

2025



EXTENSION AND ADVISORY TEAM

GUIDE TO WEED, INSECT AND DISEASE MANAGEMENT IN CRANBERRY

Nova Scotia Guide to Pest Management in Cranberry 2025
[Cran1-25]



DISCLAIMER

Recommendations in this guide are given for general information only and do not give the user the right to use a product in a manner not in accordance with the pesticide label or Pest Control Products Act. Perennia, by funding and printing this publication, and the editors/authors, do not offer any warranty or guarantee and do not assume any liability for crop loss, animal loss, health, safety, or environmental hazard caused by the use of any pesticide, advice, or recommendation in this schedule. Pesticides used in this schedule are products labeled for the target and crop. This information was retrieved from the Pest Management Regulatory online of Registered Products Database. The list of products presented in this schedule is intended to be complete, based on products known to be available in the region, but in no way is guaranteed to be complete. Some of the products listed may not be available. Trade names are given as a convenience to producers and are neither an endorsement of the product nor a suggestion that similar products are not available or effective.

Discard old editions of the pesticide spray guide. Each year, Perennia specialists update the pesticides and information contained in this publication.

ONLINE RESOURCE

The information contained in the following summary is also available online in an interactive format at <https://www.farmdatatools.perennia.ca/pest-guides/>

Emergency and First Aid Procedure for Pesticide Poisoning

- If poisoning from exposure to a pesticide by swallowing, inhalation or contact with skin or eyes is suspected, read the product label of the pesticide container and carry out first aid treatment as suggested.
- If a person is seriously injured, call 911 immediately.
- Emergency advice on pesticide poisoning is available 24 hours/day from the Atlantic Canada Poison Centre. Phone: 1-844-764-7669 (NS & PEI).

All Herbicides in the Cranberry Weed Guide 2025



PCP #	Herbicide	Active Ingredient	Group	PHI (days)	REI (days)	Product Maximum	Application Interval
27598	Centurion 240 EC	clethodim	1	30	0.5	1 app	
24835	Poast Ultra 450 EC	sethoxydim	1	15	0.5		
22625	Select 240 EC	clethodim	1	30	0.5	1 app	
21209	Venture L 125 EC	fluzafop-P-butyl + S-isomer	1		0.5	1 app	
5931, 14726, 17511, 26163	2,4-D Amine 600 LI	2,4-D, present as dimethylamine salt	4	50	0.5	1 app	
23545	Lontrel 360 LI	clopyralid	4	60	0.5	2 apps	
32795	Lontrel XC 600 SN	clopyralid	4	60	0.5	2 apps	
32265	Pyralid 300	clopyralid (present as triisopropanolamine salt)	4	60	0.5	2 apps	
27487	Roundup WeatherMAX 540 SN	glyphosate	9	30	0.5	1 app	
28983	Touchdown Total 500 SN	glyphosate	9	50	0.5	1 app	
12533	Casoron G-4	dichlobenil	20		0.5		
27833	Callisto 480 SC	mesotrione	27	60	0.5	See label	14 d
33632	Mester 480 SC	mesotrione	27	60	0.5	See label	14 d
30248	Serene 20 LI	acetic acid			0.5, when dry		

Guide to Weed Management in Cranberry 2025



Weed Types	Herbicide Product	Active Ingredient	Group	Rate	Water Volume	PHI (days)	REI (days)	Product Maximum	App Interval	Notes / Restrictions / Warnings	Status Update
01: PRE-EMERGENCE											
Broadleaf	Callisto 480 SC	mesotrione	27	0.21-0.3 L/ha, see label	100-200 L/ha, see label	60	0.5	See label	14 d	Crop stage: For bearing beds, apply between bud break and fruit set. For non-bearing beds, apply between bud break and and 60 days prior to to fall or winter flooding.	
	Mester 480 SC	mesotrione	27	0.21-0.3 L/ha, see label	100-200 L/ha, see label	60	0.5	See label	14 d	Crop stage: For bearing beds, apply between bud break and fruit set. For non-bearing beds, apply between bud break and and 60 days prior to to fall or winter flooding.	
Grass	Casoron G-4	dichlobenil	20	110 kg/ha			0.5			Pest stage: Early spring while perennial weeds are still dormant and annual weeds have not started to germinate.Crop safety: Avoid overapplication which may result in temporary reddening of cranberry plants. Do not apply after cranberry plants start to bloom as yield may be reduced. Do not use on young beds, newly sanded beds, or beds recently mowed for vines.	
02: POST-EMERGENCE											
Broadleaf	Callisto 480 SC	mesotrione	27	0.21-0.3 L/ha, see label	100-200 L/ha, see label	60	0.5	See label	14 d	Crop stage: For bearing beds, apply between bud break and fruit set. For non-bearing beds, apply between bud break and and 60 days prior to to fall or winter flooding.	
	Mester 480 SC	mesotrione	27	0.21-0.3 L/ha, see label	100-200 L/ha, see label	60	0.5	See label	14 d	Crop stage: For bearing beds, apply between bud break and fruit set. For non-bearing beds, apply between bud break and and 60 days prior to to fall or winter flooding.	
Grass	Centurion 240 EC	clethodim	1	0.19-0.38 L/ha, see label	110 L/ha	30	0.5	1 app		Crop stage: Apply post-emergence. Do no apply between the hook stage and full fruit set.Pest stage: Apply post-emergencePollinators/Beneficials: Toxic to certain beneficial insects.Recommendations: Apply with Adjuvant Amigo 0.5 – 1.0% v/v	
	Poast Ultra 450 EC	sethoxydim	1	0.32-1.1 L/ha, see label		15	0.5			Recommendations: To be used with Merge adjuvant or Assist oil concentrate. Pest stage: Apply to actively growing grasses.	Phase-out: Last sale by retail October 9, 2026. Expiry date of registration and final use by October 9, 2027.
	Select 240 EC	clethodim	1	0.19-0.38 L/ha, see label	110 L/ha (min)	30	0.5	1 app		Recommendations: To be used with Amigo adjuvant. Pest stage: Apply post-emergence of weeds. Crop stage: Post-emergence. Do not apply between the hook stage and full fruit set.	
	Venture L 125 EC	fluazifop-P-butyl + S-isomer	1	2.0 L/ha			0.5	1 app		Crop stage: Do not apply in harvest year, only in non-bearing year. Pest stage: Apply post-emergently on actively growing grasses.	
Sedges	Serene 20 LI	acetic acid		2-12% v/v, see label			0.5, when dry			Crop safety: Do not apply directly to cranberry.	
Wickwiping	2,4-D Amine 600 LI	2,4-D, present as dimethylamine salt	4	27.5% solution		50	0.5	1 app		Pest stage: Apply as an over the top wipe on application to actively growing weeds (June-July).Recommendations: Active ingredient concentration may vary between suppliers. Check supplier label for application rate.	
	Lontrel 360 LI	clopyralid	4	2% solution		60	0.5	2 apps		Crop stage: Wipe in the fall at least two weeks after harvest or in the spring before bud break.Crop safety: Contact of the treatment solution with cranberry foliage after bud break should be avoided since it will result in plant injury.	
	Lontrel XC 600 SN	clopyralid	4	2% solution		60	0.5	2 apps		Crop stage: Wipe in the fall at least two weeks after harvest or in the spring before bud break.Crop safety: Contact of the treatment solution with cranberry foliage after bud break should be avoided since it will result in plant injury.	
	Pyralid 300	clopyralid (present as triisopropanolamine salt)	4	2.4% solution		60	0.5	2 apps			



Weed Types	Herbicide Product	Active Ingredient	Group	Rate	Water Volume	PHI (days)	REI (days)	Product Maximum	App Interval	Notes / Restrictions / Warnings	Status Update
	Roundup WeatherMAX 540 SN	glyphosate	9	13.4% solution		30	0.5	1 app			
	Touchdown Total 500 SN	glyphosate	9	15% v/v		50	0.5	1 app		Crop stage: Late spring.	

All Pesticides in the Cranberry Insect and Disease Guide 2025



PCP #	Pesticide	Active Ingredient	Group	PHI (days)	REI (days)	Product Maximum	Application Interval	Pesticide Type
31825	Cueva 1.8 SN	copper octanoate	M02	1	0.2	15 apps	7-10 d, see label	Fungicide
13245	Guardsman Copper Oxychloride 50 WP	copper oxychloride	M02	10	2	3 apps	10 d	Fungicide
27733	Folpan 80 WDG	folpet	M04	30	0.5-4, see label	2 apps	10-14 d, see label	Fungicide
29355	Echo 720 SC	chlorothalonil	M05	50	2	1 app		Fungicide
33519	Echo 90 WSP	chlorothalonil	M05	50	0.5-5 (see label)	1 app		Fungicide
27876	Sevin XLR 43 SC	carbaryl	01A	2-10, see label	2	2 apps	8 d	Insecticide
29064	Imidan 70 WP	phosmet	01B	30	3	1 app		Insecticide
8372	Malathion 85 E	malathion	01B	3	none	1 app		Insecticide
28017	Bumper 432 EC	propiconazole	3	45	0.5	4 apps	10-14 d, see label	Fungicide
28016	Mission 418 EC	propiconazole	3	45	0.5	4 apps	10-14 d, see label	Fungicide
32240	Propi Super 25 EC	propiconazole	3	45	0.5	4 apps	10-14 d, see label	Fungicide
30164	Pyganic EC 1.4 II	pyrethrins	3	0	0.5	10 apps	3 d	Insecticide
32563	Ship 250 EC	cypermethrin	3	2	0.5	3 apps	7 d	Insecticide
19346	Tilt 250 E	propiconazole	3	45	0.5	4 apps	10-14 d, see label	Fungicide
28795	Up-cyde 2.5 EC	cypermethrin	3	2	0.5	3 apps	7 d	Insecticide
28408	Actara 25 WG	thiamethoxam	4	3	0.5	2 apps		Insecticide
28778	Delegate 25 WG	spinetoram	5	21	0.5	3 apps	7 d	Insecticide
30382	Entrust 240 SC	spinosad	5	21	0.5	3 apps	See label	Insecticide
27825	Entrust 80 WG	spinosad	5	21	0.5	3 apps	See label	Insecticide
26835	Success 480 SC	spinosad	5	21	0.5	3 apps	See label	Insecticide
31758	Kenja 400 SC	isofetamid	7	7	none	3 apps	7-14 d, see label	Fungicide
32263	Azoshy 250 SC	azoxystrobin	11	30	0.5	3 apps	7-10 d, see label	Fungicide
26508	Dipel 2X DF	Bacillus thuringiensis	11	0	none		3-14 d, see label	Insecticide
26153	Quadris 250 SC	azoxystrobin	11	30	0.5	3 apps	7-10 d, see label	Fungicide
30518	Quadris Top SC	azoxystrobin + difenoconazole	11, 03	30	0.5	3 apps	7-10 d, see label	Fungicide
28515	Rimon 10 EC	novaluron	15	1	0.5	3 apps	7 d	Insecticide
24503	Confirm 240 F	tebufenozide	18	30	none	3 apps	10 d	Insecticide
27786	Intrepid 240 SC	methoxyfenozide	18	14	0.5		10-18 d, see label	Insecticide
32918	Diplomat 5 SC	polyoxin d zinc salt	19	0	none	3 apps	See label	Fungicide
28953	Movento 240 SC	spirotetramat	23	7	0.5	1.833 mL/ha	7 d	Insecticide
28981	Altacor 35 WG	chlorantraniliprole	28	1	0.5	3 apps, 645 g/ha	7 d	Insecticide
30895	Exirel 100 SC	cyantraniliprole	28	14	0.5	4 apps	7-14 d, see label	Insecticide
32350	Regalia Rx 5 SC	Reynoutria sachalinensis	P05	0	when dry		7-14 d, see label	Fungicide

Guide to Insect and Disease Management in Cranberry 2025

Pest	Pesticide Products	Active Ingredient	Group	Rate	Water Volume	PHI (days)	REI (days)	Product Maximum	App Interval	Notes / Restrictions / Warnings	Status Update
Blackheaded fireworm	Altacor 35 WG	chlorantraniliprole	28	215-285 g/ha, see label	450 L/ha	1	0.5	3 apps, 645 g/ha	7 d	Pest stage: ThresholdPollinators/Beneficials: Toxic to certain beneficial insects.	
	Confirm 240 F	tebufenozide	18	1.2 L/ha	190 L/ha (min)	30	none	3 apps	10 d		
	Delegate 25 WG	spinetoram	5	420 g/ha	500 L/ha (min)	21	0.5	3 apps	7 d	Pest stage: Target eggs at hatch or small larvae. Pollinators/Beneficials: Toxic to bees and certain beneficial insects	
	Entrust 240 SC	spinosad	5	364-727 g/ha, see label	500 L/ha	21	0.5	3 apps	See label	Pollinators/Beneficials: Toxic to bees.	
	Entrust 80 WG	spinosad	5	109-218 g/ha, see label	500 L/ha	21	0.5	3 apps	See label	Pollinators/Beneficials: Toxic to bees	
	Exirel 100 SC	cyantraniliprole	28	750-1500 mL/ha, see label		14	0.5	4 apps	7-14 d, see label	Pest stage: ThresholdPollinators/Beneficials: Toxic to bees and certain beneficial arthropods.	
	Imidan 70 WP	phosmet	01B	1.57 kg		30	3	1 app		Crop stage: Make one application per season at pre-bloom to control the first generation of blackheaded fireworm or post-bloom where field scouting indicates insect numbers warrant treatment.Pollinators/Beneficials: Toxic to bees and certain beneficial arthropods.	
	Intrepid 240 SC	methoxyfenozide	18	0.75-1.16 mL/ha, see label		14	0.5		10-18 d, see label	Pest stage: Apply to overwintering generation larvae or at early egg hatch for summer generation. Apply before larvae penetrate the fruit.	
	Malathion 85 E	malathion	01B	610-1100 mL/ha, see label	1000 L/ha	3	none	1 app		Crop stage: Do not apply during bloom.Pollinators/Beneficials: Toxic to bees and certain beneficial insects.	
	Pyganic EC 1.4 II	pyrethrins	3	2.32-4.65 mL/ha, see label		0	0.5	10 apps	3 d	Pollinators: Toxic to bees and certain beneficial insects. Recommendations: If possible, apply in early morning or evening hours. Mix only enough for immediate use.	
Brown cranberry spanworm	Rimon 10 EC	novaluron	15	677-835 mL/ha, see label		1	0.5	3 apps	7 d	Pollinators/Beneficials: Toxic to bees and certain beneficial insects	
	Sevin XLR 43 SC	carbaryl	01A	6.4-7.6 L/ha, see label	3000 L/ha	2-10, see label	2	2 apps	8 d	Crop stage: Apply during late bloom.Pollinators/Beneficials: Toxic to bees and certain beneficial insects.	
	Success 480 SC	spinosad	5	182-365 mL/ha, see label	500 L/ha (min)	21	0.5	3 apps	See label	Pollinators/Beneficials: Toxic to bees	
Cottonball	Dipel 2X DF	Bacillus thuringienis	11	275-1125 g/ha, see label	600L/ha	0	none		3-14 d, see label	Pest stage: Treat when larvae are young, before the crop is damaged.	
	Pyganic EC 1.4 II	pyrethrins	3	2.32-4.65 mL/ha, see label		0	0.5	10 apps	3 d	Pollinators: Toxic to bees and certain beneficial insects. Recommendations: If possible, apply in early morning or evening hours. Mix only enough for immediate use.	
Cottonball	Azoshy 250 SC	azoxystrobin	11	1.0 L/ha		30	0.5	3 apps	7-10 d, see label	Crop stage: 5-10% bloom	
	Bumper 432 EC	propiconazole	3	300 mL/ha		45	0.5	4 apps	10-14 d, see label	Crop stage: Apply the first application at leaf bud break.Pollinators/Beneficials: Toxic to certain beneficial arthropods	

Pest	Pesticide Products	Active Ingredient	Group	Rate	Water Volume	PHI (days)	REI (days)	Product Maximum	App Interval	Notes / Restrictions / Warnings	Status Update
	Diplomat 5 SC	polyoxin d zinc salt	19	463-926 mL/ha, see label		0	none	3 apps	See label		
	Mission 418 EC	propiconazole	3	300 mL/ha		45	0.5	4 apps	10-14 d, see label	Crop stage: Apply the first application at leaf bud break. Pollinators/Beneficials: Toxic to certain beneficial insects.	
	Propi Super 25 EC	propiconazole	3	300 mL/ha		45	0.5	4 apps	10-14 d, see label	Crop stage: Apply the first application at leaf bud break. Pollinators/Beneficials: Toxic to certain beneficial insects.	
	Quadris 250 SC	azoxystrobin	11	1.0 L/ha	100 L/ha (min)	30	0.5	3 apps	7-10 d, see label		
	Quadris Top SC	azoxystrobin + difenoconazole	11, 03	1.0 L/ha	100 L/ha (min)	30	0.5	3 apps	7-10 d, see label	Pollinators/Beneficials: Toxic to certain beneficial arthropods. Crop stage: Begin applications at 5-10% bloom	
	Regalia Rx 5 SC	Reynoutria sachalinensis	P05	2.5-10 L/ha, see label	250-300 L/ha	0	when dry		7-14 d, see label		
	Tilt 250 E	propiconazole	3	500 mL/ha		45	0.5	4 apps	10-14 d, see label	Crop stage: Apply the first application at leaf bud break. Pollinators/Beneficials: Toxic to certain beneficial insects.	
Cranberry fruitworm	Altacor 35 WG	chlorantraniliprole	28	215-285 g/ha, see label	450 L/ha	1	0.5	3 apps, 645 g/ha	7 d	Pest stage: Threshold. Pollinators/Beneficials: Toxic to certain beneficial insects.	
	Entrust 240 SC	spinosad	5	364-727 g/ha, see label	500 L/ha	21	0.5	3 apps	See label	Pollinators/Beneficials: Toxic to bees.	
	Entrust 80 WG	spinosad	5	109-218 g/ha, see label	500 L/ha	21	0.5	3 apps	See label	Pollinators/Beneficials: Toxic to bees	
	Exirel 100 SC	cyantraniliprole	28	750-1500 mL/ha, see label		14	0.5	4 apps	7-14 d, see label	Pest stage: Threshold. Pollinators/Beneficials: Toxic to bees and certain beneficial arthropods.	
	Intrepid 240 SC	methoxyfenozide	18	0.75-1.16 mL/ha, see label		14	0.5		10-18 d, see label	Pest stage: Apply to overwintering generation larvae or at early egg hatch for summer generation. Apply before larvae penetrate the fruit.	
	Malathion 85 E	malathion	01B	610-1100 mL/ha, see label	1000 L/ha	3	none	1 app		Crop stage: Do not apply during bloom. Pollinators/Beneficials: Toxic to bees and certain beneficial insects.	
	Pyganic EC 1.4 II	pyrethrins	3	2.32-4.65 mL/ha, see label		0	0.5	10 apps	3 d	Pollinators: Toxic to bees and certain beneficial insects. Recommendations: If possible, apply in early morning or evening hours. Mix only enough for immediate use.	
	Rimon 10 EC	novaluron	15	677-835 mL/ha, see label		1	0.5	3 apps	7 d	Pollinators/Beneficials: Toxic to bees and certain beneficial insects	
	Sevin XLR 43 SC	carbaryl	01A	6.4-7.6 L/ha, see label	3000 L/ha	2-10, see label	2	2 apps	8 d	Crop stage: Apply during late bloom. Pollinators/Beneficials: Toxic to bees and certain beneficial insects.	
	Success 480 SC	spinosad	5	182-365 mL/ha, see label	500 L/ha (min)	21	0.5	3 apps	See label	Pollinators/Beneficials: Toxic to bees	
Cranberry tipworm	Delegate 25 WG	spinetoram	5	420 g/ha	500 L/ha (min)	21	0.5	3 apps	7 d	Pest stage: Target eggs at hatch or small larvae. Pollinators/Beneficials: Toxic to bees and certain beneficial insects	

Guide to Insect and Disease Management in Cranberry 2025

Pest	Pesticide Products	Active Ingredient	Group	Rate	Water Volume	PHI (days)	REI (days)	Product Maximum	App Interval	Notes / Restrictions / Warnings	Status Update
	Movento 240 SC	spirotetramat	23	365-435 mL/ha, see label		7	0.5	1.833 mL/ha	7 d	Recommendations: Must be tank-mixed with adjuvant/additive that must be non-ionic or methylated seed oil or horticultural oil. Pollinators/Beneficials: Toxic to bees and certain beneficial insects.	
	Rimon 10 EC	novaluron	15	677-835 mL/ha, see label		1	0.5	3 apps	7 d	Pollinators/Beneficials: Toxic to bees and certain beneficial insects	
Cranberry weevil	Actara 25 WG	thiamethoxam	4	210-280 g/ha, see label	100 L/ha (min)	3	0.5	2 apps		Pest stage: Apply before pest reach damaging level. If pests reach damaging levels during bloom, application are to be made as soon as possible post-bloom. Pollinators/Beneficials: Toxic to bees and certain beneficial insects.	
Fruit rot	Azoshy 250 SC	azoxystrobin	11	1.0 L/ha		30	0.5	3 apps	7-10 d, see label	Crop stage: 5-10% bloom	
	Diplomat 5 SC	polyoxin d zinc salt	19	463-926 mL/ha, see label		0	none	3 apps	See label		
	Echo 720 SC	chlorothalonil	M05	4.7-8.1 L/ha, see label		50	2	1 app		Crop stage: Apply at budbreak, early bloom, or late bloom. Crop safety: Do not apply this product to fields when flooded or allow release of irrigation water from bogs for at least 3 days following application.	
	Echo 90 WSP	chlorothalonil	M05	3.8-6.4 kg/ha, see label		50	0.5-5 (see label)	1 app		Recommendations: Do not apply this product to fields when flooded or allow release of irrigation water from bogs for at least 3 days following application.	
	Folpan 80 WDG	folpet	M04	3.25 kg/ha	2000 L/ha (max)	30	0.5-4, see label	2 apps	10-14 d, see label	Crop stage: Apply when 5% of blossoms are open	
	Guardsman Copper Oxychloride 50 WP	copper oxychloride	M02	4 kg/ha	500-1000 L/ha	10	2	3 apps	10 d		
	Quadris 250 SC	azoxystrobin	11	1.0 L/ha	100 L/ha (min)	30	0.5	3 apps	7-10 d, see label		
	Quadris Top SC	azoxystrobin + difenoconazole	11, 03	1.0 L/ha	100 L/ha (min)	30	0.5	3 apps	7-10 d, see label	Pollinators/Beneficials: Toxic to certain beneficial arthropods	
	Regalia Rx 5 SC	Reynoutria sachalinensis	P05	2.5-10 L/ha, see label	250-300 L/ha	0	when dry		7-14 d, see label	Crop stage: Begin applications at 5-10% bloom	
Green cranberry spanworm	Dipel 2X DF	Bacillus thuringiensis	11	275-1125 g/ha, see label	600L/ha	0	none		3-14 d, see label	Pest stage: Treat when larvae are young, before the crop is damaged.	
	Pyganic EC 1.4 II	pyrethrins	3	2.32-4.65 mL/ha, see label		0	0.5	10 apps	3 d	Pollinators: Toxic to bees and certain beneficial insects. Recommendations: If possible, apply in early morning or evening hours. Mix only enough for immediate use.	
Grey mould	Diplomat 5 SC	polyoxin d zinc salt	19	463-926 mL/ha, see label		0	none	3 apps	See label		
	Kenja 400 SC	isofetamid	7	0.987-1.24 L/ha, see label		7	none	3 apps	7-14 d, see label	Pest stage: Prevention	
Leafrollers	Dipel 2X DF	Bacillus thuringiensis	11	275-1125 g/ha, see label	600L/ha	0	none		3-14 d, see label	Pest stage: Treat when larvae are young, before the crop is damaged.	

Pest	Pesticide Products	Active Ingredient	Group	Rate	Water Volume	PHI (days)	REI (days)	Product Maximum	App Interval	Notes / Restrictions / Warnings	Status Update
	Pyganic EC 1.4 II	pyrethrins	3	2.32-4.65 mL/ha, see label		0	0.5	10 apps	3 d	Pollinators: Toxic to bees and certain beneficial insects. Recommendations: If possible, apply in early morning or evening hours. Mix only enough for immediate use.	
Spotted wing drosophila	Ship 250 EC	cypermethrin	3	245-285 mL/ha, see label		2	0.5	3 apps	7 d	Pest stage: Timing of applications should be based on the presence of adult flies. Pollinators/Beneficials: Toxic to bees.	
	Up-cyde 2.5 EC	cypermethrin	3	245-285 mL/ha, see label		2	0.5	3 apps	7 d	Pest stage: Timing of applications should be based on the presence of adult flies. Pollinators/Beneficials: Toxic to bees and certain beneficial insects.	
Twig and leaf blight and upright dieback	Cueva 1.8 SN	copper octanoate	M02	0.5-2% solution, see label	470-940 L/ha	1	0.2	15 apps	7-10 d, see label	Pest stage: 2 weeks before disease normally appears or when weather forecasts predict a long period of wet weather. Alternatively, begin treatment when disease first appears.	
	Echo 720 SC	chlorothalonil	M05	4.7-8.1 L/ha, see label		50	2	1 app		Crop stage: Apply at budbreak, early bloom, or late bloom. Crop safety: Do not apply this product to fields when flooded or allow release of irrigation water from bogs for at least 3 days following application.	
	Echo 90 WSP	chlorothalonil	M05	3.8-6.4 kg/ha, see label		50	0.5-5 (see label)	1 app		Recommendations: Do not apply this product to fields when flooded or allow release of irrigation water from bogs for at least 3 days following application.	
	Guardsman Copper Oxychloride 50 WP	copper oxychloride	M02	4 kg/ha	500-1000 L/ha	10	2	3 apps	10 d		