do not apply more than 6.9 L/ha. Spray interval - 12 days. REIs: 7 days for thinning, 12 hours for all other activities.
	tetraniliprole (Vayego 200 SC) 33711	28	150 ml	61 ml	12 hours	7 days	Suppression only. Max 3 applications per year. Toxic to bees. Do not apply during pre-bloom or blooming period. Apply post-bloom only.
	Mineral oil (Suffoil- X) 33099	NC	10 L/1000 L of water	10 L/1000 L of water	12 hours	0	Test for crop tolerance before widespread use. Apply every 10 - 14 days,depending on level of pest pressure. Do not use within 14 days before or after captan fungicide. Do not apply more than 8 applications per year.
	afidopyropen (Versys) 33266	9D	0.1 L	0.04 L	12 hrs	7 days	Allow 7 days between applications. Do not apply more than 4 times per season. For resistance management, rotate with another insecticide group after 2 applications.
	flupyradifurone (Sivanto Prime) 31452	4D	500-750 mL	202-304 mL	12 h	14	Minimum interval between applications: 10 days. Maximum amount per season: 2000 mL/ha (810 mL/acre)
	malathion (Malathion 85E) 8372	1B	610 - 880 mL/1000 L water		12 h - 3 days	3	Harmful to beneficial insects that attack aphids. Apply the spray mixture in sufficient volume to ensure thorough coverage. Only two applications per year. Spray interval: 10 days.
	flonicamid (Beleaf) 29796	29	160 g	65 g	12 h-2 days	21	Field reports indicate the rates may not provide satisfactory level of control. 2 days REI for thinning.
	sulfoxaflor (Closer) 30826	4C	100 - 200 mL	40 - 80 mL	12 h	7	Do not apply more than 2 times/season. Spray interval: minimum 7 days.
	spirotetramat	23	365-435 mL	148-176 mL	12 h	7	Apply Movento with an adjuvant such as Agral 90. Do not

Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes
	Product Choices					(days)	
	(Movento 240 SC)						exceed 1830 mL Movento/ha (741 mL/acre) per season.
	28953						Also controls woolly apple aphid and apple leaf curling
			00.400	00.40			midge. Toxic to bees. Spray interval: minimum 14 days.
	acetamiprid (Assail)	4	80-120 g	32-48 g	12 h-6	7	Do not apply Group 4 insecticides more than 2 times/seasor
	27128				days		to avoid possible mite problems. Spray interval - 12 days. REIs of 2 days for scouting and 6 days is for thinning.
			opper and leafminer. D mire and Alias will no l				1 2 times/season to avoid possible mite problems. Spray as of April 11, 2021.
		group 4	insecticides more than				oblems. Spray interval: 10 to 14 days. Clutch will no longer be
Rosy Apple Aphid	acetamiprid +	4 + 15	700 - 1050 ml	283 - 425 ml	12 hrs	14 days	Do not apply more than 6.9 L/ha. Spray interval - 12 days.
,	novaluron				to 7		REIs: 7 days for thinning, 12 hours for all other activities.
	(Cormoran) 33353				days		
	tetraniliprole	28	150 ml	61 ml	12	7 days	Suppression only. Max 3 applications per year. Toxic to
	(Vayego 200 SC)				hours		bees. Do not apply during pre-bloom or blooming period.
	33711						Apply post-bloom only.
	Mineral oil (Suffoil-	NC	10 L/1000 L of water	10 L/1000 L of water	12	0	Test for crop tolerance before widespread use. Apply every
	X) 33099				hours		10 - 14 days, depending on level of pest pressure. Do not use within 14 days before or after captan fungicide. Do not apply more than 8 applications per year.
	afidopyropen (Versys) 33266	9D	0.1 L	0.04 L	12 hrs	7 days	Allow 7 days between applications. Do not apply more than 4 times per season. For resistance management, rotate with another insecticide group after 2 applications.
	flupyradifurone (Sivanto Prime) 31452	4D	500-750 mL	202-304 mL	12 h	14	Minimum interval between applications: 10 days. Maximum amount per season: 2000 mL/ha (810 mL/acre).
	cyantraniliprole (Exirel) 30895	28	750- 1500 mL	304- 607 mL	12 h	3	Do not apply more than 4 times/season. Do not tank mix with Sovran, Flint, Pristine, copper or captan fungicides. Toxic to bees.Spray interval: 10 to 14 days.
	malathion	1B	610 - 880 mL/1000		12 hr -	3	This product is harmful to beneficial insects that attack
	(Malathion 85E)		L		3		aphids. Apply the spray mixture in sufficient volume to
	8372				days		ensure thorough coverage. Only two applications per year. Spray interval: 10 days.
	flonicamid (Beleaf) 29796	29	160 g	65 g	12 h-2 days	21	Experience in the field indicates there may be issues with current label rate. 2 days REI for thinning.
	sulfoxaflor (Closer) 30826	4C	100-200 mL	40-80 mL	12 h	7	Do not apply more than 2 times/season. Spray interval: minimum 7 days.
	spirotetramat	23	365- 435 mL	148- 176 mL	12 h	7	Apply Movento with an adjuvant such as Agral 90. Do not

Insect or Disease	pment: Summer Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes
	(Movento 240 SC) 28953						exceed 1830 mL Movento/ha (741 mL/acre) per season. Also controls woolly apple aphid. Toxic to bees. Spray interval: minimum 14 days.
	acetamiprid (Assail) 27128	4	80-120 g	32-48 g	12 h-6 days	7	Do not apply this products alone or alternately with other Group 4 products more than twice/season (see additional notes). Will also control white apple leafhopper. Spray interval - 12 days. REIs of 2 days for scouting and 6 days is for thinning.
	mineral oil (Purespray Green) 27666	NC	10 L/1000 L water	10 L/1000 L water	12 h	n/a	Do not use within 14 days before or after captan or sulphu
	alone or alternately of for use by growers as	or agains s of April	t any other pests the ro 11, 2021.	emainder of the seaso	n. Spray	r interval: r	ted in mite problems, do not apply more than twice per seaso ninimum 7 days. Admire and Alias will no longer be registere
							nger be registered for use by growers as of April 11, 2021.
Woolly Apple Aphid	acetamiprid + novaluron (Cormoran) 33353	4 + 15	700 - 1050 ml	283 - 425 ml	12 hrs to 7 days	14 days	Do not apply more than 6.9 L/ha. Spray interval - 12 days REIs: 7 days for thinning, 12 hours for all other activities.
	tetraniliprole (Vayego 200 SC) 33711	28	150 ml	61 ml	12 hours	7 days	Suppression only. Max 3 applications per year. Toxic to bees. Do not apply during pre-bloom or blooming period. Apply post-bloom only.
	Mineral oil (Suffoil- X) 33099	NC	10 L/1000 L of water	10 L/1000 L of water	12 hours	0	Test for crop tolerance before widespread use. Apply ever 10 - 14 days,depending on level of pest pressure. Do not us within 14 days before or after captan fungicide. Do not app more than 8 applications per year.
	malathion (Malathion 85E) 8372	1B	610 mL /1000 L		24 h*	3	This product is harmful to beneficial insects that attack aphids. Apply the spray mixture in sufficient volume to ensure thorough coverage. Only two applications per year Spray interval: 10 days.
	flonicamid (Beleaf) 29796	29	160 g	65 g	12 h-2 days	21	Experience in the field indicates there may be issues with current label rate. 2 days REI for thinning.
	sulfoxaflor (Closer) 30826	4C	400 mL	162 mL	12 h	7	For suppression only. Do not apply more than twice/season Spray interval: minimum 7 days.
		more that		/ interval: 10 to 14 day			nger be registered for use by growers as of April 11, 2021.
Stink Bugs	fenpropathrin (Danitol) 33817	3	779 - 1559 ml	315 - 631 ml	24 h - 23 days	16 days	Toxic to bees. Do not apply during bloom. REI/PHI's: 23 days (thinning), 16 days (hand harvesting), 7 days (scoutin hand pruning), 14 days (mechanical harvesting), 24 hours
							(all other activities). Pests controlled: exclude Brown

Insect or Disease	Recommended Product Choices	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³ (days)	Precautions and Notes					
							marmorated stink bug					
	Notes: There are no some control. Check			ield advisor. Products	registere	d for brow	n marmorated stink bugs (Actara and Clutch) will provide					
White Apple Leafhopper	flupyradifurone (Sivanto Prime) 31452	4D	500-750 mL	202-304 mL	12 h	14	Minimum interval between applications: 10 days. Maximum amount per season: 2000 mL/ha (810 mL/acre).					
	acetamiprid (Assail) 27128	4	80-120 g	32-48 g	12 h-6 days	7	Will also suppress aphids and leafminers. Do not apply this products alone or alternately with other Group 4 products more than twice/season (see additional notes). Spray interva - 12 days. REIs of 2 days for scouting and 6 days is for thinning.					
	thiacloprid (Calypso) 28429	4	145 mL	59 mL	12 h	30	Do not apply more than twice/season. Spray interval: 14 to 21 days.					
	Notes: Will also control aphid and leafminer. Do not apply more than twice per season. See note below. Spray interval: minimum 7 days. Admire and Alias will no longer be registered for use by growers as of April 11, 2021.											
		Notes: Do not apply more than twice/season. Spray interval: 10 to 14 days. Clutch will no longer be registered for use by growers as of April 11, 2021. Notes: Avoid using Group 4 products more than twice/season for all registered uses to prevent mite problems.										
		Froup 4 p		ice/season for all regis	stered us	es to prev						
San Jose Scale	flupyradifurone (Sivanto Prime) 31452	4D	750-1000 mL + 0.25% oil	304-405 mL + 0.25% oil	12 h	14	Minimum interval between applications: 10 days. Maximum amount per season: 2000 mL/ha (810 mL/acre).					
	sulfoxaflor (Closer) 30826	4C	200-400 mL	80-160 mL	12 h	7	Do not apply more than twice/season. Spray interval: minimum 7 days.					
	spirotetramat (Movento 240 SC) 28953	23	365-585 mL	148-237 mL	12 h	7	Apply Movento with an adjuvant such as Agral 90. Do not exceed 1830 mL Movento/ha (741 mL/acre) per season. Also controls woolly apple aphid. Toxic to bees. Spray interval: minimum 14 days.					
	Notes: Use sufficient density trees in order			с 3.	rage of th	ne tree lim	bs and trunks. Leave lower nozzles on when spraying high					
Mealybugs	spirotetramat (Movento 240 SC) 28953	23	365-585 mL	148-237 mL	12 h		Apply Movento with an adjuvant such as Agral 90 after. Minimum interval between applications: 14 days. Maximum 1.83 L/ha (741 mL/acre) per season.					
Apple Leaf Curling Midge	spirotetramat (Movento 240 SC) 28953	23	365-585 mL	148-237 mL	12 h	7	Suppression only. Maximum of 2 applications per season. Minimum interval between sprays: 14 days.					
	spinetoram (Delegate) 28778	5	420 g	170 g	12 h	7	Toxic to bees. Do not apply to flowering crops or weeds if bees are visiting the treatment area. Maximum 3 applications per year. Application interval: 17 days.					

Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes					
	Product Choices					(days)						
	Cygon/Lagon applied	against	other pests of non-bea	aring trees will provide	e control.							
Fire Blight	copper octanoate	M1	Prepare 0.5-2%		4 h	1	Apply 470-940 L of mixture/ha. Repeat every 7-10 days as					
	(Cueva Commercial)		solution (5-20				long as weather conditions favour disease development					
	31825		L/1000 L water)				(maximum 6 applications per season). See Fire blight					
			,				description.					
	Notes: There are no products that can be applied to cure fire blight following infection. Preventative copper sprays may help to protect against new											
		•			•		areful to disinfect tools between cuts.					
Post-Harvest Rots	pyrimethanil (Scala)	9	1.5-2.0L	607-810 mL	12	14	Apply 2 weeks before harvest to help control storage rots					
Initiated in the	28011				h-24 h		caused by Botrytis and Penicillium. 24 hour REI for thinning.					
Orchard												
Crown and Root	fosetyl-al (Aliette)	33	5.0 kg	2.0 kg	dry	30	See description of crown rot for more information.					
Rot	27688		Ū									
Powdery Mildew	Notes: See petal fall	for avail	able fungicides. Use c	aution with sulphur or	oil spray	s during h	ot weather. Jonagold is sensitive to sulphur.					
(Apples)			C C			Ū.						
Apple Scab	Notes: If no scab is p	present c	on apple leaves or fruit	by the end of June, se	cab spra	ys are not	needed for the remainder of the season. If scab symptoms					
	are present, continue protectant fungicide coverage until harvest, with particular consideration to rainy weather. See Petal fall section for available											
	are present, continue	indicides. Check pre-harvest intervals before any late-season sprays.										

Insect or Disease	Recommended	Grp ¹	Amount Per Ha	Amount Per Acre	REI ²	PHI ³	Precautions and Notes
	Product Choices					(days)	
Apple Clearwing	novaluron (Rimon)	15	1.4 L/1000 L	1.4 L/1000 L	12 h	14	Apply in September. Direct spray on tree trunk with a hand
Moth	28515						gun or backpack sprayer. Inspect trunk and limbs for signs of
							apple clearwing moth damage and spray if present. Do not
							apply more than 2 times/season.
Apple Leaf Curling	spinetoram	5	420 g	170 g	12 h	7	Toxic to bees. Do not apply to flowering crops or weeds if
Midge	(Delegate) 28778						bees are visiting the treatment area. Maximum 3 applications
							per year. Application interval: 17 days.
Fire Blight	Copper hydroxide	M1	4.7 L	1.9 L	48 hrs	2 days	Apply after harvest with 50% leaf drop. Max. two applications
	(Parasol) 25901						per year.