

2024 HORTICULTURE CROP PROTECTION GUIDE

Trusted technologies and innovative solutions for Canadian fruit and vegetable growers.

Whether it is insects, diseases or weeds, the wide range of high-performance solutions from Corteva Agriscience™ ensures you have everything you need to protect your fruit and vegetable crops.

Our products are designed to work with your existing Integrated Pest Management programs and our team is continually innovating and developing new technologies to bring you the latest in horticulture crop protection.

Corteva Agriscience: the agricultural company dedicated to farmers and growers.

KEEP GROWING.

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IMPORTANT NOTICE:

This information is provided for reference only and does not supply sufficient information for application. Always read and follow label directions.

	INSECTICIDES							FUNGICIDES				HERBICIDES			BIOLOGICALS
	Closer™	Delegate™	Entrust™	GF-120 Fruit Fly Bait	Intrepid™	Success™	Vydate™	Fontelis™	Indar™	Nova™	Tanos™	Kerb™ SC	Lontrel™ XC	Prism™ SG	Utrisha™ N
Apple	X	X	X	X	X	X	X*	X		X		X	X		X
Apricot	X	X	X		X	X		X	X				X	X	
Blackberry		X	X		X	X		X		X	X			X	
Blueberry – lowbush	X	X	X	X	X	X		X		X		X	X	X	X
Blueberry – highbush	X	X	X	X	X	X		X	X	X			X	X	X
Cantaloupe					X			X		X					
Cherry	X	X	X	X	X	X		X	X	X			X	X	X
Cranberry		X	X		X	X		X	X				X	X	X
Grape	X	X	X		X	X				X				X	X
Nectarine	X	X	X		X	X		X	X	X			X	X	X
Peach	X	X	X		X	X		X	X	X			X	X	X
Pear	X	X	X		X	X		X		X		X	X		X
Plum/Prune	X	X	X		X	X		X	X				X	X	X
Raspberry	X	X	X		X	X	X	X		X	X			X	X
Saskatoon berry	X	X	X		X	X		X		X			X		X
Strawberry		X	X			X		X		X		X	X		X
Watermelon					X			X		X					X

*Non-bearing trees.

Always read the label for rates, instructions and precautions. Visit Horticulture.corteva.ca for more information.

	INSECTICIDES						FUNGICIDES					HERBICIDES				NEMATICIDE	BIOLOGICALS
	Close [™]	Delegate [™]	Entrust [™]	Intrepid [™]	Success [™]	Vydate [™]	Acapela [™]	Curzate [™]	Fontelis [™]	Nova [™]	Tanos [™]	Accent [™] JS	Kerb [™] SC	Lontrel [™] XC	Prism [™] SG	Salibro [™]	Utrisha [™] N
Asparagus	X	X	X		X				X								
Basil and dill		X	X		X												
Broccoli	X	X	X	X	X			X					X				X
Brassica transplants			X		X												
Cabbage	X	X	X	X	X			X					X				X
Carrot	X	X						X							X		X
Cauliflower	X	X	X	X	X			X					X				X
Celery	X	X	X	X	X			X									X
Corn – sweet	X	X	X	X	X		X				X						
Cucumber				X				X	X						X		X
Cucumber – greenhouse		X	X		X			X	X								
Eggplant		X	X	X	X			X									X
Eggplant – greenhouse		X	X		X			X	X								
Garlic		X	X		X		X	X									X
Lettuce – head and leaf	X	X	X	X	X			X				X					X
Lettuce – greenhouse		X	X		X			X									
Mint		X	X		X												
Non-bearing nursery stock		X															
Onion – green		X	X		X		X	X									X
Onion – dry bulb		X	X		X		X	X					X				
Parsley	X	X	X	X	X			X									
Legume Vegetable (Pea/Bean)		X	X	X	X		X	X									X
Pepper – green		X	X	X	X			X									X
Pepper – greenhouse		X	X		X			X	X								
Potatoes	X	X	X		X	X	X	X		X			X		X		X
Pumpkin				X				X	X						X		
Radish	X	X	X		X			X									X
Rutabaga	X	X	X		X			X					X				
Shallots – dry bulb		X	X		X		X	X									
Sweet potato	X			X													X
Swiss chard	X	X	X	X	X			X									
Tomato		X	X	X	X			X		X			X		X		X
Tomato – greenhouse		X	X		X			X	X								
Turnip	X	X	X		X			X					X				

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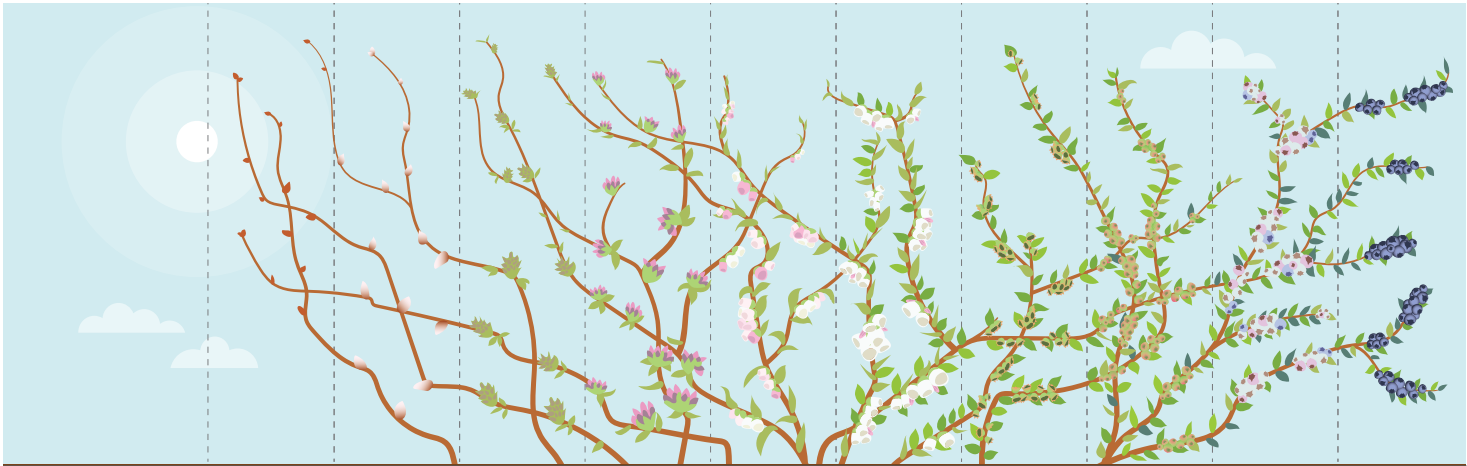
CROP GROUPINGS





BERRIES

(Crop Group 13-07 including blackberries, raspberries, blueberries and strawberries)



	DORMANT	BUD SWELL TO BUD BREAK	TIGHT CLUSTER	PINK BUD	5% BLOOM	FULL BLOOM	PETAL FALL	GREEN FRUIT	FRUIT COLOURING	HARVEST
INSECTICIDES:										
Delegate™					1					
Entrust™					1					
GF-120 Fruit Fly Bait										
Intrepid™										
Success™					1					
FUNGICIDES:										
Indar™										
Fontelis™										
Nova™										
Tanos™										
HERBICIDES:										
Kerb™ SC										
Lontrel™ XC										
Prism™ SG										
NEMATOCIDE:										
Vydate™*										

¹ Apply only when bees are not visiting the area.
* Apply one application in fall before October 31. Do not apply in the spring.

PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Blueberry flea beetle	Success™	Spinosad	5	C, Ing	165-220 mL*	When dry or 12	3	3
	Delegate™	Spinetoram	5	C, Ing	200 g	12	3	3
	Entrust™	Spinosad	5	C, Ing	334-440 mL*	When dry or 12	3	3
Oblique-banded leafroller, Spanworm	Success™	Spinosad	5	C, Ing	145-182 mL	When dry or 12	1	3
	Entrust™	Spinosad	5	C, Ing	267-364 mL	When dry or 12	1	3
	Delegate™	Spinetoram	5	C, Ing	100-200 g	12	1-3	3
	Intrepid™	Methoxyfenozide	18	Ing	500 mL	12	7	2 L/ha
Spotted wing drosophila	Delegate™	Spinetoram	5	C, Ing	315-420 g	12	1	3
	Success™	Spinosad	5	C, Ing	165-220 mL	When dry or 12	1	3
	Entrust™	Spinosad	5	C, Ing	334-440 mL	When dry or 12	1	3
Thrips*	Delegate™	Spinetoram	5	C, Ing	200-280 g	12	1	3
FUNGICIDES								
Botrytis grey mold, Powdery mildew, Mummy berry*	Fontelis™	Penthiopyrad	7	Pre, Cur	1-1.75 L	12	0	5.25 L/ha
Caneberry spur blight, Botrytis, Anthracnose	Tanos™	Famoxadone + Cymoxanil	11+27	Cur	840 g	9 days	9	3
Mummy berry	Indar™	Fenbuconazole	3	Pre	140 g	12	30	4
Powdery mildew	Nova™	Myclobutanil	3	Pre, Cur	340 g	1-14 days	1-14	3-6
HERBICIDES								
Quackgrass, Annual Grasses and Chickweed	Kerb™ SC	Propyzamide	3	Sys	4.1-5.6 L	24		1
Broadleaf weeds hard to control	Lontrel™ XC	Clopyralid	4	Sys	0.25-0.5 L	12	45	1
Broadleaf and grassy weeds: Redroot pigweed, Lamb's-quarters*, Quackgrass, Foxtail, Barnyard grass	Prism™ SG	Rimsulfuron	2	Sys	60 g	12	21 14 months - lowbush blueberry	1
NEMATICIDES								
Root lesion nematode (raspberries only)	Vydate™	Oxamyl	1A	C, Ing	9.35 L	12		1

[^] C - Contact
Ing - Ingestion
Sys - Systemic

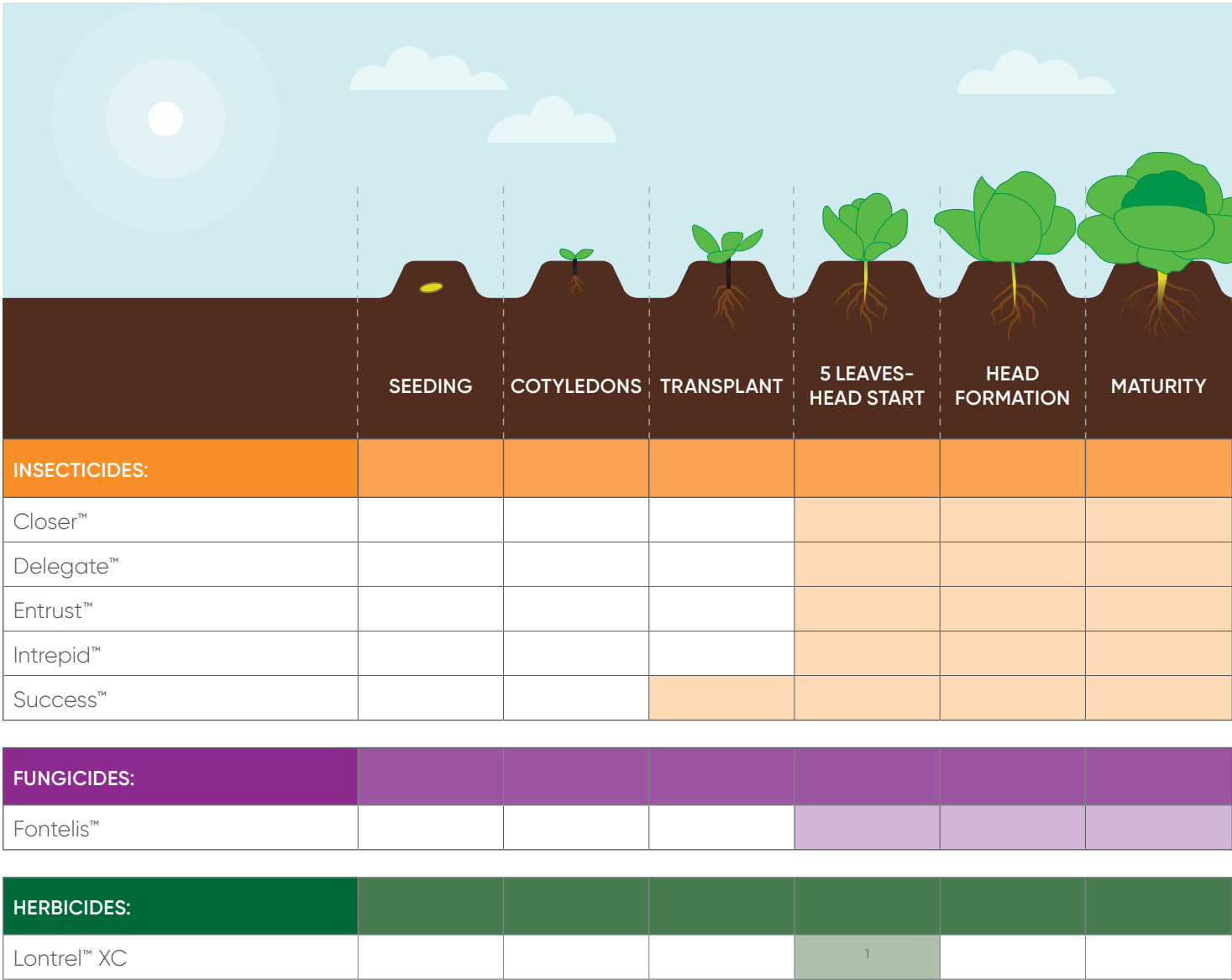
Pre - Preventative
Cur - Curative

* Suppression

This guide is a reference only. Always read and follow label directions.

BRASSICA

(Crop Group 5-13 including broccoli, cauliflower and cabbage)



¹ Apply from established transplant, about 7 days after transplantation up to approx 8-10 leaves

PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Aphids	Closer™	Sulfoxaflor	4C	C, Ing	100-150 mL	12	3	2
Cabbage looper, Diamondback moth, Imported cabbage worm	Success™	Spinosad	5	C, Ing	182 mL	3 days	3	3
	Entrust™	Spinosad	5	C, Ing	364 mL	3 days	3	3
	Delegate™	Spinetoram	5	C, Ing	140-200 g	12	1	3
	Intrepid™	Methoxyfenozide	18	C	300-600 mL	12	1	2 L/ha
Cabbage maggot	Success™	Spinosad	5	C, Ing	12.5 mL/1000 plants	24	3	1
	Entrust™	Spinosad	5	C, Ing	25 mL/1000 plants	24	3	1
Crucifer flea beetles*	Success™	Spinosad	5	C, Ing	182 mL	3 days	3	3
	Entrust™	Spinosad	5	C, Ing	364 mL	3 days	3	3
Swede midge**	Success™	Spinosad	5	C, Ing	146 mL	3 days	3	3
	Entrust™	Spinosad	5	C, Ing	292 mL	3 days	3	3
Thrips*	Success™	Spinosad	5	C, Ing	146 mL	3 days	3	3
	Entrust™	Spinosad	5	C, Ing	292 mL	3 days	3	3
	Delegate™	Spinetoram	5	C, Ing	200-336 g	12	1	3
FUNGICIDES								
Gray mold	Fontelis™	Penthiopyrad	7	Pre, Cur	1.25-2.25 L	12	0	5.25 L/ha
Sclerotinia stem rot*, Alternaria leaf spot, Powdery mildew	Fontelis™	Penthiopyrad	7	Pre, Cur	1.25-1.75 L	12	0	5.25 L/ha
HERBICIDES								
Broadleaf weeds	Lontrel™ XC	Clopyralid	4	Sys	0.34 L	12	30	1

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 Ing - Ingestion
 Sys - Systemic
 Pre - Preventative
 Cur - Curative

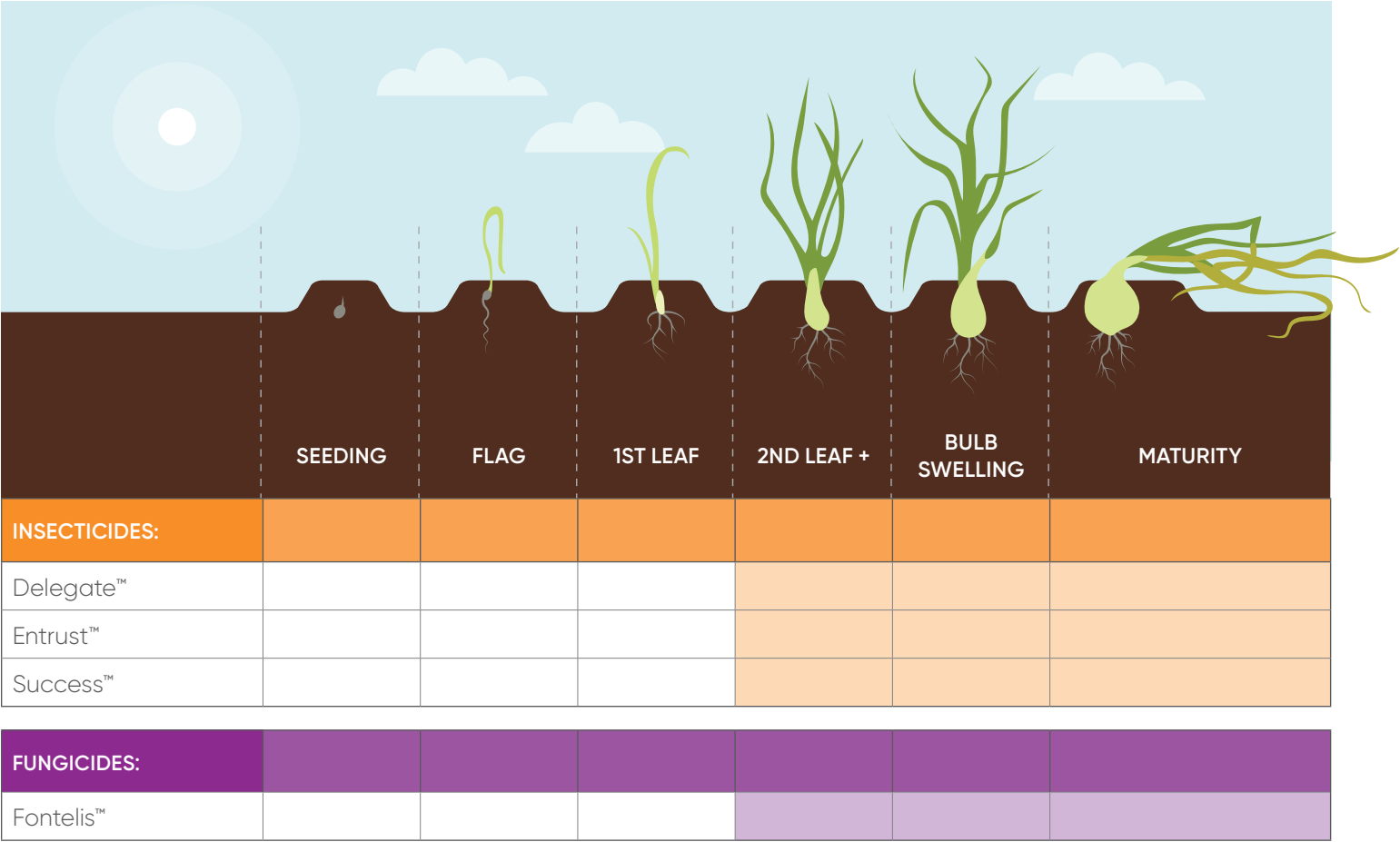
* Suppression

** Reduction in damage

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BULB VEGETABLES

(Crop Group 3 including green onion and garlic)



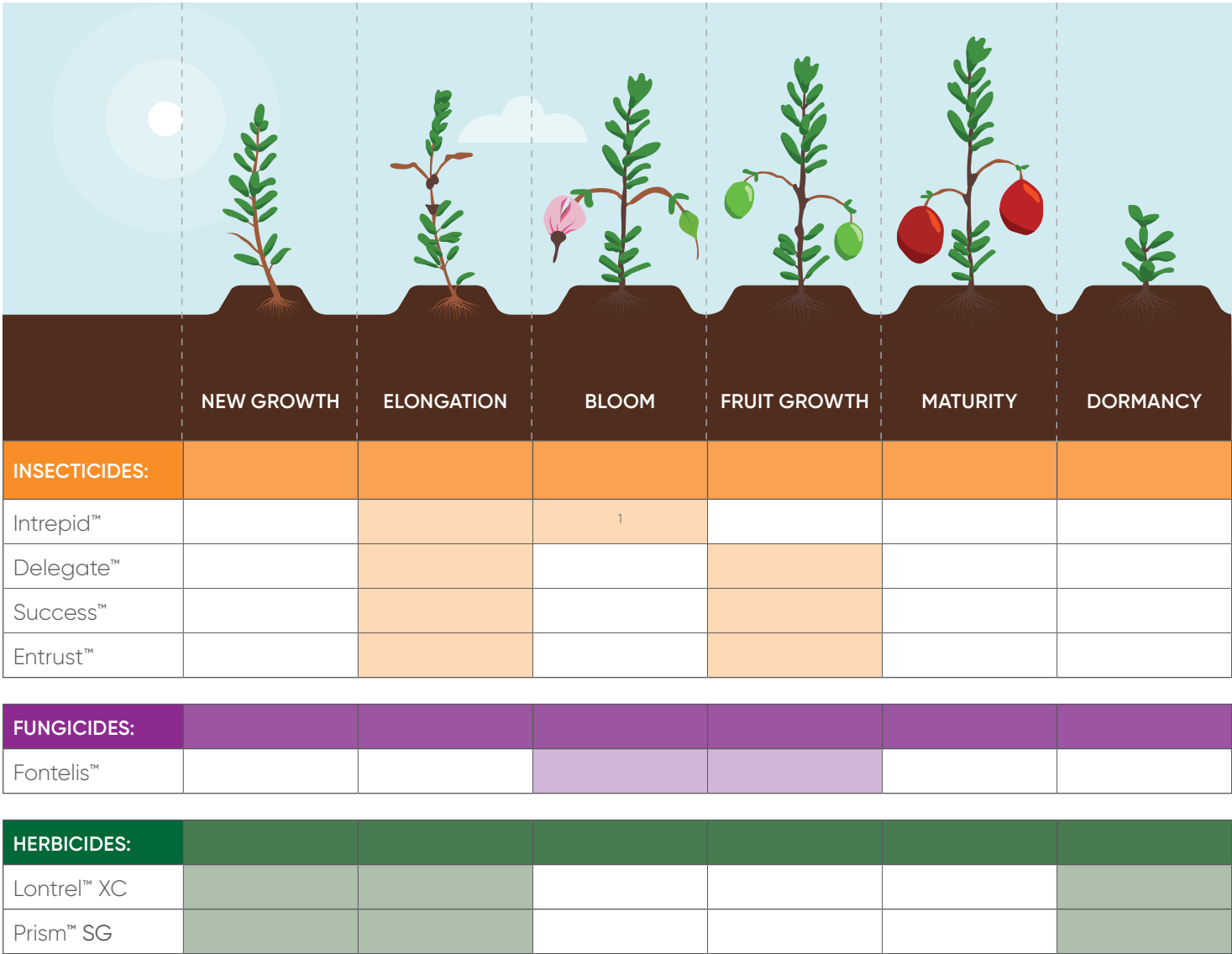
PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDE								
Onion leafminer*	Success™	Spinosad	5	C, Ing	218-262 mL	When dry or 12	3	3
	Entrust™	Spinosad	5	C, Ing	437-527 mL	When dry or 12	3	3
	Delegate™	Spinetoram	5	C, Ing	200-336 g	12	3	3
Thrips*	Success™	Spinosad	5	C, Ing	218-262 mL	When dry or 12	3	3
	Entrust™	Spinosad	5	C, Ing	437-527 mL	When dry or 12	3	3
	Delegate™	Spinetoram	5	C, Ing	200-336 g	12	3	3
FUNGICIDES								
Botrytis fleck, Purple blotch, Botrytis leaf blight	Fontelis™	Penthiopyrad	7	Pre, Cur	1.25-1.75 L	12	3	5.25 L/ha

[^] C - Contact
 Ing - Ingestion
 Sys - Systemic
 Pre - Preventative
 Cur - Curative

* Suppression

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CRANBERRY



¹ Apply only when bees are not visiting the area

PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Blackheaded fireworm Sparganothis fruitworm	Success™	Spinosad	5	C, Ing	182 mL	When dry or 12	21	3
	Entrust™	Spinosad	5	C, Ing	364 mL	When dry or 12	21	3
	Delegate™	Spinetoram	5	C, Ing	420 g	12	21	3
	Intrepid™	Methoxyfenozide	18	Ing	0.75-1.16 L	12	14	2 L/ha
Cranberry fruitworm	Success™	Spinosad	5	C, Ing	365 mL*	When dry or 12	21	3
	Entrust™	Spinosad	5	C, Ing	727 mL*	When dry or 12	21	3
	Intrepid™	Methoxyfenozide	18	Ing	0.75-1.16 L	12	14	2 L/ha
Cranberry tipworm*	Delegate™	Spinetoram	5	C, Ing	420 g	12	21	3
FUNGICIDES								
Botrytis gray mold	Fontelis™	Penthiopyrad	7	Sys	1-1.75 L	12	0	5.25 L/ha
HERBICIDES								
Vetch	Lontrel™ XC	Clopyralid	4	Sys	12 mL /L water**	12	60	2
Broadleaf and grassy weeds: Redroot pigweed, Lamb's-quarters*, Quackgrass, Foxtail, Barnyard grass	Prism™ SG	Rimsulfuron	2	Sys	60 g	12	60	1

[^] C - Contact
 Ing - Ingestion
 Sys - Systemic
 Pre - Preventative
 Cur - Curative

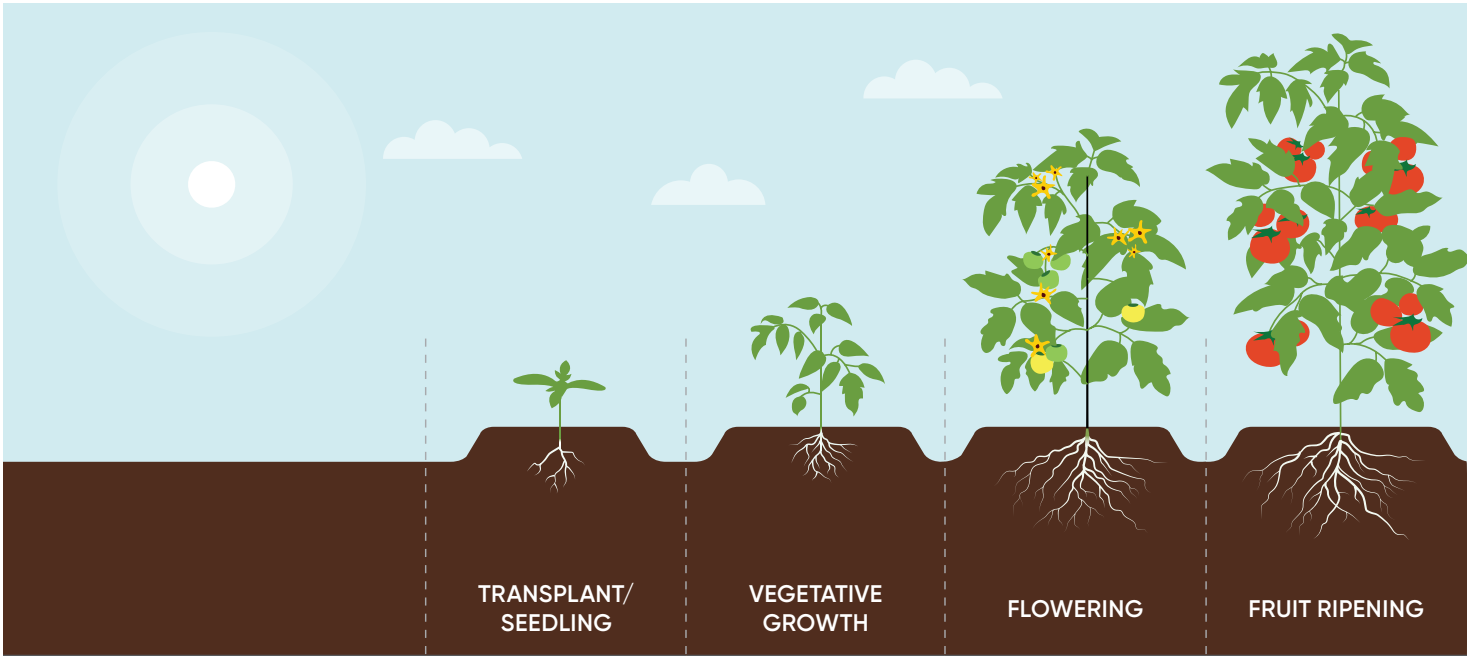
* Suppression

** Wick application only

This guide is a reference only. Always read and follow label directions.

FRUITING VEGETABLES

(Crop Group 8-09 including tomato, pepper and eggplant)



	TRANSPLANT/ SEEDLING	VEGETATIVE GROWTH	FLOWERING	FRUIT RIPENING
INSECTICIDES:				
Delegate™			2	
Entrust™			2	
Intrepid™				
Success™			2	

FUNGICIDES:				
Fontelis™				
Tanos™				

HERBICIDES:				
Prism™ SG		1		

¹ 7-10 days after transplanting

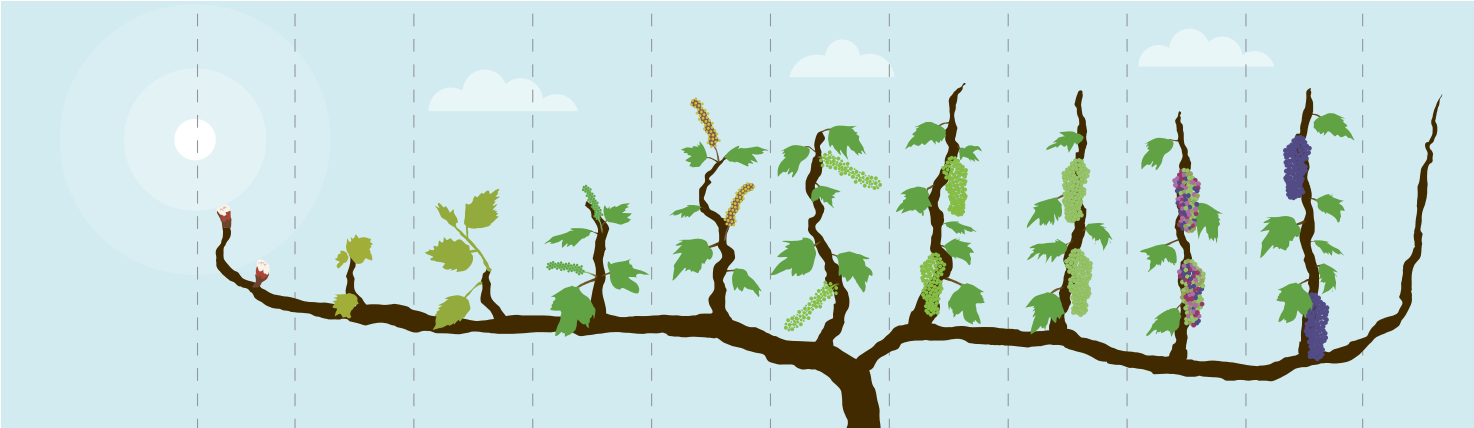
² Apply only when bees are not visiting the area

PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Diamondback moth, Imported cabbage worm	Success™	Spinosad	5	C, Ing	182 mL	12	1	3
	Entrust™	Spinosad	5	C, Ing	364 mL	12	1	3
Cabbage looper	Success™	Spinosad	5	C, Ing	182 mL	12	1	3
	Entrust™	Spinosad	5	C, Ing	364 mL	12	1	3
	Delegate™	Spinetoram	5	C, Ing	140-200 g	12	1	3
	Intrepid™	Methoxyfenozide	18	C	300-600 mL	12	1	2 L/ha
Colorado potato beetles	Success™	Spinosad	5	C, Ing	83 mL	12	1	3
	Entrust™	Spinosad	5	C, Ing	167 mL	12	1	3
	Delegate™	Spinetoram	5	C, Ing	160-240 g	12	1	3
European corn borer	Success™	Spinosad	5	C, Ing	83 mL	12	1	2
	Entrust™	Spinosad	5	C, Ing	167 mL	12	1	2
	Delegate™	Spinetoram	5	C, Ing	160 g	12	1	3
	Intrepid™	Methoxyfenozide	18	C	300-600 mL	12	1	2 L/ha
FUNGICIDES								
Early blight and Late blight	Tanos™	Famoxadone + Cymoxanil	11+27	Cur	560 g	12	3	3
Gray mold and Early blight*	Fontelis™	Penthiopyrad	7	Pre, Cur	1.25-1.75 L	12	0	5.25 L/ha
HERBICIDES								
Broadleaf and grassy weeds: Redroot pigweed, Lamb's-quarters*, Quackgrass, Foxtail, Barnyard grass	Prism™ SG	Rimsulfuron	2	Sys	60 g	12	30	1

[^] C - Contact
 Ing - Ingestion
 Sys - Systemic
 Pre - Preventative
 Cur - Curative

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GRAPES



	BUD BURST	1ST LEAF	3-5 LEAF	PRE-BLOOM	BLOOM	FRUIT SET	PEA SIZED FRUIT	BUNCH CLOSURE	VERAISON	HARVEST	DORMANT
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INSECTICIDES:											
Closer™											
Delegate™											
Entrust™											
Intrepid™											
Success™											

FUNGICIDES:											
Nova™											

HERBICIDES:											
Prism™ SG											

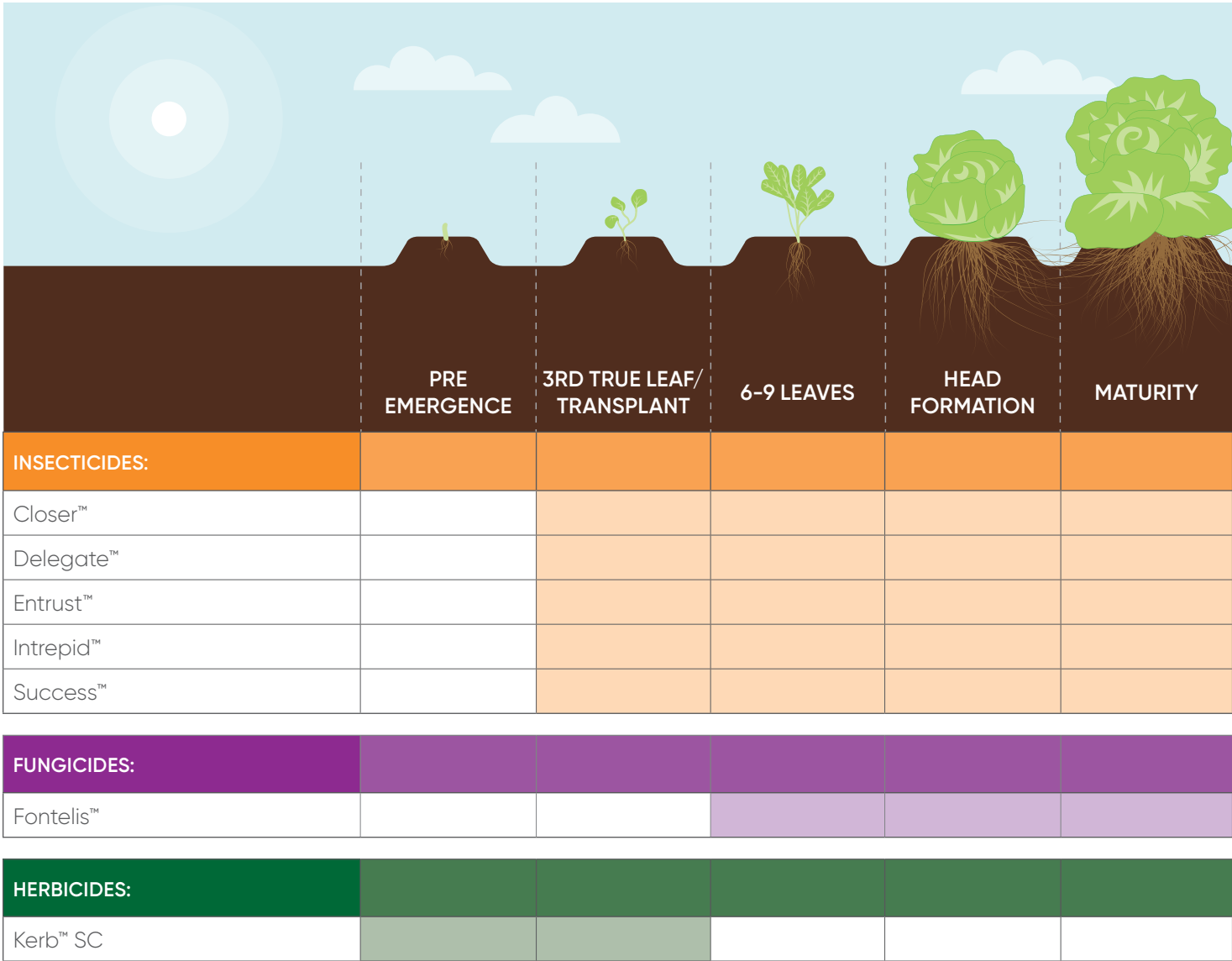
PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Climbing Cutworm	Intrepid™	Methoxyfenozide	18	Ing	600 mL	12	30	2
Grape Berry Moth	Delegate™	Spinetoram	5	C, Ing	280 g*	12	7	3
	Success™	Spinosad	5	C, Ing	182 mL*	When dry to 15 days	7	3
	Entrust™	Spinosad	5	C, Ing	364 mL*	When dry to 15 days	7	3
	Intrepid™	Methoxyfenozide	18	Ing	600 mL	12	30	3
Leafhoppers*	Closer™	Sulfoxyflor	4C	C, Ing	200-400 mL	12	7	2
Spotted-Wing Drosophilla	Success™	Spinosad	5	C, Ing	182 mL	When dry to 15 days	7	3
	Entrust™	Spinosad	5	C, Ing	364 mL	When dry to 15 days	7	3
Western Flower Thrips*	Success™	Spinosad	5	C, Ing	182 mL	When dry to 15 days	7	3
	Entrust™	Spinosad	5	C, Ing	364 mL	When dry to 15 days	7	3
FUNGICIDES								
Black Rot	Nova™	Myclobutanil	3	Sys, local	200 g	12	14	5
Powdery Mildew	Nova™	Myclobutanil	3	Sys, local	200 g	12	14	5
HERBICIDES								
Broadleaf and grassy weeds: Redroot pigweed, Lamb's-quarters*, Quackgrass, Foxtail, Barnyard grass	Prism™ SG	Rimsulfuron	2	Sys	60 g	12	21	1

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LEAFY VEGETABLES

(Crop Group 4-13 including lettuce and spinach)



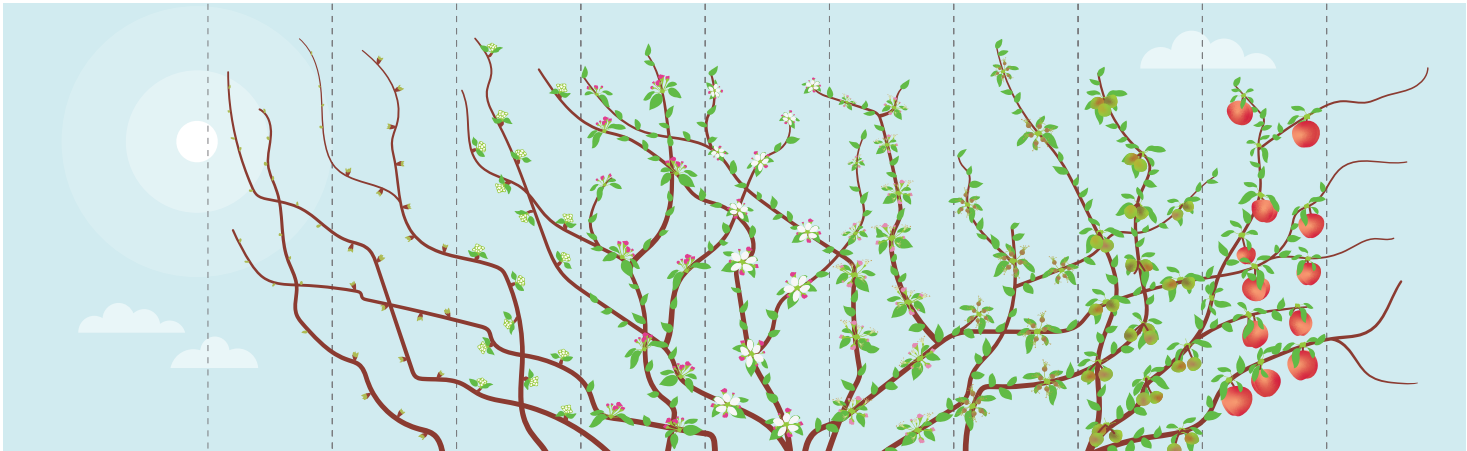
PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Aphids	Closer™	Sulfoxaflor	4C	C, Ing	100-150 mL	12	3	2
Cabbage looper	Success™	Spinosad	5	C, Ing	182 mL	3 days	1	3
	Entrust™	Spinosad	5	C, Ing	364 mL	3 days	1	3
	Delegate™	Spinetoram	5	C, Ing	140-200 g	12	1	3
	Intrepid™	Methoxyfenozide	18	C	300-600 mL	12	1	2 L/ha
Diamondback moth, Imported cabbage worm	Success™	Spinosad	5	C, Ing	182 mL	3 days	1	3
	Entrust™	Spinosad	5	C, Ing	364 mL	3 days	1	3
	Delegate™	Spinetoram	5	C, Ing	140-200 g	12	1	3
Thrips*	Success™	Spinosad	5	C, Ing	146 mL	3 days	3	3
	Entrust™	Spinosad	5	C, Ing	292 mL	3 days	3	3
FUNGICIDES								
Gray mold, Lettuce drop*	Fontelis™	Penthiopyrad	7	Pre, Cur	1.25-1.75 L	12	3	5.25 L/ha
Septoria late blight, Alternaria leaf spot, Cercospora leaf spot, Powdery mildew	Fontelis™	Penthiopyrad	7	Pre, Cur	1.0-1.75 L	12	3	5.25 L/ha
HERBICIDES								
Annual grasses and broadleaf weeds	Kerb™ SC	Propyzamide	3	Sys	2.75 L	24	55	1

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 Cur - Curative

* Suppression
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POME FRUIT

(Crop Group 11-09 including apple and pear)



	GREEN TIP	HALF-INCH GREEN	TIGHT CLUSTER	PINK	FULL BLOOM	PETAL FALL	FRUIT SET	SUMMER	HARVEST	DORMANT
INSECTICIDES:										
Closer™										
Delegate™										
Entrust™										
GF-120 Fruit Fly Bait										
Intrepid™										
Success™										
FUNGICIDES:										
Fontelis™										
Nova™										
HERBICIDES:										
Kerb™ SC										
Lontrel™ XC										
NEMATOCIDES:										
Vydate™*										

* Non-bearing apple only

PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL ^A	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Aphids; apple aphids, rosy apple aphids	Closer™	Sulfoxyflor	4C	C, Ing	100-200 mL	12	7	2
	Vydate™™™	Oxamyl	1A	C, Ing	1.5 - 3 L/1,000 L	12		3
Apple maggot*	Delegate™	Spinetoram	5	C, Ing	420 g	12	7	3
Apple clearwing moth	Delegate™	Spinetoram	5	C, Ing	420 g	12	7	2
	Success™	Spinosad	5	C, Ing	125 mL	12	7	7
	Entrust™	Spinosad	5	C, Ing	250 mL	12	7	7
Codling moth	Delegate™	Spinetoram	5	C, Ing	420 g	12	7	3
	Entrust™	Spinosad	5	C, Ing	364 mL*	12	7	3
	Intrepid™	Methoxyfenozide	18	Ing	1 L	12	14	2
Dogwood borer	Delegate™	Spinetoram	5	C, Ing	420 g	12	7	2
Mullein bug, Woolly apple aphids	Closer™	Sulfoxyflor	4C	C, Ing	400 mL	12	7	2
Oblique banded leafrollers, Fruit tree leafrollers and European leafroller, Eyespotted budmoth	Delegate™	Spinetoram	5	C, Ing	210-420 g	12	7	3
	Success™	Spinosad	5	C, Ing	182 mL	12	7	3
	Entrust™	Spinosad	5	C, Ing	364 mL	12	7	3
	Intrepid™	Methoxyfenozide	18	Ing	0.75 L	12	14	2
Oriental fruit moth	Delegate™	Spinetoram	5	C, Ing	420 g	12	7	3
	Intrepid™	Methoxyfenozide	18	Ing	1 L	12	14	2
Plum curculio* European apple sawfly	Delegate™	Spinetoram	5	C, Ing	420 g	12	7	3
San Jose scale	Closer™	Sulfoxyflor	4C	C, Ing	200-400 mL	12	7	2
Spotted & Western tentiform leafminers	Delegate™	Spinetoram	5	C, Ing	210-420 g	12	7	3
	Intrepid™	Methoxyfenozide	18	Ing	0.5 L	12	14	2
Tarnished plant bug	Closer™	Sulfoxyflor	4C	C, Ing	300 mL	12	7	2
FUNGICIDES								
Apple scab, Powdery mildew, Cedar apple rust	Fontelis™	Penthiopyrad	7	Pre, Cur	1-1.5 L	12	28	4.5 L/ha
	Nova™	Myclobutinal	3	Pre, Cur	340 g	12	14	6
HERBICIDES								
Quack grasses, annual grasses	Kerb™ SC	Propyzamide	3	Sys	5.6 L	24		1
Broadleaf weeds, vetch	Lontrel™ XC	Clopyralid	4	Sys	0.34 L	12	30	1
NEMATOCIDES								
Root lesion nematode	Vydate™™™	Oxamyl	1A	Sys	1.25 L/1000 L	12	365	1

^A C - Contact
Ing - Ingestion
Sys - Systemic

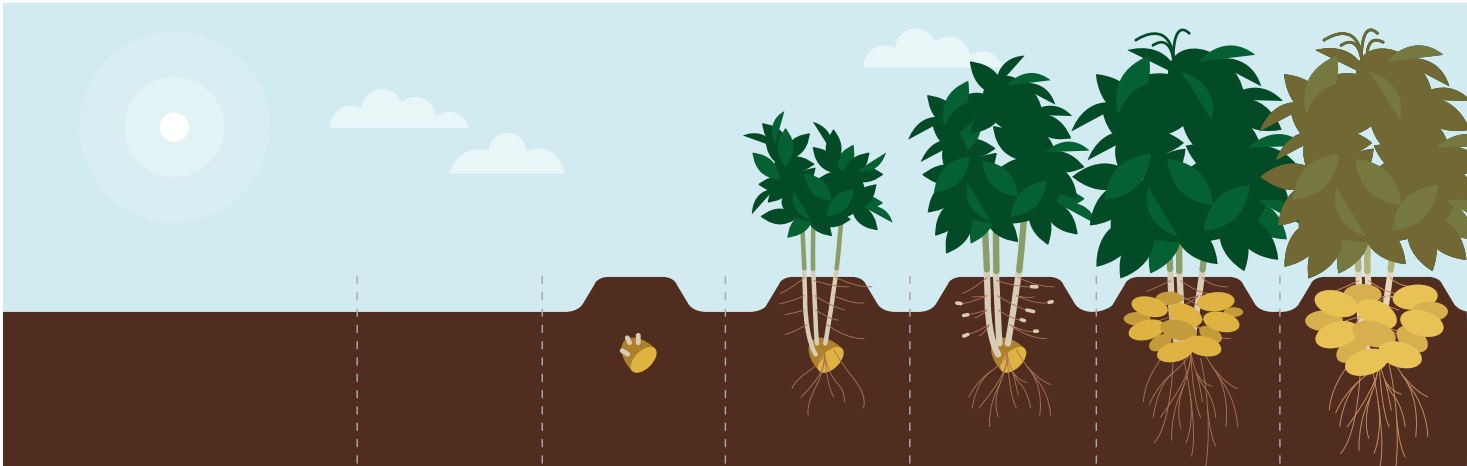
Pre - Preventative
Cur - Curative

* Suppression
** Non-bearing apple only

*This guide is a reference only.
Always read and follow label directions.*

ROOT AND TUBER VEGETABLES

(Crop Group 1 including carrot, potato, sweet potato, radish and sugar beets)



	PRE-PLANT/ AT PLANT	SPROUT DEVELOPMENT	VEGETATIVE GROWTH	TUBER INITIATION	TUBER BULKING	MATURATION
--	------------------------	-----------------------	----------------------	---------------------	------------------	------------

INSECTICIDES:						
Closer™						
Delegate™						
Success™						
Entrust™						
Vydate™			1	1	1	

FUNGICIDES:						
Curzate™					2	2
Tanos™						

HERBICIDES:						
Prism™ SG						

NEMATICIDES:						
Salibro™						

¹ Colorado potato beetles resistant to carbamates will not be controlled.
² Early blight is controlled by the registered tank mix with a Group M fungicide.
 This chart is intended for reference only and not intended to provide information for application. Always read and follow label directions. Chart shows possible pest timing, not spray timing.

PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Aphids	Closer™	Sulfoxaflor	4C	C, Ing	50-150 mL	12	7	2
	Vydate™	Oxamyl	1A	Sys	2.3-3 L	12	7	2
Colorado potato beetles	Success™	Spinosad	5	C, Ing	83-167 mL	12	7	250 mL/ha
	Entrust™	Spinosad	5	C, Ing	167-334 mL	12	7	500 mL/ha
	Delegate™	Spinetoram	5	C, Ing	160-240 g	12	7	3
	Vydate™	Oxamyl	1A	Sys	2.3-3 L	12	7	2
European corn borer	Success™	Spinosad	5	C, Ing	125 mL	12	7	250 mL/ha
	Entrust™	Spinosad	5	C, Ing	250 mL	12	7	2
	Delegate™	Spinetoram	5	C, Ing	160 g	12	7	3
Flea beetles	Vydate™	Oxamyl	1A	Sys	2.3-3 L	12	7	2
Leafhoppers	Closer™	Sulfoxaflor	4C	C, Ing	300 mL	12	7	2
	Vydate™	Oxamyl	1A	Sys	2.3-3 L	12	7	2
Tarnished plant bug	Vydate™	Oxamyl	1A	Sys	2.3-3 L	12	7	2
FUNGICIDES								
Late blight and Early blight	Curzate™	Cymoxanil	27	Pre, Cur	225 g	24	8	4
	Tanos™	Famoxadone + Cymoxanil	11+27	Cur	560-840 g	24	14	3
HERBICIDES								
Broadleaf and grassy weeds: Redroot pigweed, Lamb's-quarters*, Quackgrass, Foxtail, Barnyard grass	Prism™ SG	Rimsulfuron	2	Sys	60 g	12	30	1
NEMATICIDES								
Root knot nematode	Salibro™	Fluazaindolizine		Ing	1.12 - 4.48 L**	12	40	2

[^]C - Contact
 Ing - Ingestion
 Sys - Systemic
 Pre - Preventative
 Cur - Curative

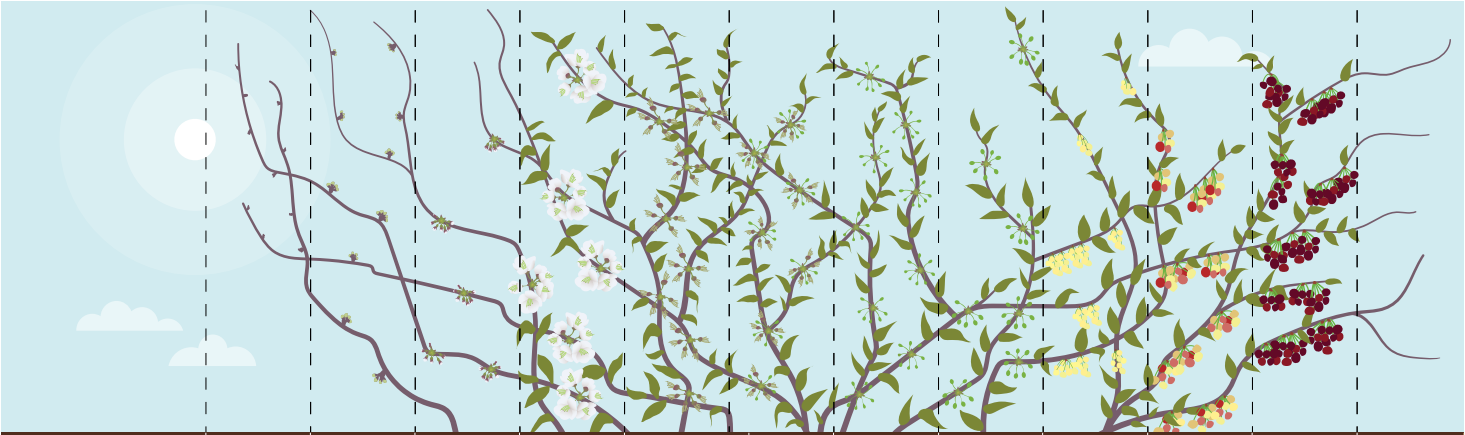
*Suppression

**Pre-plant incorporated/in furrow application: 2.24 - 4.48 L/ha; Post-plant Chemigation: 1.12 - 2.24 L/ha. See product label for specific application rates.

This guide is a reference only. Always read and follow label directions.

STONE FRUIT

(Crop Group 12-09 including cherries, peaches and plums)



	DORMANT	GREEN TIP	PINK	BLOOM	PETAL FALL	FRUIT SET	SHUCK SPLIT/ HUSK FALL	FRUIT SIZING	STRAW COLOUR (CHERRIES ONLY)	BLUSH	HARVEST	POST HARVEST
INSECTICIDES:												
Closer™												
Delegate™												
Entrust™												
GF 120 Fruit Fly Bait												
Intrepid™												
Success™												

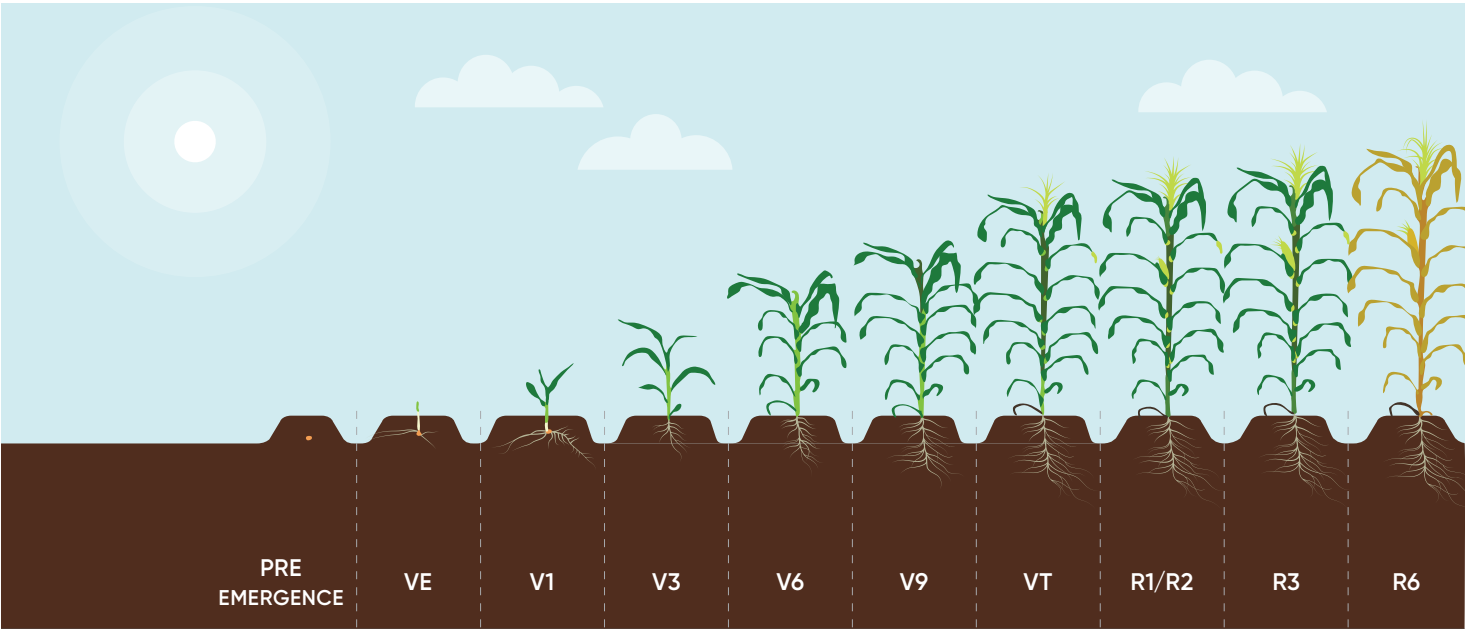
FUNGICIDES:												
Fontelis™												
Indar™												
Nova™												

HERBICIDES:												
Lontrel™ XC												
Prism™ SG												

PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Aphids; Green peach, Mealy plum, Black cherry	Closer™	Sulfoxyflor	4C	C,Ing	100-200 mL	12	7	2
Cherry fruit fly	Delegate™	Spinetoram	5	C, Ing	420 g*	12	5	3
	Entrust™	Spinosad	5	C, Ing	364 mL	When dry or 12	7	4
Peach tree borer, Lesser peachtree borer*	Delegate™	Spinetoram	5	C, Ing	420 g	12	1-5	3
Peach twig borer	Success™	Spinosad	5	C, Ing	182 mL*	When dry or 12	14	3
	Entrust™	Spinosad	5	C, Ing	364 mL*	When dry or 12	14	3
	Intrepid™	Methoxyfenozide	18	Ing	750 mL	12	7	1.5 L/ha
Oblique-banded leafroller, Three-lined leafrollers, Fruittree leafroller, European leafroller, Eye spotted budmoth	Delegate™	Spinetoram	5	C, Ing	210-420 g	12	1-5	3
	Success™	Spinosad	5	C, Ing	182 mL	When dry or 12	1-3	3
	Entrust™	Spinosad	5	C, Ing	364 mL	When dry or 12	1-3	3
	Intrepid™	Methoxyfenozide	18	Ing	750 mL	12	7	1.5 L/ha
Oriental Fruit moth	Delegate™	Spinetoram	5	C, Ing	420 g	12	1-5	3
	Intrepid™	Methoxyfenozide	18	Ing	1.5 L	12	14	1
San Jose scale	Closer™	Sulfoxyflor	4C	C,Ing	200-400 mL	12	7	2
Spotted Wing drosophila	Delegate™	Spinetoram	5	C, Ing	420 g	12	5	3
	Success™	Spinosad	5	C, Ing	182 mL	When dry or 12	1-3	3
	Entrust™	Spinosad	5	C, Ing	364 mL	When dry or 12	1-3	3
Western flower thrips*	Success™	Spinosad	5	C, Ing	182 mL	When dry or 12	14	3
	Entrust™	Spinosad	5	C, Ing	364 mL	When dry or 12	14	3
FUNGICIDES								
Black knot	Indar™	Fenbuconazole	3	Pre	140 g	12	1	7
Blossom Blight	Fontelis™	Penthiopyrad	7	Pre, Cur	1-1.75 L	12	0	4.5 L/ha
	Indar™	Fenbuconazole	3	Pre	140 g	12	1	7
Botrytis	Fontelis™	Penthiopyrad	7	Pre, Cur	1.25 - 1.75 L	12	0	4.5 L/ha
Brown Rot	Fontelis™	Penthiopyrad	7	Pre, Cur	1-1.75 L	12	0	4.5 L/ha
	Indar™	Fenbuconazole	3	Pre	140 g	12	1	7
	Nova™	Myclobutinal	3	Pre, Cur	340 g	12	1	6
Cherry leaf spot*	Fontelis™	Penthiopyrad	7	Pre, Cur	1.5 L	12	0	4.5 L/ha
Fruit rot	Fontelis™	Penthiopyrad	7	Pre, Cur	1-1.75 L	12	0	4.5 L/ha
Leaf Spot	Nova™	Myclobutinal	3	Pre, Cur	340 g	12	1	6
Powdery Mildew	Fontelis™	Penthiopyrad	7	Pre, Cur	1-1.5 L	12	0	4.5 L/ha
	Nova™	Myclobutinal	3	Pre, Cur	340 g	0.5-12 days	1	6
Scab	Fontelis™	Penthiopyrad	7	Pre, Cur	1 - 1.5 L	12	0	4.5 L/ha
HERBICIDES								
Broadleaf weeds, vetch	Lontrel™ XC	Clopyralid	4	Sys	0.25-0.50 L	12	30	1
Broadleaf and grassy weeds: Redroot pigweed, Lamb's-quarters*, Quackgrass, Foxtail, Barnyard grass	Prism™ SG	Rimsulfuron	2	Sys	60 g	12	14	1

[^] C - Contact Pre - Preventative *Suppression
 Ing - Ingestion Cur - Curative This guide is a reference only. Always read and follow label directions.
 Sys - Systemic

SWEET CORN



	PRE EMERGENCE	VE	V1	V3	V6	V9	VT	R1/R2	R3	R6
INSECTICIDES:										
Closer™							1	1		
Delegate™							1	1		
Entrust™							1	1		
Intrepid™										
Success™							1	1		

FUNGICIDES:										
Acapela™										

HERBICIDES:										
Accent™ IS										

¹ Apply only when bees are not visiting the area

PEST	TRADE NAME	ACTIVE INGREDIENT	GROUP	CONTROL [^]	RATE/HA	REI (HOURS)	PHI (DAYS)	MAX APP. PER YEAR
INSECTICIDES								
Aphids	Closer™	Sulfoxaflor	4C	C, Ing	75-150 mL	12	7	2
European corn borer	Success™	Spinosad	5	C, Ing	83 mL	7 days	7	2
	Entrust™	Spinosad	5	C, Ing	167 mL	7 days	7	2
	Delegate™	Spinetoram	5	C, Ing	120-210 g	12	1	3
	Intrepid™	Methoxyfenozide	18A	C	300-600 mL	12	3	1.8 L/ha
Western bean cutworm	Delegate™	Spinetoram	5	C, Ing	120-210 g	12	1	3
FUNGICIDES								
Northern corn leaf blight	Acapela™	Picoxystrobin	11	Sys, Pre, Cur	530-800 mL	12	7	3.5 L/ha
HERBICIDES								
Quackgrass, Barnyard grass, Panicum, Foxtails	Accent™ IS	Nicosulfuron	2	Sys	45.8 g	12	40	1

[^] C - Contact
 Ing - Ingestion
 Sys - Systemic
 Pre - Preventative
 Cur - Curative

This guide is a reference only. Always read and follow label directions.

INSECTICIDES

A close-up photograph of several green leaves, likely from a plant, showing signs of insecticide application. The leaves are vibrant green and have a slightly textured surface. The background is a soft, out-of-focus green, suggesting a natural outdoor setting. The lighting is bright, highlighting the veins and edges of the leaves.



GROUP

4C

Closer™

Isoclast™ active

INSECTICIDE

EXCEPTIONAL SPEED AND CONTROL OF APHIDS AND SCALE IN VEGETABLE, FRUIT AND FIELD CROPS.

Nothing works faster to control aphids, tarnished plant bugs, leaf hoppers and scale in your crops.

Closer™ insecticide with Isoclast™ active is a Group 4C insecticide, ideal for controlling insects resistant to other classes. It moves quickly through the plant to control pests through both contact and ingestion.

Closer is selective and can be used safely around beneficial populations when used according to the product label.

Closer controls economically important and difficult to control sap-feeding insects.

PRECAUTIONS

- Do not make applications less than seven days apart.
- DO NOT apply this product during crop flowering period or when flowering weeds are present in the treatment areas (except for potatoes where applications during crop flowering period are allowed).
- For REIs for various crops see Quick Reference Charts.
- For Woolly apple aphid control: It is recommended to add MSO or other horticultural oil at 0.2% v/v. Applications made with dormant oil does not require additional MSO.

TARGET PESTS

- Aphids
- Leafhoppers
- Lygus bugs
- Mullein bug
- San Jose scale
- Woolly apple aphid
- Tarnished plant bug

CROPS

- Caneberry
- Corn – field, sweet, seed and popping
- Brassica (cole) leafy vegetables
- Bushberry
- Field Basil
- Grape
- Leafy vegetables
- Pome fruits
- Root and tuber vegetables
- Stone fruits
- Tree nuts

FORMULATION AND PACKAGING

- Suspension concentrate
- 12 x 1 L jugs

For more information
on Closer
insecticide visit:



GROUP

5

Delegate™

Jemvelva™ active

INSECTICIDE**HARNESS NATURE'S STRENGTH FOR SUSTAINABLE FARMING.**

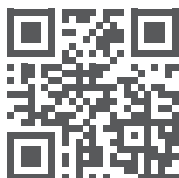
Delegate™ insecticide with Jemvelva™ active (spinetoram) is a naturally-derived product that is fast-acting against a wide range of insect pests including Western Bean Cutworm and Colorado potato beetle, with minimal impact on beneficials and the environment. Its unique profile makes this product an excellent fit for IPM and IRM programs while contributing to a profitable and sustainable tomorrow. Choose Delegate and you're choosing a brighter future for your farm.

Delegate is registered for aerial application in potatoes and corn (field, sweet, seed and popping).

PRECAUTIONS

- Maximum of two or three applications per year, depending on crop.
- Spray solution pH can affect the performance of Delegate. A pH between 5 and 9 is preferred for optimal performance.
- DO NOT apply this product to flowering crops or weeds if bees are visiting the treatments area.
- For REIs for various crops see Quick Reference Charts.

For more information on Delegate insecticide visit:

**TARGET PESTS**

- Apple clearwing moth
- **NEW** Apple leaf curling midge
- Apple maggot
- Armyworm
- Asparagus beetle
- Blackheaded fireworm
- Blueberry flea beetle
- Blueberry spanworm
- Cabbage looper
- Cherry fruit fly
- Codling moth
- Colorado potato beetle
- Cranberry tipworm
- Diamondback moth
- Dogwood borer
- European corn borer
- Eye-spotted bud moth
- Flea beetle
- Grapeberry moth
- Imported cabbageworm
- Leafminer
- Leafroller
- Leek moth
- Oriental fruit moth
- Peach tree borer
- Plum curculio
- Sparganothis fruitworm
- Spotted wing drosophila
- Thrips
- Walnut and butternut curculio
- Walnut husk fly
- Western bean cutworm
- Winter moth

CROPS

- Asparagus
- Basil
- Brassica (cole) leafy vegetables
- Bulb vegetables
- Bushberry
- Caneberry
- Cereals
- Corn - sweet, seed and popcorn
- Cranberry
- Dill
- Fruiting vegetables
- Grapes
- Greenhouse vegetables
- Leafy vegetables
- Leaves of root & tuber vegetables
- Mint
- Non-bearing nursery stock
- Pome fruits
- Potatoes
- Root vegetables
- Soybeans
- Stone fruits
- Strawberry
- Tree nuts

FORMULATION AND PACKAGING

- Wettable granule
- 6 x 840 g bottles

Entrust™

Qalcova™ active

INSECTICIDE

A PROVEN NATURAL INSECTICIDE.

Entrust™ insecticide with Qalcova™ active (spinosad) is the world's number one natural insecticide for organic agriculture. Qalcova active is an effective insecticide made from a naturally occurring soil bacteria. It controls harmful insects while being kinder to beneficials and pollinators when used according to the product label. With cross-spectrum control and a unique mode of action, Entrust is a perfect fit for integrated pest management programs.

PRECAUTIONS

- Spray solution pH can affect the performance of Entrust. A pH between 6 and 8 is preferred for optimal performance.
- Ground application: Apply product in a minimum of 1,000 L/ha of water. Ensure good coverage of all target foliage.
- For REIs for various crops see Quick Reference Charts.

RESISTANCE MANAGEMENT STRATEGIES

- Follow application rates as per label.
- Ensure the correct water volume for adequate coverage.
- Be aware of water quality and necessary pH requirements.
- Monitor to ensure correct application timing and thresholds.
- Target pests at their most susceptible stage.
- Do not apply more than two consecutive applications of the same chemistry group, per generation, per year.

For more information on Entrust insecticide visit:



TARGET PESTS

- Asparagus beetle
- Blackheaded fireworm
- Blueberry flea beetle
- Blueberry maggot
- Blueberry spanworm
- Cabbage looper
- Cherry fruit fly
- Clearwing moth
- Codling moth
- Colorado potato beetle
- Cranberry fruitworm
- Crucifer flea beetle
- Diamondback moth
- European corn borer
- Eye-spotted bud moth
- Grapeberry moth
- Imported cabbageworm
- Leafroller species (oblique-banded, three-lined, fruittree and European)
- Leek moth
- Peach twig borer
- Spanworm
- Sparganothis fruitworm
- Spotted wing drosophila
- Swede midge
- Thrips
- Tuber flea beetle
- Western flower thrip
- Winter moth

CROPS

- Apple
- Asparagus
- Basil
- Blueberry
- Brassica (cole) leafy vegetables
- Broccoli greenhouse transplants
- Bulb vegetables
- Bushberry
- Caneberry
- Cherry – sweet and tart
- Cranberry
- Dill seed
- Fruiting vegetables
- Ginseng
- Grapes
- Greenhouse vegetables, lettuce, cucumber, pepper, tomato and eggplant
- Leafy vegetables
- Low-growing berry
- Pome fruits
- Potatoes
- Root and tuber vegetables
- Snap beans
- Stone fruits
- Sweet corn
- Walnuts

FORMULATION AND PACKAGING

- Suspension concentrate
- 12 x 1 L bottles

GROUP

5

GF-120 Fruit Fly Bait

Qalcova™ active

INSECTICIDE

HIGH PERFORMANCE BAIT FOR CHERRY FRUIT FLY, BLUEBERRY MAGGOT AND APPLE MAGGOT.

GF-120 Fruit Fly Bait insecticide with Qalcova™ active (spinosad) performs as a true bait, attracting only targeted insects. The goal is to strategically place large droplets where flies will find them in their normal search for food.

Uniform coverage is not as critical as with conventional sprays. The application technique for GF-120 Fruit Fly Bait is an ultra low volume application, but with large droplets.

PRECAUTIONS

- **Blueberry:** Do not exceed five applications per season.
- **Apple, cherry and walnut:** Do not exceed 10 applications per season.
- This product resists wash off but will lose effectiveness if exposed to rain and overhead irrigation.
- Once diluted, GF-120 Fruit Fly Bait should be used with 24 hours.
- Large droplets (5 mm in diameter) help the product remain viable in the field for longer periods of time.
- Do not apply during periods when heavy rain is expected. Reapply immediately after rain.
- For REIs for various crops see Quick Reference Charts.

TARGET PESTS

- Apple maggot
- Blueberry maggot
- Cherry fruit fly
- Walnut husk fly

CROPS

- Apple
- Blueberry
- Cherry
- Walnut

FORMULATION AND PACKAGING

- Liquid suspension
- 4 x 3.78 L jugs

For more information on GF-120 Fruit Fly Bait insecticide visit:



Intrepid™

INSECTICIDE

PERFORMANCE AND PEACE OF MIND. WITH INTREPID™, THERE IS NO NEED TO CHOOSE.

Intrepid™ insecticide initiates a lethal premature molt in specific lepidopterous pests (caterpillars) while not adversely affecting beneficial insect populations such as bees, making it ideal for integrated pest management programs.

Intrepid has both ovicidal and larvicidal activity. Ingestion is the main source of activity on pests, causing the larvae to stop feeding within 24 hours and providing long residual control for 10 to 14 days after application.

PRECAUTIONS

- Do not apply more than 2 L/ha of Intrepid per year.
- Maximum one to three applications per season.
- Intrepid is registered for application through chemigation. Please refer to label for application directions.
- For REIs for various crops see Quick Reference Charts.

TARGET PESTS

- Armyworm
- Blackheaded fireworm
- Cabbage looper
- Climbing cutworm
- Codling moth
- Cranberry fruitworm
- Diamondback moth
- Garden webworm
- Grapeberry moth
- Imported cabbageworm
- Oblique-banded leafroller
- Oriental fruit moth
- Peach twig borer
- Spanworm
- Sparganothis fruitworm
- Spotted tentiform leafminer
- Three-lined leafroller
- Western bean cutworm
- Western tentiform leafminer
- Winter moth

CROPS

- Brassica (cole) leafy vegetables
- Bushberry
- Caneberry
- Corn – field, sweet, seed and popping
- Cranberry
- Cucurbit vegetables
- Dried beans
- Edible-podded legume vegetables
- Fruiting vegetables
- Grapes
- Herbs (except chives)
- Leafy vegetables
- Pome fruits
- Stone fruits
- Succulent shelled peas and beans
- Tree nuts
- Tuberous and corn vegetables

FORMULATION AND PACKAGING

- Liquid suspension
- 4 x 4 L jugs

For more information on Intrepid insecticide visit:



GROUP

5

Success™

Qalcova™ active

INSECTICIDE**GROW HIGH-QUALITY FRUIT AND VEGETABLE CROPS WITH A PROVEN INSECTICIDE OF NATURAL ORIGIN.**

Success™ insecticide with Qalcova™ active (spinosad), made from naturally occurring soil bacteria (*Saccharopolyspora spinosa*), has helped generations of farmers responsibly produce abundant and safe food. While effective against a range of damaging pests, including Cabbage Maggot, Success insecticide has a minimal impact to the environment, users and beneficial insects, when used according to the product label.

PRECAUTIONS

- Avoid use when bees are actively foraging.
- Sweet corn, fruiting vegetables: Do not exceed two applications per year.
- Brassica head and stem vegetables greenhouse transplants: Do not exceed one application per year.
- Other registered crops: Do not exceed three applications per year.
- Spray solution pH can affect the performance of Success. A pH between 6 and 8 is preferred for optimal performance.
- For REIs for various crops see Quick Reference Charts.

DRENCH APPLICATION ON BRASSICA TRANSPLANTS

- Water the plant first prior to the application of Success.
- Apply 12.5 mL of Success per 1,000 plants.
- After application, water again to ensure the product reaches the roots.
- Success should be applied 24 hours to the plants before being transplanted.

TARGET PESTS

- Asparagus beetle
- Blackheaded fireworm
- Blueberry flea beetle
- Blueberry maggot
- Cabbage looper
- Cabbage maggot
- Clearwing moth
- Colorado potato beetle (larvae)
- Cranberry fruitworm
- Diamondback moth
- European corn borer (larvae)
- Eye-spotted budmoth
- Flea beetle
- Grapeberry moth
- Imported cabbageworm
- Leafroller species (oblique-banded, three-lined, fruittree and European)
- Leek moth
- Peach twig borer
- Potato stem borer
- Prairie tent caterpillar
- Spanworm
- Sparganothis fruitworm
- Spotted wing drosophila
- Swede midge
- Thrips
- Western flower thrips
- Winter moth

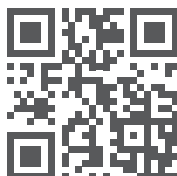
CROPS

- Asparagus
- Basil
- Blueberry
- Brassica (cole) leafy vegetables
- Broccoli greenhouse transplants
- Bulb vegetables
- Bushberry
- Caneberry
- Chokecherry
- Cranberry
- Dill seed
- Fruiting vegetables
- Ginseng
- Grapes
- Greenhouse ornamentals
- Greenhouse vegetables
- Leafy vegetables
- Low-growing berries
- Pome fruit
- Potatoes
- Rhubarb
- Root and tuber vegetables
- Snap bean
- Strawberry
- Stone fruits
- Sweet corn

FORMULATION AND PACKAGING

- Liquid suspension
- 12 x 1 L jugs

For more information on Success insecticide visit:



GROUP

1A

Vydate™

INSECTICIDE/NEMATICIDE

EFFECTIVE CONTROL OF VARIOUS INSECTS, INCLUDING COLORADO POTATO BEETLE AND NEMATODES.

Vydate™ insecticide/nematicide, a Group 1A effectively controls various insect pests in non-bearing apple trees, potatoes and raspberries.

PRECAUTIONS

- Maximum 2 applications in potatoes with a minimum 14 days between applications
- Do not apply this product while bees are actively visiting the treatment area.

CROP	ACTIVITY	RESTRICTED ENTRY INTERVAL
Non-bearing apple trees	Hand pruning, scouting, training	7 days
	Hand thinning	32 days
	All other activities	12 hours
Raspberries	All activities	12 hours
Potatoes	Irrigation (hand set)	3 days
	Roguing	1 day
	All other activities	12 hours

TARGET PESTS

- Aphids (green apple, green peach, potato, rosy apple)
- Apple rust mites
- Colorado potato beetle¹
- European red mites
- Flea beetles
- Leafhoppers
- Leafrollers
- Potato leafhopper
- Root-lesion nematodes
- Tarnished plant bug
- Tentiform leafminers
- Two spotted spider mites

CROPS

- Non-bearing apple trees
- Potatoes
- Raspberries

FORMULATION AND PACKAGING

- Water soluble liquid
- 2 x 9.6 L jug

¹ Colorado potato beetles resistant to carbamates will not be controlled.

For more information on Vydate insecticide/nematicide visit:



NEMATOCIDE

A high-angle, close-up photograph of a carrot field. The rows of carrot plants are densely packed, with their bright green, feathery foliage filling most of the frame. A narrow, dark brown soil path runs vertically along the left side of the image, separating the rows. The lighting is natural, highlighting the texture of the leaves.

Salibro™

Reklemel™ active

NEMATICIDE**NOVEL SULFONAMIDE NEMATICIDE WITH A UNIQUE MODE OF ACTION AGAINST PLANT-PARASITIC NEMATODES.**

Salibro™ nematicide with Reklemel™ active is a true nematicide with no insecticidal nor fungicidal activity, making it a highly effective and selective nematode control solution with a more favorable environmental profile compared to conventional treatments.

Salibro protects crop roots without compromising beneficial insects that provide useful functions in the crop root zone.

It is a core component of an integrated nematode management program. Start at the roots to protect the future of your farm.

WHEN TO APPLY**Pre-plant incorporated or broadcast followed by soil incorporation**

- Uniformly apply over the field and incorporate mechanically or through irrigation to a depth of 10-15 cm with incorporation equipment to ensure even distribution
- For maximum residual efficacy, pre-plant incorporate within 7 days prior to planting
- **In furrow (potatoes only)**
 - Direct applications into the open furrow and cover with soil
- **Chemigation**
 - Apply the labeled rate in sufficient water and for sufficient duration to evenly cover the entire treated area

For more information on Salibro nematicide visit:

**NEMATODES CONTROLLED**

- Root-knot nematode (*Melodogyne spp.*)

CROPS

- Carrots
- Cucurbit vegetables*
- Tuberous and corm vegetables (potatoes)
- Fruiting vegetables (tomatoes)

FORMULATION AND PACKAGING

- 2 x 9.6 L jugs

SOIL HEALTH

Salibro nematicide is a selective, effective new generation nematicide that controls plant parasitic nematodes including root-knot nematodes. It has a unique mode of action, Reklemel active, and has an excellent fit with precision application technology important to growers. Salibro helps support a healthy crop root system, by protecting against plant parasitic nematode damage, which is critical to maximizing water and nutrient utilization and providing the opportunity of realizing yield potential in the crop.

CROP ROTATION

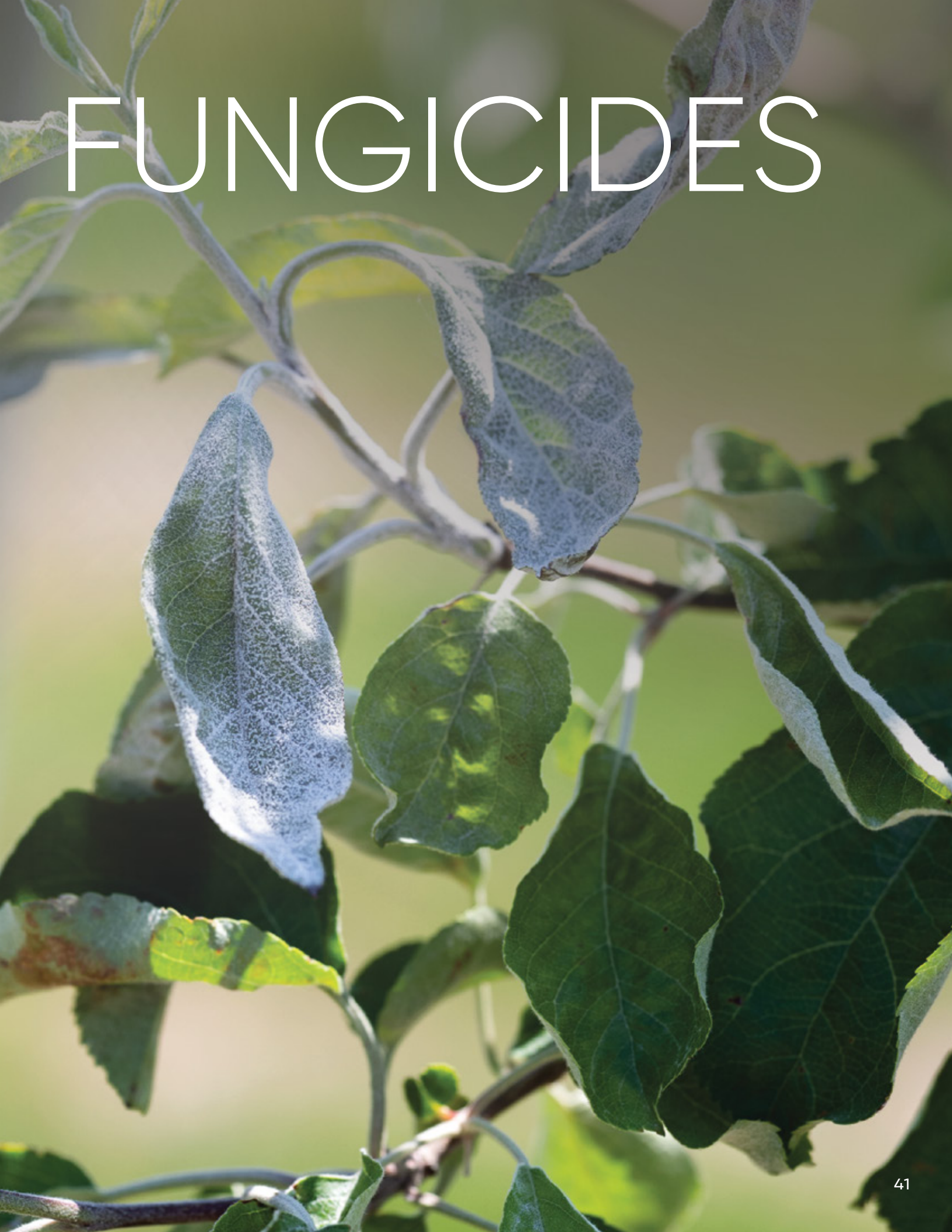
- **Anytime:** carrots, potatoes
- **14 days:** barley, wheat, oats, corn, soybeans, chickpeas, field peas, lentils, sunflowers and flax

PRE-HARVEST INTERVAL

- The PHI for carrot is 65 days.
- The PHI for cucurbit and tomato is 1 day.
- The PHI for potato is 40 days.

* Suppression

This guide is a reference only. For more information on use directions, please refer to the product label.



FUNGICIDES

Acapela™

FUNGICIDE

SPEED, AGILITY AND EXCEPTIONAL COVERAGE.

Acapela™ fungicide provides outstanding disease protection in corn. It has unique movement properties that quickly and efficiently surrounds, penetrates and protects. Acapela is rapidly absorbed moving quickly into and within each plant. Acapela supports positive plant performance by increasing chlorophyll content and plant productivity, even in stressful conditions.

PRECAUTIONS

- Make no more than two sequential applications of Acapela before switching to a fungicide with a different mode of action.
- Maximum total seasonal use rate is 2.63 L/ha in bulb vegetables.
- Minimum time (PHI) between application and harvest is 0 days for bulb vegetables.

TARGET DISEASES

- Northern corn leaf blight (corn)
- Sclerotinia rot* (dry edible beans)
- Purple blotch (bulb vegetables)
- Botrytis neck rot (bulb vegetables)
- Botrytis blight* (bulb vegetables)
- Leaf spot (sugar beets)
- Powdery mildew (sugar beets)
- Rust* (sugar beets)
- Rhizoctonia root and crown rot* (sugar beets)

CROPS

- Bulb vegetables
- Corn (field, seed, sweet and popping)
- Dry edible beans
- Legumes (edible-podded and succulent)
- Sugar beets

FORMULATION AND PACKAGING

- Suspension concentrate
- 2 x 9.6 L jugs
- 115.2 L drum

* *Suppression only*

For more information on Acapela fungicide visit:



GROUP

27

Curzate™**FUNGICIDE****CURZATE HAS BEEN BEATING BLIGHT FOR OVER 40 YEARS.**

Curzate™ fungicide is highly effective with its locally systemic activity. It rapidly penetrates the foliage and stem surfaces to provide multi-levels of fast-acting disease control. Curzate can help stop disease post-infection but cannot reverse damage already done, so make sure you apply prior to symptoms appearing. Always tank-mix with a preventative broad-spectrum fungicide to control early blight. Curzate employs a combination of preventative, post-infection and antispore activity.

PRECAUTIONS

- Initial applications should start when local conditions indicate that late blight is imminent; make additional applications at 5–7 day intervals, however at least 20 days must pass between the second and third application.
- If disease conditions are present during this 20 day period, a fungicide other than Curzate must be used to protect the crop during this period.
- Apply no more than four applications per crop.
- The disease early blight is controlled by the registered tank-mix with a Group M3 fungicide.

TARGET DISEASES

- Late blight

CROPS

- Potatoes

FORMULATION AND PACKAGING

- Dry flowable
- 5 x 1.8 kg bag

For more information
on Curzate
fungicide visit:



Fontelis™

FUNGICIDE

POWERFUL, FLEXIBLE DISEASE MANAGEMENT.

Fontelis™ fungicide provides residual, preventative and post-infection activity on a broad-spectrum of key diseases such as apple scab, powdery mildew and botrytis. Its single mode of action allows for flexible application timing and disease management. Fontelis provides translaminar and systemic protection, and redistributes well to protect both the treated and untreated parts of the plant.

PRECAUTIONS

- Make no more than two sequential applications of Fontelis before switching to a fungicide with a different mode of action.
- Maximum seasonal use rates apply dependent on the type of crop, please consult the label for more information.

TARGET DISEASES

- Alternaria (blight and leafspot)
- Anthracnose
- Ascochyta (blight and leafspot)
- Asian soybean rust
- Botrytis (blight, fleck, gray mold, leaf blight and rot)
- Brown rot blossom blight and fruit rot
- Cedar apple rust
- Cherry leafspot (cherry only)
- Early blight
- Early leafspot
- Late leafspot
- Lettuce drop
- Mummy berry
- Powdery mildew
- Purple blotch
- Rust
- Scab
- Sclerotinia (blight and stem rot)
- Septoria late blight (celeric and celery)
- Southern stem rot
- Web blotch

CROPS

- Alfalfa
- Low growing berries
- Bulb vegetables (green, dry)
- Bushberries
- Brassica (cole) leafy vegetables
- Caneberries
- Cucurbit vegetables
- Fruiting vegetables
- Leafy vegetables
- Legume vegetables
- Pome fruits
- Root vegetables and leaves
- Stone fruit
- Tree nuts
- Peanuts

FORMULATION AND PACKAGING

- 2 x 9.6 L jugs

For more information on Fontelis fungicide visit:



GROUP

3

Indar™**FUNGICIDE****EXCELLENT CONTROL OF BLOSSOM BLIGHT, FRUIT BROWN ROT AND BLACK KNOT IN STONE FRUITS.**

Indar™ fungicide protects the fruit and leaf by remaining on the fruit and leaf surface longer. It has locally systemic and curative activity, as well as strong residual activity.

PRECAUTIONS

- Do not apply through irrigation systems (chemigation).
- NOTE: Reduced product efficacy may occur if water containing suspended soil particles is used, such as water from ponds, streams or unlined ditches.
- A wetting agent or non-polymer containing spray adjuvant approved for use in registered pesticide products on fruit should be added to spray solutions according to manufacturers' use instructions to achieve optimum disease control.
- The pouches of Indar are water-soluble. Do not allow pouches to become wet prior to adding to the spray tank.
- For REIs for various crops see Quick Reference Charts.

TARGET DISEASES

- Black knot
- Blossom blight
- Fruit brown rot
- Fruit rots (early, end, bitter, cotton ball, ripe, viscid, yellow, black and storage)
- Mummy berry

CROPS

- Apricot
- Cherry
- Cranberry
- Highbush blueberry
- Nectarine
- Peach
- Plum

FORMULATION AND PACKAGING

- Wettable powder
- 12 x 454 g bags

For more information
on Indar
fungicide visit:



GROUP

3

Nova™

FUNGICIDE

EFFECTIVE DISEASE CONTROL IN FRUITS AND VEGETABLES INCLUDING APPLE, GRAPE AND STONE FRUITS.

Nova™ fungicide is a systemic fungicide providing long-lasting, effective control of diseases such as apple scab, powdery mildew and rust in apples and other crops.

PRECAUTIONS

- **Apple, peach, pear, nectarine, greenhouse cucumber, cherry, strawberry, flowers:** Maximum of six applications per growing season.
- **Grape, asparagus:** Maximum five applications per growing season.
- **Greenhouse pepper, Saskatoon berry:** Maximum three applications of up to 340 g/ha per growing season.
- **Greenhouse tomato:** Maximum two applications per growing season.
- **Dry beans:** Maximum three applications per growing season.
- Copper products tank mixed with Nova reduce the effectiveness of the fungicide.
- For REIs for various crops see Quick Reference Charts.

TARGET DISEASES

- Anthracnose
- Apple scab
- Black rot
- Black spot
- Brown rot
- Gummy stem blight
- Powdery mildew
- Rust diseases
- Scab
- Septoria leaf spot

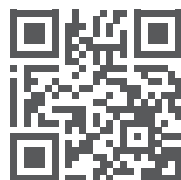
CROPS

- Apple
- Asparagus
- Bushberry including highbush and lowbush blueberry
- Caneberry including blackberry and raspberry
- Cherry – sweet and tart
- Cucurbit vegetables including cantaloupe, cucumbers and pumpkin
- Dry beans
- Flowers
- Grapes
- Greenhouse cucumber
- Greenhouse pepper
- Greenhouse tomato
- Pear
- Saskatoon berry
- Stone fruit including peach and nectarine
- Strawberry

FORMULATION AND PACKAGING

- Granule
- 12 x 560 g bags

For more information on Nova fungicide visit:



GROUP

11

GROUP

27

MULTI
MODE
OF ACTION**Tanos™****FUNGICIDE****IT WORKS. RAIN OR SHINE.**

Tanos™ fungicide provides control of early blight, late blight and botrytis in a variety of crops. It offers both systemic and protectant activity, in addition to being resistant to wash off.

PRECAUTIONS

- Make the first application of Tanos following one to two applications of a preventative broad spectrum fungicide such as chlorothalonil or mancozeb.
- Make the second application no less than 12 days after the first; a third application may be made no less than 24 days after the second.
- Apply Tanos in a preventative program.
- When using Tanos in a fungicide program, a recommendation is to alternate with other fungicides to manage resistance.
- Utilize sufficient water to obtain thorough coverage.

TARGET DISEASES

- Cane botrytis
- Caneberry (anthracnose and spur blight)
- Early blight
- Fruit rot (preharvest)
- Late blight

CROPS

- Caneberry
- Potatoes
- Tomatoes

FORMULATION AND PACKAGING

- Dry flowable
- 4 x 3.4 kg bags

For more information
on Tanos
fungicide visit:





HERBICIDES



GROUP

2

Accent™ IS

HERBICIDE

TOUGH ON WEEDS. SAFE ON CORN.

Accent™ IS herbicide delivers outstanding control of annual and perennial grass weeds in field corn, seed corn² and sweet corn³. With a built-in crop safener, Accent IS can be applied with confidence under a wide range of weather and growth stages.

PRECAUTIONS

- Add a registered non-ionic surfactant (NIS) such as Agral® 90 or Ag-Surf® at 2 L per 1000 L of spray solution (0.2% v/v).
- Agitation is required for uniform mixing and application. The optimum water volume for Accent IS application is 140–190 litres of water per hectare (minimum of 100 litres of water per hectare).

WEEDS CONTROLLED

- Barnyard grass
- Fall panicum
- Green foxtail
- Long-spined sandbur
- Old witchgrass
- Quackgrass
- Wild oats
- Yellow foxtail¹

CROPS

- Field corn
- Seed corn²
- Sweet corn²

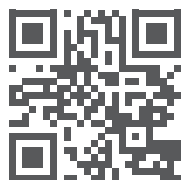
FORMULATION AND PACKAGING

- Water Dispersible Granule
- 370 gram bottle treats 20 acres

1 Suppression only. For improved control, apply Accent IS with Merge (0.5% v/v) or NIS + UAN (0.2% v/v + 5 L/Ha)

2 Sweet corn varieties and seed corn inbreds may vary in their tolerance to herbicide, including Accent IS Herbicide. Since not all sweet corn varieties and seed corn inbreds have been tested for tolerance to Accent IS Herbicide, consult your seed supplier for information on the tolerance of specific sweet corn varieties and seed corn inbreds to Accent IS Herbicide.

For more information
on Accent IS
herbicide visit:



GROUP

3

Kerb™ SC**HERBICIDE****SOIL ACTIVE WEED CONTROL IN ORNAMENTALS AND SELECT HORTICULTURE CROPS.**

Kerb™ SC herbicide provides selective weed control and is readily absorbed by plants through the root system, translocated upward and distributed into the entire plant.

PRECAUTIONS

- Do not make more than one application of Kerb SC per year.
- Herbicide activity is best when the soil organic matter is less than four percent. Use in soils with higher organic matter may result in inconsistent or incomplete weed control.
- Dandelion, thistles and other members of the Compositae family are not controlled by Kerb SC.
- Less tolerant grass species (e.g. tall fescue, creeping red fescue) may experience a 10 to 15 percent injury as a result of the treatment.
- DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty.
- For REIs for various crops see Quick Reference Charts.

WEEDS CONTROLLED

- Chickweed
- Foxtail barley
- Orchardgrass
- Quackgrass
- Timothy
- Volunteer wheat
- Wild oats

CROPS

- Alfalfa
- Apple
- Established grassland
- Lettuce
- Lowbush blueberry
- Ornamentals
- Pear
- Strawberry
- Trefoil

FORMULATION AND PACKAGING

- Liquid suspension
- 2 x 10 L jugs

For more information
on Kerb SC
herbicide visit:



GROUP

4

Lontrel™ XC

HERBICIDE

THE STANDARD FOR THISTLE CONTROL.

Lontrel™ XC herbicide delivers Canada thistle and broadleaf weed control that producers have counted on for more than 35 years.

PRECAUTIONS

- Maximum of one application per year in all crops, with the exception of cranberry.
- Residues of the herbicide occurring in the straw may be harmful to susceptible plants; therefore, do not use straw or crop residue from treated crops for composting or mulching susceptible broadleaved crops. Do not grow susceptible crops such as peas, beans, lentils, potatoes, sunflowers or other sensitive crops on land that has been mulched with straw containing Lontrel XC residues within the last 12 months.
- For REIs for various crops see Quick Reference Charts.

WEEDS CONTROLLED

- Alsike clover
- Canada thistle
- Common groundsel
- Common ragweed
- Kudzu
- Ox-eye daisy*
- Perennial sow thistle (top growth control)
- Ragweed
- Red/white clover
- Scentless chamomile
- Sheep sorrel*
- Tufted vetch
- Vetch
- Volunteer alfalfa
- Wild buckwheat

* Suppression only

CROPS

- Balsam fir Christmas tree plantations
- Blueberry
- Brassica (cole) leafy vegetables
- Brussels sprouts
- Corn - field
- Cranberry
- Crop and non-crop farmland areas
- Dry bulb onions (approved varieties only)
- Garden beets
- Hybrid poplars
- Pome fruit
- Rutabaga
- Saskatoon berry
- Spinach
- Stone fruit
- Strawberry
- Sugar beet
- Wide variety of oilseeds, cereals and grasses. See label for complete listing.

FORMULATION AND PACKAGING

- Solution
- 4 x 2.67 L jugs

For more information on Lontrel XC herbicide visit:



GROUP

2

Prism™ SG**HERBICIDE****OUTSTANDING POST-EMERGENT CONTROL OF QUACKGRASS, PIGWEED AND ANNUAL GRASSES.**

Potato and field tomato growers look to Prism™ SG herbicide for its outstanding post-emergent weed control.

PRECAUTIONS

- Application to control annual grasses and quackgrass must be made before the crop canopy can interfere with spray coverage of the target weeds.
- Cultivation is NOT recommended within 7-10 days prior to or after application of Prism™ SG.

WEEDS CONTROLLED

- Barnyard grass
- Fall panicum
- Green foxtail
- Hairy nightshade
- Lamb's-quarters*
- Quackgrass
- Redroot pigweed
- Witchgrass
- Yellow foxtail

CROPS

- Blueberry
- Caneberry
- Grapes
- Potatoes
- Stone fruit
- Tomatoes (field)

FORMULATION AND PACKAGING

- Soluble granule
- 12 x 480 g bottles

* Suppression only

For more information
on Prism SG
herbicide visit:





BIOLOGICALS

EMBRACE A BALANCED FUTURE

Corteva's new biological products offer cutting-edge, complementary solutions to persistent challenges like resistance management and environmental impact, so you can leverage resources more effectively. By complementing existing practices, biologicals can help you enhance return on investment and profitability and preserve your land for the future.

Corteva is focused on a biological portfolio that is designed to offer proven, predictable performance, work side by side with evolving farming practices, and meet changing market expectations.

WHAT IS A BIOLOGICAL?

Biologicals are crop treatments that are either living or derived from naturally-occurring materials and help protect plants from pests, disease, and environmental stress.

DIFFERENT TYPES OF BIOLOGICAL PRODUCTS

Our pipeline is full of exciting new developments. Expect more biological crop protection solutions from Corteva Agriscience in these categories, coming soon.

Biostimulants

Biocontrol Products

Pheromones

biologicals

WHY CHOOSE BIOLOGICALS FROM CORTEVA AGRISCIENCE?

PROVEN, PREDICTABLE PERFORMANCE

Our biologicals go through years of testing to ensure they consistently deliver, giving you peace of mind about your crop protection and confidence in a strong harvest.

COMPLEMENT EVOLVING FARMING PRACTICES

Biological products offer cutting-edge, complementary solutions to persistent challenges, like resistance management and environmental impact, so you can leverage resources more effectively.

MEET CHANGING MARKET EXPECTATIONS

Look toward the future with products that will help you keep your operation viable, enhance marketability, meet consumer preferences, and boost ROI and profitability on your farm.

NEW FORMULATION

Utrisha™ N



NUTRIENT EFFICIENCY BIOSTIMULANT

UTRISHA™ N NUTRIENT EFFICIENCY BIOSTIMULANT PROVIDES CROPS A UNIQUE WAY TO CAPTURE NITROGEN THROUGHOUT THE SEASON, HELPING PLANTS REACH THEIR YIELD POTENTIAL.

Utrisha™ N is a nutrient efficiency biostimulant. The natural bacteria, *methylobacterium symbioticum*, fixes nitrogen from the air and converts it into a usable form for the plant.

WHY USE UTRISHA N NUTRIENT EFFICIENCY BIOSTIMULANT?

- Utrisha N enhances plant growth and resilience by improving the nitrogen availability in the plant throughout the growing season.
- Maximizes crop potential through improved nitrogen management, offering proven, predictable performance.
- Works side by side with evolving farming practices with simple, flexible storage and application.
- Utrisha N meets changing market expectations by providing a sustainable source of nitrogen.

ENHANCES NITROGEN USE EFFICIENCY

Utrisha N provides a sustainable, alternative source of nitrogen that reduces dependency of nitrogen uptake from the soil and ensures the plant has access to nitrogen all season long, without the risk of leaching into water tables or releasing additional greenhouse gases.

RECOMMENDATIONS

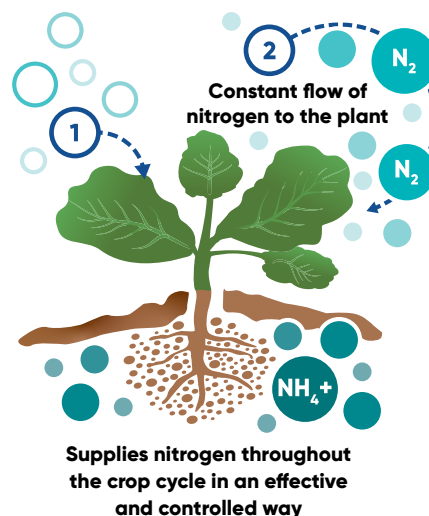
- Apply during active plant growth
- Apply in healthy crops unaffected by poor nutrition or other biotic/abiotic stresses
- Apply with sufficient plant biomass, when the crop presents good soil coverage
- Use water with a total chlorine content <2 ppm
- Use water with a pH between 5 and 8
- Utrisha N is best applied in the early morning, when a greater number of stomata are open

CROPS

- Artichoke
- Beet
- Blueberry (high and low bush)
- Broad bean
- Broccoli
- Cabbage
- Caneberry
- Carrot
- Cauliflower
- Celery
- Chard
- Cranberry
- Cucumbers
- Eggplant
- Escarole
- Fennel
- Garlic
- Ginseng
- Grapes
- Green asparagus
- Green onions
- Herbs
- Leek
- Lettuce
- Melon
- Nut trees
- Onion
- Pea
- Pepper for paprika
- Peppers
- Pome fruit trees
- Potato
- Pumpkin
- Radish
- Raspberry
- Romanesco
- Saskatoon
- Spinach
- Squash
- Stone fruit trees
- Strawberry
- Sugar Beet
- Sweet Potato
- Tomatoes
- Watermelon
- White asparagus
- Zucchini

PACKAGING

- 2 x 5.39 kg bags (case)



For more information on Utrisha N nutrient efficiency biostimulant visit:



OMRI Listed

This guide is a reference only. For more information on use directions, please refer to the product label.

AGRONOMY



INTEGRATED PEST MANAGEMENT



Integrated pest management (IPM) is a systematic decision-making process that supports a balanced approach to managing crop production systems through sound economic and environmental practices. Here are some of the principles:

Evaluate disease and pest populations through scouting and monitoring programs.

Use practices to support resistance management, including proper application rates, techniques and rotation of chemical groups.

Biological, chemical, cultural and mechanical methods are used to reduce pest populations.

Control measures are implemented using the knowledge of known threshold levels for economic damage, the potential impact on beneficials and the crop value.

Records are maintained for products use, product groups, application information and results achieved.

Corteva Agriscience™ recommends consulting your local extension specialist or certified crop advisor for any additional pesticide resistance management and/or IPM recommendations for specific site and pest problems in your area.



THE SOIL HEALTH CYCLE: PRESERVE TODAY, PROVIDE FOR TOMORROW

Soil holds the secrets to keeping your roots and your crop healthy. To help ensure your soil supports a plentiful and quality harvest year after year, it would be beneficial for you to have a clear understanding of the actions you can take to keep it a productive resource.

Doran describes soil health as “The capacity of soil to function as a vital living system, within ecosystem and land-use boundaries, to sustain plant and animal productivity, maintain or enhance water and air quality, and promote plant and animal health” (Doran et al. 1996). Healthy soils can suppress naturally soil-borne pathogens and pests, support efficient nutrient cycles and provide improved physical structure for robust root foundation and plant growth. This is why it is important to know what agricultural practices to adopt to **boost soil health**.

Crops draw nutrients from the soil through their roots. The roots in turn, release food that sustains the beneficial organisms in the soil. However, roots are not immune to threats as a variety of factors can destroy roots. One of the least understood threats is **harmful nematodes**. Nematodes are microscopic and invisible to the naked eye but can cause significant yield loss. Control of harmful nematodes is essential to keeping crops healthy.

Contrary to what many people think, the number of harmful nematodes in soils is easily outnumbered by the number of **beneficial nematodes** that promote natural fertility and quality over time. **Beneficial nematodes** feed on bacteria, fungi, insects or harmful nematodes in the soil, stimulating soil nutrient cycles, and keeping populations of damaging plant pests and diseases at bay.

Therefore, it is crucial to adopt farm management tools that work in harmony with the beneficial nematodes.

You can take several actions to preserve and promote the health of your soils, including:

- Minimizing disturbance by adopting practices like no-till or minimum tillage
- Planting cover crops to preserve moisture and reduce erosion
- Promoting biodiversity in the soils by choosing inputs that are less disruptive to the beneficial organisms in the soil
- And using **nematicides**, like Salibro™ nematicide with Rekleme!™ active, that preserve beneficial nematodes and control harmful ones

Salibro nematicide, powered by Rekleme!™ active, is a novel sulfonamide nematicide with a unique mode of action against plant-parasitic nematodes. It is a true nematicide with no insecticidal nor fungicidal activity, making it a highly effective nematode control solution with a more favorable environmental profile compared to conventional treatments. Salibro protects crop roots without compromising beneficial arthropods, pollinators or other organisms that provide useful functions in the crop root zone. It is a core component of an integrated nematode management program.

Healthy soils promote healthy crops and abundant yields for years. A simple shift from merely managing the soil to **proactively advancing soil health** and recognizing the greater role it plays in benefiting farmland and the planet can create long-term value. As farmers, you can take actions today to leave behind a legacy for the future.



CLOSER™ INSECTICIDE WITH ISOCLAST™ ACTIVE IN LEAFY VEGETABLES

Sap-feeding insects are among the most destructive insect pests, causing economic losses in horticultural crops. Management of sap-feeding insects often requires diverse control tactics, including the use of insecticides such as Closer™ insecticide with Isoclast™ active.

EFFECTIVE AT LOW USE RATES

Closer delivers excellent efficacy against target pests at low use rates. In leafy vegetables, including Brassica, Closer can be applied at a rate from 40 to 60 mL/ac to control aphids and 121 mL/ac to control tarnished plant bugs.

Closer insecticide controls insect pests both by contact and through ingestion to provide fast knockdown and residual control. To learn more about controlling sap-feeding insects in leafy vegetables with Closer insecticide, scan this QR Code:



CONTROLLING WESTERN BEAN CUTWORM IN DRY BEANS

While it is known as a primary pest in corn, Western Bean Cutworm (WBC) is also negatively impacting crop quality and yield for Canadian dry bean growers.

WHY IS WBC DIFFICULT TO CONTROL IN DRY BEANS?

After the late-tassel stage in corn, WBC moths seek out dry beans and lay their eggs deep in the crop canopy of fields, anytime between mid-June and the end of August. Because the larvae hide in the soil during the day before feeding at night, WBC is particularly hard for farmers to scout before damage occurs.

The best way to control WBC in dry beans is with an Integrated Pest Management Plan that includes an insecticide like Intrepid™ insecticide. Intrepid uses a novel mode of action (Molt Accelerating Compound) to specifically target lepidopterous pests like WBC while not adversely affecting beneficial insects when used according to the product label.

For tips on how to protect your dry bean crops for the most quality, yield and profit at harvest, scan this QR code to read our agronomy article on Controlling Western Bean Cutworm in Dry Beans.



CONTROLLING POWDERY MILDEW IN FRUITING AND LEAFY VEGETABLES

If white powdery patches are found on fruiting and leafy vegetable crops – powdery mildew might be the culprit.

WHAT IS POWDERY MILDEW?

Powdery mildew is a fungal disease that can appear as white or grey dusty patches on leaf surfaces. The disease is favoured by warm, humid weather and its infection begins in late summer.

The damage of powdery mildew can be costly, resulting in reduced yield and lower-quality crops – impacting Canadian growers' bottom line.

How can growers prevent and control powdery mildew in fruiting and leafy vegetable crops?

Having an Integrated Pest Management Plan in place is crucial to controlling any pest. For powdery mildew in fruiting and leafy vegetable crops, consider Fontelis™ fungicide. Fontelis provides residual, preventative and post-infection activity on powdery mildew.

For more information on preventing and controlling powdery mildew with Fontelis fungicide, scan this QR code to read our agronomy article.





STRATEGIES FOR CONTROLLING APHIDS IN POTATOES

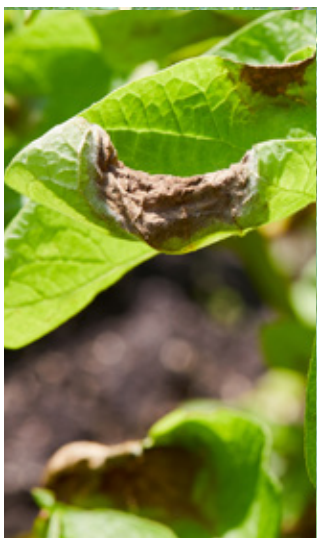
Aphids are a common insect pest that can be found in almost all potato-producing areas in Canada,¹ and they must be actively managed in order to avoid loss of crop quality and yield.

Scan this QR code to read our agronomic article for advice on:

- Aphid identification
- Scouting and managing aphids
- Protecting your potato crop with Closer™ insecticide with Isoclast™ active



Closer™ insecticide is a superior control product that offers fast-acting, complete knockdown and residual control of aphids. Closer's rapid activity decreases the likelihood of virus transmission via aphids, protecting overall crop quality and yield.



PROACTIVE STRATEGIES FOR PROTECTING POTATOES FROM EARLY & LATE BLIGHT

Two common diseases, early blight and late blight, can be found in most potato-growing regions across Canada, and when left untreated, can cause serious economic impacts.² Understanding the difference between these two diseases, and having a proactive crop management plan in place, can help significantly reduce the risk posed to your fields.

Scan this QR code to read our agronomic article for advice on:

- Impact of early & late blight on potatoes
- Recognizing the signs & symptoms
- Managing early & late blight with an application of Tanos™ fungicide for preventative blight control



Tanos protects your potato yields from both early blight and late blight by combining powerful control with resistance management—utilizing Group 11 and Group 27 active ingredients

¹ https://www2.gnb.ca/content/gnb/en/departments/10/agriculture/content/crops/potatoes/potato_aphid.html#:~:text=Chemical%20Control%20%2D%20Any%20recommended%20insecticide,needed%20occasionally%20in%20Eastern%20Canada.

² <https://www.alberta.ca/late-blight-of-potatoes-and-tomatoes.aspx#:~:text=Each%20year%2C%20Late%20blight%20reduces,last%20one%20was%20in%201993.>



STRATEGIES FOR PROTECTING POTATO CROPS FROM KEY WEEDS

Manage key weeds in potato crops to help avoid marketable yield loss of up to 30%¹. To help protect potatoes for the most yield and quality at harvest, we have gathered some helpful weed control tips.

Scan this QR code to read our agronomic article, for advice on:

- Planning an effective weed management plan
- Applying a post-emergent herbicide, such as Prism™ SG Herbicide, as part of that plan.



Best used as part of an Integrated Pest Management (IPM) strategy, Prism™ SG herbicide provides outstanding post-emergent control of weeds such as quackgrass, redroot pigweed, barnyard grass, fall panicum, green foxtail, lamb's-quarters (suppression), witchgrass and yellow foxtail.



SUPPRESSING BLUEBERRY MAGGOT IN ORGANIC BLUEBERRIES

With blueberry maggot becoming a major problem for Canada's organic blueberry growers², we want to provide you with the information and advice you need to help protect your crops.

Scan this QR code to get detailed information and advice on:

- Impact of the blueberry maggot
- Using Entrust™ Insecticide with Qalcova™ active (spinosad) for peace of mind and protection
- Application best practices



Entrust provides the performance organic growers have come to trust. Qalcova™ active (spinosad) was the first commercialized active ingredient in the unique class of insect control products, the spinosyns.



SAVING CANADA'S STRAWBERRY CROPS FROM POWDERY MILDEW

Powdery mildew in strawberries is tricky to identify and can cause up to 30% yield losses once established.³ To provide you with the information you need to protect your strawberries, we have compiled some helpful tips.

Scan this QR code to read our agronomic article, with detailed advice on:

- Identifying powdery mildew in strawberries
- Common risk factors
- Disease management strategies
- Fungicide application, including Nova™ fungicide



Nova is a systemic, Group 3 fungicide for the control of various diseases affecting strawberries, apples, grapes and other crops. An advanced solution that meets strawberry farmers' needs, it provides long-lasting and effective control of powdery mildew.

¹ <https://peipotatoagronomy.com/wp-content/uploads/2021/01/Weed-Mgmt-in-PEI-potato-production-Jan21-1.pdf>

² <https://inspection.canada.ca/plant-health/invasive-species/insects/blueberry-maggot/eng/1328325206503/1328325288221>

³ Carisse, O.; Morissette-Thomas, V.; Van der Heyden, H. Lagged association between powdery mildew leaf severity, airborne inoculum, weather, and crop losses in strawberry. *Phytopathology* 2013, 103, 811–821.

CROP GROUPS AND SUBGROUPS – NUMBER AND NAME	REPRESENTATIVE COMMODITIES	COMMODITIES
1. Root and Tuber Vegetables	Carrot, potato, sweet potato, radish, sugar beet	Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; beet, garden; beet, sugar; burdock, edible; canna, edible; carrot; cassava, bitter and sweet; celeriac; chayote (root); chervil, turnip-rooted; chicory; chufa; dasheen (taro); ginger; ginseng; horseradish; leren; parsley, turnip-rooted; parsnip; potato; radish; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; sweet potato; tanier; turmeric; turnip; yam bean; yam, true
1A. Root vegetables subgroup	Carrot, radish and sugar beet	Beet, garden; beet, sugar; burdock, edible; carrot; celeriac; chervil, turnip-rooted; chicory; ginseng; horseradish; parsley, turnip-rooted; parsnip; radish; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; turnip
1B. Root vegetables (except sugar beet) subgroup	Carrot and radish	Beet, garden; burdock, edible; carrot; celeriac; chervil, turnip-rooted; chicory; ginseng; horseradish; parsley, turnip-rooted; parsnip; radish; radish, oriental; rutabaga; salsify; salsify, black; salsify, Spanish; skirret; turnip
1C. Tuberous and corm vegetables subgroup	Potato	Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen (taro); ginger; leren; potato; sweet potato; tanier; turmeric; yam bean; yam, true
1D. Tuberous and corm vegetables (except potato) subgroup	Sweet potato	Arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen (taro); ginger; leren; sweet potato; tanier; turmeric; yam bean; yam, true
2. Leaves of Root and Tuber Vegetables (Human Food or Animal Feed)	Turnip and garden beet or sugar beet	Beet, garden; beet, sugar; burdock, edible; carrot; cassava, bitter and sweet; celeriac; chervil, turnip-rooted; chicory; dasheen (taro); parsnip; radish; radish, oriental (daikon); rutabaga; salsify, black; sweet potato; tanier; turnip; yam, true
3. Bulb Vegetables	Onion, green; and onion, dry bulb	Garlic; garlic, great-headed; leek; onion, dry bulb and green; onion, Welsh; shallot
3-07. Bulb vegetable group	Onion, bulb; onion, green	Chive, fresh leaves; chive, Chinese, fresh leaves; daylily, bulb; elegans hosta; fritillaria, bulb; fritillaria, leaves; garlic, bulb; garlic, great-headed, bulb; garlic, serpent, bulb; kurrat; lady's leek; leek; leek, wild; lily, bulb; onion, Beltsville bunching; onion, bulb; onion, Chinese, bulb; onion, fresh; onion, green; onion, macrostem; onion, pearl; onion, potato, bulb; onion, tree, tops; onion, Welsh, tops; shallot, bulb; shallot, fresh leaves; cultivars, varieties, and/or hybrids of these
3-07A. Onion, bulb, subgroup	Onion, bulb	Daylily, bulb; fritillaria, bulb; garlic, bulb; garlic, great-headed, bulb; garlic, serpent, bulb; lily, bulb; onion, bulb; onion, Chinese, bulb; onion, pearl; onion, potato, bulb; shallot, bulb
3-07B. Onion, green, subgroup	Onion, green	Chive, fresh leaves; chive, Chinese, fresh leaves; elegans hosta; fritillaria, leaves; kurrat; lady's leek; leek; leek, wild; onion, Beltsville bunching; onion, fresh; onion, green; onion, macrostem; onion, tree, tops; onion, Welsh, tops; shallot, fresh leaves
4-13. Leafy Vegetables	Head lettuce, leaf lettuce and spinach	Amaranth (Chinese, leafy); arugula; aster, Indian; blackjack; broccoli (raab, Chinese); cabbage (Abyssinian, Chinese (bok choy), seakale); cat's whiskers; cham-chwi; cham-na-mul; chervil, fresh leaves; chipilin; chrysanthemum, garland; cilantro, fresh leaves; collards; corn salad (lamb's lettuce, Italian); cosmos; cress (garden, upland); dandelion; dang-gwi; dillweed, fresh leaves; dock; dol-nam-mul; ebolo; endive; escarole; fameflower; feather cockscomb; good King Henry; Hanover salad; huauzontle; jute leaves; kale; lettuce (bitter, head, leaf, Romaine); maca; mizuna; mustard greens; orach; parsley, fresh leaves; plantain, buckhorn; primrose, English; purslane (garden, winter); radicchio (red chicory); radish, leaves; rape greens; rocket, wild; shepherd's purse; spinach (malabar, New Zealand, tree); Swiss chard; tanier spinach; turnip greens; violet, Chinese; watercress; cultivars, varieties and/or hybrids of these
4-13A. Leafy greens subgroup	Head lettuce, leaf lettuce and spinach	Amaranth (Chinese, leafy); aster, Indian; blackjack; cat's whiskers; cham-chwi; cham-na-mul; chervil, fresh leaves; chipilin; chrysanthemum, garland; cilantro, fresh leaves; corn salad (lamb's lettuce, Italian); cosmos; dandelion; dang-gwi; dillweed, fresh leaves; dock; dol-nam-mul; ebolo; endive; escarole; fameflower; feather cockscomb; good King Henry; huauzontle; jute leaves; lettuce (bitter, head, leaf, Romaine); orach; parsley, fresh leaves; plantain, buckhorn; primrose, English; purslane (garden, winter); radicchio (red chicory); spinach (malabar, New Zealand, tree); Swiss chard; tanier spinach; violet, Chinese; cultivars, varieties and/or hybrids of these

CROP GROUPS AND SUBGROUPS – NUMBER AND NAME	REPRESENTATIVE COMMODITIES	COMMODITIES
4-13B. Brassica leafy greens subgroup	Mustard greens	Arugula; broccoli (raab, Chinese); cabbage (Abyssinian, Chinese (bok choy), seakale); collards; cress (garden, upland); Hanover salad; kale; maca; mizuna; mustard greens; radish, leaves; rape greens; rocket, wild; shepherd's purse; turnip greens; watercress; Chinese; cultivars, varieties and/or hybrids of these
5-13. Brassica Head and Stem Vegetables	Broccoli, cauliflower and cabbage	Broccoli; Brussels sprouts; cabbage, Chinese (napa); cauliflower; Cultivars, varieties and/or hybrids of these
6. Legume Vegetables (Succulent or Dried)	Bean (Phaseolus) (succulent and dried), pea (Pisum) (succulent and dried) and soybean	Bean (Lupinus) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (Phaseolus) (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); bean (Vigna) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); broad bean (fava); chickpea (garbanzo); guar; jackbean; lablab bean; lentil; pea (Pisum) (includes dwarf pea, edible-podded pea, English pea, field pea, garden pea, green pea, snowpea, sugar snap pea); pigeon pea; soybean; soybean (immature seed); sword bean
6A. Edible-podded legume vegetables subgroup	Any one succulent cultivar of edible-podded bean (Phaseolus) and any one succulent cultivar of edible-podded pea (Pisum)	Bean (Phaseolus) (includes runner bean, snap bean, wax bean); bean (Vigna) (includes asparagus bean, Chinese longbean, moth bean, yardlong bean); jackbean; pea (Pisum) (includes dwarf pea, edible-podded pea, snow pea, sugar snap pea); pigeon pea; soybean (immature seed); sword bean
6B. Succulent shelled pea and bean subgroup	Any succulent shelled cultivar of bean (Phaseolus) and garden pea (Pisum)	Bean (Phaseolus) (includes lima bean, green; broad bean, succulent); bean (Vigna) (includes blackeyed pea, cowpea, southern pea); pea (Pisum) (includes English pea, garden pea, green pea); pigeon pea
6C. Dried shelled pea and bean (except soybean) subgroup	Any one dried cultivar of bean (Phaseolus) and any one dried cultivar of pea (Pisum)	Dried cultivars of bean (Lupinus); bean (Phaseolus) (includes field bean, kidney bean, lima bean (dry), navy bean, pinto bean, tepary bean); bean (Vigna) (includes adzuki bean, blackeyed pea, catjang, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean); broad bean (dry); chickpea; guar; lablab bean; lentil; pea (Pisum) (includes field pea); pigeon pea
8-09. Fruiting Vegetable Group	Tomato, standard size, and one cultivar of small tomato; bell pepper and one cultivar of small non-bell pepper	African eggplant; bush tomato; bell pepper; cocona; currant tomato; eggplant; garden huckleberry; goji berry; groundcherry; martynia; naranjilla; okra; pea eggplant; pepino; non-bell pepper; roselle; scarlet eggplant; sunberry; tomatillo; tomato; tree tomato; cultivars, varieties, and/or hybrids of these
8-09A. Tomato subgroup	Tomato (standard size and one cultivar of small tomato)	Bush tomato; cocona; currant tomato; garden huckleberry; goji berry; groundcherry; naranjilla; sunberry; tomatillo; tomato; tree tomato; cultivars, varieties, and/or hybrids of these
8-09B. Pepper/Eggplant subgroup	Bell pepper and one cultivar of small nonbell pepper	African eggplant; bell pepper; eggplant; martynia; nonbell pepper; okra; pea eggplant; pepino; roselle; scarlet eggplant; cultivars, varieties, and/or hybrids of these
8-09C. Nonbell pepper/Eggplant subgroup	One cultivar of small nonbell pepper or one cultivar of small eggplant	African eggplant; eggplant; martynia; nonbell pepper; okra; pea eggplant; pepino; roselle; scarlet eggplant ; cultivars, varieties, and/or hybrids of these
9. Cucurbit Vegetables	Cucumber, muskmelon and summer squash	
9A. Melon subgroup	Cantaloupe	Citron melon; muskmelon; watermelon
9B. Squash/Cucumber subgroup	One cultivar of summer squash and cucumber	Chayote (fruit); Chinese waxgourd; cucumber; gherkin; gourd, edible; Momordica spp; pumpkin; squash, summer; squash, winter
11-09. Pome Fruit Group	Apple and pear	Apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these

CROP GROUPS AND SUBGROUPS – NUMBER AND NAME	REPRESENTATIVE COMMODITIES	COMMODITIES
12-09. Stone Fruit Group	Sweet cherry or tart cherry, Peach and plum or prune plum	Apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; Jujube, Chinese; nectarine; peach; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; sloe; cultivars, varieties, and/or hybrids of these
13-07. Berry And Small Fruit	Any one blackberry or any one raspberry, highbush blueberry, elderberry or mulberry, grape, fuzzy kiwifruit and strawberry	Amur river grape; aronia berry; bayberry; bearberry; bilberry; blackberry (including Andean blackberry, arctic blackberry, bingleberry, black satin berry, boysenberry, brombeere, California blackberry, Chesterberry, Cherokee blackberry, Cheyenne blackberry, common blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, evergreen blackberry, Himalayaberry, hullberry, lavacaberry, loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, mora, mures deronce, nectarberry, Northern dewberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, Southern dewberry, tayberry, youngberry, zarzamora, and cultivars, varieties and/or hybrids of these); blueberry, highbush; blueberry, lowbush; buffalo currant; buffaloberry; che; Chilean guava; chokecherry; cloudberry; cranberry; cranberry, highbush; currant, black; currant, red; elderberry; European barberry; gooseberry; grape; honeysuckle, edible; huckleberry; jostaberry; Juneberry (Saskatoon berry); kiwifruit, fuzzy; kiwifruit, hardy; lingonberry; maypop; mountain pepper berries; mulberry; muntries; native currant; partridgeberry; phalsa; pincherry; rasperry, black and red; riberry; salal; schisandra berry; sea buckthorn; serviceberry; strawberry; wild raspberry; cultivars, varieties, and/or hybrids of these
13-07A. Caneberry subgroup	Any one blackberry or any one raspberry	Blackberry; loganberry; rasperry, black and red; wild raspberry; cultivars, varieties, and/or hybrids of these
13-07B. Bushberry subgroup	Blueberry, highbush	Aronia berry; blueberry, highbush; blueberry, lowbush; buffalo currant; Chilean guava; cranberry, highbush; currant, black; currant, red; elderberry; European barberry; gooseberry; honeysuckle, edible; huckleberry; jostaberry; Juneberry (Saskatoon berry); lingonberry; native currant; salal; sea buckthorn; cultivars, varieties, and/or hybrids of these
13-07C. Large shrub/tree berry subgroup	Elderberry or mulberry	Bayberry; buffaloberry; che; chokecherry; elderberry; Juneberry (Saskatoon berry); mountain pepper berries; mulberry; phalsa; pincherry; riberry; salal; serviceberry; cultivars, varieties, and/or hybrids of these
13-07D. Small fruit vine climbing subgroup	Grape and fuzzy kiwifruit	Amur river grape; gooseberry; grape; kiwifruit, fuzzy; kiwifruit, hardy; maypop; schisandra berry; cultivars, varieties, and/or hybrids of these
13-07E. Small fruit vine climbing subgroup, except grape	Fuzzy kiwifruit	Amur river grape; gooseberry; kiwifruit, fuzzy; kiwifruit, hardy; maypop; schisandra berry; cultivars, varieties, and/or hybrids of these
13-07F. Small fruit vine climbing subgroup, except fuzzy kiwifruit	Grape	Amur river grape; gooseberry; grape; kiwifruit, hardy; maypop; schisandra berry; cultivars, varieties, and/or hybrids of these
13-07G. Low growing berry subgroup	Strawberry	Bearberry; bilberry; blueberry, lowbush; cloudberry; cranberry; lingonberry; muntries; partridgeberry; strawberry; cultivars, varieties, and/or hybrids of these
13-07H. Low growing berry subgroup, except strawberry	Cranberry	Bearberry; bilberry; blueberry, lowbush; cloudberry; cranberry; lingonberry; muntries; partridgeberry; cultivars, varieties, and/or hybrids of these
14. Tree Nuts	Almond and pecan	Almond; beechnut; Brazil nut; butternut; cashew; chestnut; chinquapin; filbert (hazelnut); hickory nut; macadamia nut; pecan; walnut, black and English
22. Stalk, stem, and leaf petioles	Asparagus and Celery	Agave; aloe vera; asparagus; bamboo, shoots; cardoon; celery; celery, Chinese; celtuce; fennel, Florence, fresh leaves and stalk; fern, edible; fuki; kale, sea; kohlrabi; palm hearts; prickly pear; prickly pear, Texas; rhubarb; udo; zuiki; cultivars, varieties, and hybrids of these

Questions?

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