

## Insecticides Registered for Wild Blueberry Insect Pests

Pest	Active	Product	Product rate		Pre-harvest interval (days)	Comments (see label for additional information and precautions)
			kg or L / ha	kg or L / ac		
Thrips	permethrin	Ambush 500 EC	0.14 L/ha	0.057 L/ac	-	Spring, sprout year only: One application when plants are 1 to 2 cm tall, before the thrips move to the plants. Thrips are protected from the spray once they are in between rolled up leaves. Use in 1000 litres of water per hectare.
		Perm-UP EC	0.18 L/ha	0.073 L/ac		
		Pounce 384 EC				
	malathion	Malathion 85 E	1 L/ha	0.40 L/ac	1	Spring, sprout year only: One application when plants are 1 to 2 cm tall, before the thrips move to the plants. Thrips are protected from the spray once they are in between rolled up leaves. Use above 20°C for best results.
	acetamiprid	Assail 70 WP	0.16 kg/ha	0.065 kg/ac	7	Spring, sprout year only: One application when plants are 1 to 2 cm tall, before the thrips move to the plants. Thrips are protected from the spray once they are in between rolled up leaves. Apply a minimum spray volume of 187 L/ha (75.7 L/ac). Do not apply more than once every 12 days. Maximum 4 applications per season. Do not exceed a total of 0.64 kg product per ha (0.259 kg/ac) per season. See label for details on application by sprayer.
Aceta 70 WP						
novaluron and acetamiprid	Cormoran	1.4 L/ha	0.56 L/ac	8	Apply in a minimum finished spray volume of 200 L/ha by ground. Repeat applications if needed to maintain control, but DO NOT apply more than once every 10 to 14 days. Some phytotoxic symptoms to foliage in the form of mottled chlorosis may be observed when Cormoran is applied to blueberries under conditions of high temperatures and/or drought stress, particularly during periods of new, tender shoot growth.	
Strawberry rootworm adults	acetamiprid	Assail 70 WP	0.16 kg/ha	0.065 kg/ac	7	Apply in a minimum spray volume of 187 L/ha (75.7 L/ac). Do not apply more than once every 12 days. Maximum 4 applications per season. Do not exceed a total of 0.64 kg product per ha (0.259 kg/ac) per season. See label for details on application by sprayer. There have not been any deleterious effects of Assail on honey bees reported in NB. Laboratory studies suggest that there may be some deleterious effects on honey bees when Assail has interacted with some group 3 fungicides used on blueberries. Do not expose bees to Assail and group 3 fungicides.
	novaluron and acetamiprid	Cormoran	1.4 L/ha	0.56 L/ac	8	Apply in a minimum finished spray volume of 200 L/ha by ground. Repeat applications if needed to maintain control, but DO NOT apply more than once every 10 to 14 days. Some phytotoxic symptoms to foliage in the form of mottled chlorosis may be observed when Cormoran is applied to blueberries under conditions of high temperatures and/or drought stress, particularly during periods of new, tender shoot growth.

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			kg or L / ha	kg or L / ac		
Black vine weevil adults, <i>Otiorhynchus sulcatus</i>	cyantran-iliprole	Exirel	1 - 1.5 L/ha	0.4 - 0.6 L/ac	3	<b>Restricted maximum residue limits (MRL). Contact buyer before use.</b> Apply when most of adults have emerged but before they begin to lay eggs.
Blueberry spanworm	chlorantran-iliprole	Altacor	0.215-0.285 kg/ha	0.088-0.115 kg/ac	1	Do not make more than 3 applications per season. Do not apply more than once per 7 days. Do not exceed 0.645 kg/ha (0.261 kg/ac) per season.
	acetamiprid	Assail 70 WP	0.16 kg/ha	0.065 kg/ac	7	<b>For suppression.</b> Apply in a minimum spray volume of 187 L/ha (75.7 L/ac). Do not apply more than once every 12 days. Maximum 4 applications per season. Do not exceed 0.64 kg product/ha (0.259 kg/ac) per season. See label for details on application by sprayer. There have not been any deleterious effects of Assail on honey bees reported in NB. Laboratory studies suggest that there may be some deleterious effects on honey bees when Assail has interacted with some group 3 fungicides used on blueberries. Do not expose bees to Assail and group 3 fungicides.
		Aceta 70 WP				
	novaluron and acetamiprid	Cormoran	1.4 L/ha	0.56 L/ac	8	Apply in a minimum finished spray volume of 200 L/ha by ground. Repeat applications if needed to maintain control, but DO NOT apply more than once every 10 to 14 days. Some phytotoxic symptoms to foliage in the form of mottled chlorosis may be observed when Cormoran is applied to blueberries under conditions of high temperatures and/or drought stress, particularly during periods of new, tender shoot growth.
	phosmet	Imidan 50 WP Instapak	2.24 kg/ha	0.91 kg/ac	15	Maximum 2 applications per season. Use in 1000 litres of water per hectare.
		Imidan WP	1.6 kg/ha	0.648 kg/ac		
	spinosad	Success	0.145-0.182 L/ha	0.058-0.073 L/ac	3	Apply in 300 to 500 litres of water per hectare (121 to 202 litres of water per acre). Apply at egg hatch or when larvae are small. Use high label rate for higher populations and / or larger larvae. Maximum of three applications per year. Repeat applications at 7 to 10 days if necessary.
		Entrust 80	0.08-0.109 kg/ha	0.032-0.044 kg/ac		
		Entrust	0.267-0.364 L/ha	0.107-0.147 L/ac		
	spinetoram	Delegate WG	0.1-0.2 kg/ha	0.04-0.08 kg/ac	3	<b>For suppression of blueberry spanworm.</b> Apply at egg hatch or to small larvae. Maximum 3 applications per year. Wait a minimum of 6 days between applications. Do not use product if exporting to countries where the maximum residue limits are not yet established.

Pest	Active	Product	Product rate		Pre-harvest interval (days)	Comments (see label for additional information and precautions)
			kg or L / ha	kg or L / ac		
Blueberry spanworm	<i>Bacillus thuringiensis kurstaki</i>	Dipel 2X DF	0.55-1.125 kg/ha	0.22-0.46 kg/ac	0	For blueberry spanworm and chainspotted geometer. Maximum of four applications per year. Apply in a minimum of 300 L/ha. Apply when larvae are in the first or second instar.
		Bioprotec CAF	0.7-1.4 L/ha	0.283-0.567 L/ac		Maximum of four applications per year. Apply in a minimum of 300 L/ha. Apply when larvae in the first or second instar are present at or above the economic threshold.
		Bioprotec PLUS	0.44-0.9 L/ha	0.178-0.364 L/ac		
	methoxy-fenozide	Intrepid	0.5 L/ha	0.2 L/ac	7	Repeat applications after 7-14 days if required.
	tebufenozide	Confirm 240F	1.0 L/ha	0.4 L/ac	14	Begin applications when first signs of feeding damage occurs or when threshold is reached.
Blueberry flea beetle larvae	acetamiprid	Assail 70 WP	0.16 kg/ha	0.065 kg/ac	7	For suppression. Apply in a minimum spray volume of 187 L/ha (75.7 L/ac). Do not apply more than once every 12 days. Maximum 4 applications per season. Do not exceed a total of 0.64 kg product per ha (0.259 kg/ac) per season. See label for details on application by sprayer. There have not been any deleterious effects of Assail on honey bees reported in NB. Laboratory studies suggest that there may be some deleterious effects on honey bees when Assail has interacted with some group 3 fungicides used on blueberries. Do not expose bees to Assail and group 3 fungicides.
		Aceta 70 WP				
	spinosad	Success	0.165-0.22 L/ha	0.067-0.089 L/ac	3	Maximum 3 applications per year. Allow 7 to 10 days between applications. Apply in early larval stage for best results.
		Entrust	0.334-0.440 L/ha	0.135-0.178 L/ac	3	<b>For suppression of larvae.</b> Maximum 3 applications per year. Allow 7 to 10 days between applications. Apply in early larval stage for best results.
		Entrust 80	0.1-0.132 kg/ha	0.04-0.053 kg/ac	3	<b>For suppression of larvae.</b> Listed by the Organic Materials Review Institute (OMRI) for use in organic production. Maximum 3 applications per year. Allow 7 to 10 days between applications. Apply in early larval stage for best results. No more than 80 ha (197 ac) of crop may be treated per day at the given rates.
	spinetoram	Delegate WG	0.2 kg/ha	0.08 kg/ac	3	Begin when flea beetles are in the early larval stage. Monitor to determine if an additional application is required. Maximum 3 applications per year. Wait a minimum of 6 days between applications. Do not use product if exporting to countries where the maximum residue limits are not yet established.
	cyantran-iliprole	Exirel	0.5 – 1 L/ha	0.2 – 0.4 L/ha	3	<b>Restricted maximum residue limits (MRL). Contact buyer before use.</b> Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.

Pest	Active	Product	Product rate		Pre-harvest interval (days)	Comments (see label for additional information and precautions)
			kg or L / ha	kg or L / ac		
Blueberry flea beetle larvae	novaluron and acetamiprid	Cormoran	1.4 L/ha	0.56 L/ac	8	Apply in a minimum finished spray volume of 200 L/ha by ground. Repeat applications if needed to maintain control, but DO NOT apply more than once every 10 to 14 days. Some phytotoxic symptoms to foliage in the form of mottled chlorosis may be observed when Cormoran is applied to blueberries under conditions of high temperatures and/or drought stress, particularly during periods of new, tender shoot growth.
Blueberry flea beetle adults	acetamiprid	Assail 70 WP	0.16 kg/ha	0.065 kg/ac	7	Apply in a minimum spray volume of 187 L/ha (75.7 L/ac). Do not apply more than once every 12 days. Maximum 4 applications per season. Do not exceed a total of 0.64 kg product per ha (0.259 kg/ac) per season. See label for details on application by sprayer. See additional comments for Assail and group 3 fungicides in section for blueberry flea beetle larvae.
		Aceta 70 WP				
	cyantran-iliprole	Exirel	0.5 – 1 L/ha	0.2 – 0.4 L/ac	3	<b>Restricted maximum residue limits (MRL). Contact buyer before use.</b> Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.
	novaluron and acetamiprid	Cormoran	1.4 L/ha	0.56 L/ac	8	Apply in a minimum finished spray volume of 200 L/ha by ground. Repeat applications if needed to maintain control, but DO NOT apply more than once every 10 to 14 days. Some phytotoxic symptoms to foliage in the form of mottled chlorosis may be observed when Cormoran is applied to blueberries under conditions of high temperatures and/or drought stress, particularly during periods of new, tender shoot growth.
Brown marmorated stink bug	malathion	Malathion 85 E	1 L/ha	0.40 L/ac	1	<b>For suppression:</b> Apply prior to harvest when treatment thresholds have been reached, as determined by monitoring. Maximum 3 applications.
Blueberry gall midge ( <i>Dasineura oxycoccana</i> )	spirotetramat	Movento 240 SC	0.365-0.435 L/ha	0.148-0.176 L/ac	7	<b>Only apply post bloom.</b> Apply in 200 to 3000 litres of spray volume per hectare. Minimum interval between applications: 7 days. For blueberry gall midge, <i>Dasineura oxycoccana</i> , apply at egg hatch.
	cyantran-iliprole	Exirel	0.75-1 L/ha	0.3-0.4 L/ac	3	<b>Restricted MRLs. Contact buyer before use.</b> Thorough coverage is essential for optimum control. Maximum 4 applications per season. Do not apply more than once every 5 days. <b>Tank mixing:</b> Read label. <b>Exirel and fungicides:</b> Read label.

Pest	Active	Product	Product rate		Pre-harvest interval (days)	Comments (see label for additional information and precautions)
			kg or L / ha	kg or L / ac		
Blueberry gall midge ( <i>Dasineura oxycoccana</i> )	novaluron and acetamiprid	Cormoran	1.4 L/ha	0.56 L/ac	8	Apply in a minimum finished spray volume of 200 L/ha by ground. Repeat applications if needed to maintain control, but DO NOT apply more than once every 10 to 14 days. Some phytotoxic symptoms to foliage in the form of mottled chlorosis may be observed when Cormoran is applied to blueberries under conditions of high temperatures and/or drought stress, particularly during periods of new, tender shoot growth.
Lygus bugs (including tarnished plant bug)	flonicamid	Beleaf 50 SG	0,2 Kg/ha	0,08 kg/ac	0	<b>For suppression:</b> Apply when lygus bugs first appear in the field and before populations reach high levels. Beleaf™ 50SG Insecticide will stop lygus bug feeding rapidly but it may take several days to see a reduction in lygus bug numbers. Reapply when new insects are detected. Allow a minimum of 7 days between applications. Do not apply more than 3 applications per year.
	sulfoxaflor	Closer	0.3 L/ha	0.12 L/ac	1	Maximum 2 applications. Do not apply more than 190 g ai/ha (77 g ai/ac); 0.8 L product /ha (0.324 L product/ac) per growing season. [ai = active ingredient] Use in sufficient water to ensure thorough coverage usually 200 to 1000 litres of water per hectare (81 to 405 litres of water per acre).
Spotted wing drosophila	cyantran-iliprole	Exirel	1-1.5 L/ha	0.4-0.6 L/ac	3	Begin applications when populations are low. Exirel targets the adult stage of the spotted wing drosophila (SWD). If SWD populations are high, use a registered insecticide with a different mode of action to reduce the pest populations. Apply a subsequent application of Exirel if required. Maximum 4 applications per season. Do not apply more than once every 5 days. Tank mixing: Read label. Exirel and fungicides: Read label.
	phosmet	Imidan WP	1.6 kg/ha	0.65 kg/ac	15	Maximum 2 applications per year. Apply in 1000 L of water per hectare.
	spinetoram	Delegate WG	0.315-0.42 kg/ha	0.127-0.17 kg/ac	3	Apply as necessary at least 7 days apart. Maximum 3 applications per year.
	spinosad	Entrust	0.334-0.440 L/ha	0.135-0.178 L/ac	1	Apply as necessary at least 5 days apart. Maximum 3 applications per year.
		Success	0.165-0.220 L/ha	0.067-0.089 L/ac		
malathion	Malathion 85E	1 L/ha	0.4 L/ac	3	<b>For suppression:</b> Use a maximum of 1000 L of water per hectare. Application Interval: 7-10 days for all crops (if applicable). Timing of applications should be based on the presence of adult flies of the pest, as determined by local monitoring.	



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			kg or L / ha	kg or L / ac		
Spotted wing drosophila	novaluron and acetamiprid	Cormoran	1.4 L/ha	0.56 L/ac	8	Apply in a minimum finished spray volume of 200 L/ha by ground. Repeat applications if needed to maintain control, but DO NOT apply more than once every 10 to 14 days. Some phytotoxic symptoms to foliage in the form of mottled chlorosis may be observed when Cormoran is applied to blueberries under conditions of high temperatures and/or drought stress, particularly during periods of new, tender shoot growth.
	cypermethrin	Up-Cyde 2.5 EC	0.245-0.285 L/ha	0.1 - 0.115 L/ac	2	Timing of applications should be based on the presence of adult pest (flies) as determined by local monitoring. Allow a minimum of 7 days between treatments. Do not apply more than two treatments. Avoid application when temperatures are above 27°C. Best control is obtained at cooler temperatures.
		Ship 250				
		Mako	0.150-0.175 L/ha	0.06-0.07 L/ac		
	Ripcord 400 EC					
cyclaniliprole	Cyclaniliprole 50 SL	1.2-1.6 L/ha	0.08 – 0.65 L/ac	1		
	Harvanta 50 SL					
Blueberry fruit fly	<b>Where populations of the blueberry fruit fly are known to be low, and sprout fields are adjacent to crop fields, it may be possible to control the blueberry fruit fly in the fruiting field by treating the sprout field.</b>					
	spirotetramat	Movento 240 SC	0.365-0.435 L/ha	0.148-0.176 L/ac	7	<b>Only apply post bloom.</b> Apply in 200 to 3000 litres of spray volume per hectare. Minimum interval between applications: 7 days.
	carbaryl	Sevin XLR	4 L/ha	1.62 L/ac	2	Fruiting year, use 1200 to 1500 litres spray volume per hectare.
	phosmet	Imidan 50 WP Instapak	2.25 kg/ha	0.91 kg/ac	15	Maximum 2 applications per season. Fruiting year, use in 1000 litres of water per hectare.
		Imidan WP	1.6 kg/ha	0.648 kg/ac		
cyantran-iliprole	Exirel	1-1.5 L/ha	0.4-0.6 L/ac	3	<b>For suppression:</b> Begin applications when populations are low. If blueberry maggot populations are high, use a registered insecticide with a different mode of action to reduce the pest populations before applying Exirel. Maximum 4 applications per season. Do not apply more than once every 5 days. <b>Tank mixing:</b> Read label. <b>Exirel and fungicides:</b> Read label.	

Pest	Active	Product	Product rate		Pre-harvest interval (days)	Comments (see label for additional information and precautions)
			kg or L / ha	kg or L / ac		
Blueberry fruit fly	Where populations of the blueberry fruit fly are known to be low, and sprout fields are adjacent to crop fields, it may be possible to control the blueberry fruit fly in the fruiting field by treating the sprout field.					
	spinosad	GF-120 fruit fly bait	1.0-1.5 L/ha	0.40-0.61 L/ac	-	<b>Note:</b> This product is registered on blueberry in general and there is limited information on the effectiveness in a lowbush blueberry field. Apply with a large spray droplet size (4 to 6 mm). Begin applications as soon as traps indicate flies are present. Repeat applications at seven-day intervals, with a shorter interval during rainy periods. Fruiting year, listed by the Organic Materials Review Institute (OMRI) for use in organic production. Maximum 5 applications per season. Apply spray in strips. Dilute volume of bait / water ratio: range is from 1 / 1.5 to 1 / 5. Warning: contains the allergen soybean oil.
	dimethoate	Cygon 480	0.58-0.825 L/ha	0.23-0.33 L/ac	15	Fruiting year, maximum 2 applications per season. Do not apply spray when daytime temperatures exceed 25°C. If using an air-blast sprayer, check weather conditions frequently (every 15 minutes). Wind speed should be from 2 to 10 km per hour. Relative humidity should not be less than 50%.
		Cygon 480 EC				
		Cygon 480-AG				
		Lagon 480 E	0.6-0.825 L/ha	0.24-0.33 L/ac		
	malathion	Malathion 85 E	0.55 L/ha	0.22 L/ac	1	Fruiting year, use in 1000 litres of water per hectare.
	acetamiprid	Assail 70 WP	0.136-0.16 kg/ha	0.055-0.065 kg/ac	7	Apply in a minimum spray volume of 187 L/ha (75.7 L/ac). Use high label rate with high pest populations or dense vegetation. Do not apply more than once every 12 days. Maximum 4 applications per season. Do not exceed a total of 0.64 kg product per ha (0.259 kg/ac) per season. See label for details on application by sprayer. Restricted entry interval (REI) is 12 hours. <b>This product has a different mode of action compared to other products and, therefore, some trap captures will occur 2 to 3 days after application.</b>
Aceta 70 WP						
flupyradi-furone	Sivanto Prime	0.75 – 1 L/ha	0.3 – 0.4 L/ac	3	Minimum 7 days between applications. Apply in a minimum volume of 100 L/ha.	
novaluron and acetamiprid	Cormoran	1.4 L/ha	0.56 L/ac	8	Apply in a minimum finished spray volume of 200 L/ha by ground. Repeat applications if needed to maintain control, but DO NOT apply more than once every 10 to 14 days. Some phytotoxic symptoms to foliage in the form of mottled chlorosis may be observed when Cormoran is applied to blueberries under conditions of high temperatures and/or drought stress, particularly during periods of new, tender shoot growth.	

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			kg or L / ha	kg or L / ha		
Whitemarked tussock moth	<i>Bacillus thuringiensis kurstaki</i>	Bioprotec CAF	4 L/ha	1.62 L/ac	0	Make 2 applications. Apply first at peak second instar larval development. Apply second application 2 to 5 days later.
		Foray 48BA				
		Bioprotec PLUS	2.5 L/ha	1.012 L/ac	0	
Redstriped fireworm	chlorantran-iliprole	Altacor	0.215-0.285 kg/ha	0.088-0.115 kg.ac	1	Begin applications when a treatment threshold has been reached. Do not make more than 3 applications per season. Do not apply more than once per 7 days. Do not exceed 0.645 kg/ha (0.261 kg/ac) per season.

**Label Information:** Information listed in this guide is provided to growers as a convenience. Pesticides must be applied according to label directions. Please refer to the product label before application and for more information on each product. Label information overrides any discrepancies between information presented in this guide and the label. Label information can be found at the Health Canada Pesticide Label Search, available on-line at <http://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php>.

**Pre Harvest Interval (PHI):** The minimum number of days between the last application of the pesticide and harvest.

### Additional Information for Insecticides Used on Wild Blueberry

Active Ingredient	Product	Group	Hazard	Protective Equipment	Buffer Zone (metres)		Restricted-entry interval (hours)	Bee Toxicity	Storage Requirements
					Water <1m	Terrestrial Habitat			
acetamiprid	Assail 70 WP	4	Warning	afgnm	20*	2*	12	high	< 46°C
	Aceta 70 WP								
<i>Bacillus thuringiensis kurstaki</i>	Bioprotec CAF	11	NL	aegmo	NL	NL	NL	not toxic	A; 0 to 15°C
	Bioprotec PLUS	11	NL	aegmo	NL	NL	NL	not toxic	A; 4 to 25°C
	Dipel 2X DF	11	Warning	aegmo	NL	NL	NL	not toxic	A; 0 to 25°C
	Foray 48BA	11	Warning	aegmo	NL	NL	NL	not toxic	A; 0 to 25°C
carbaryl	Sevin XLR	1A	Warning	ag	NL	NL	NL	high	< 38°C
chlorantraniliprole	Altacor	28	Warning	afg	NL	NL	12	not toxic	NL
cyantraniliprole	Exirel	28	Warning	afg	NL	NL	12	high	NL
cyclaniliprole	Cyclaniliprole 50 SL	28	NL	ahgio	1	NL	12	high	NL
	Harvanta 50 SL	28	NL	ahgio	1	NL	12	high	NL



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Active Ingredient	Product	Group	Hazard	Protective Equipment	Buffer Zone (metres)		Restricted-entry interval (hours)	Bee Toxicity	Storage Requirements
					Water <1m	Terrestrial Habitat			
cypermethrin	Up-Cyde 2.5 EC	3	Danger	NL	15;70	NL	12	high	NL
	Ship 250	3	Danger	dfho	15;70	NL	12	high	NL
	Mako	3	Caution	afho	15;70	NL	12	high	NL
	Ripcord 400 EC	3	Caution	afho	15;70	NL	12	high	NL
dimethoate	Cygon 480	1B	Warning	bfgo	NL	NL	NL	high	A; 4 to 30°C
	Cygon 480 EC	1B	Danger	NL	NL	NL	NL	high	A; 4 to 30°C
	Cygon 480-AG	1B	Warning	NL	NL	NL	NL	high	A; 4 to 30°C
	Lagon 480 E	1B	Warning	bfgo	NL	NL	NL	high	A; 0 to 30°C
flonicamid	Beleaf 50 SG	9C	NL	afgio	NL	1	12	not toxic	C
flupyradifurone	Sivanto Prime	4D	NL	afg	2	NL	12	not toxic	C
malathion	Malathion 85 E	1B	Warning	NL	NL	NL	NL	high	NL
methoxyfenozide	Intrepid	18	NL	afg	NL	NL	12	moderate	C
novaluron and acetamiprid	Cormoran	4, 15	NL	afgnm	90*	20*	12	high	< 46°C
permethrin	Ambush 500 EC	3	NL	NL	15	NL	12	high	A
	Perm-UP EC	3	Warning	NL	15	NL	12	high	>-12°C
	Pounce 384 EC	3	Caution	NL	15	NL	12	high	>-12°C
phosmet	Imidan 50 WP Instapak	1B	Danger	dfhlm	15*	NL	72 (360 PYO)	high	B; > 40°C
	Imidan WP	1B	Danger	dfhlm	15*	NL	72 (360 PYO)	high	B; > 40°C
spinetoram	Delegate WG	5	NL	dfg	NL	1	12	high	B
spinosad	Entrust	5	NL	dfgm	2	NL	NL	high	B
	Entrust 80	5	NL	dfgm	2	NL	NL	high	B
	GF-120 fruit fly bait	5	Warning	afg	NL	NL	12	high	B
	Success	5	NL	afg	2	NL	12	high	A
spirotetramat	Movento 240 SC	23	NL	afg	NL	NL	12	high	A
sulfoxaflor	Closer	4C	NL	afh	NL	NL	12	high	NL
tebufenozide	Confirm 240 DF	18	NL	afgmo	15	NL	12	not toxic	C

\* See label for reduction of buffer zone under specific spray applications.

**Storage Requirements:** Storage codes: **A** – Store above zero degrees Celsius; **B** - Preferably should not freeze. If frozen, return to original state by allowing product to warm to 10-20°C and agitate thoroughly before use; **C** - Not usually damaged by freezing. Store in cool dry place.

**NL:** not listed; **PYO:** pick your own (U-Pick)

**Group:** To delay insecticide resistance: Use an insecticide from a different group when such use is permitted.

**Restricted-entry Interval:** The minimum time in hours before you may enter a field that has been treated with the pesticide without wearing appropriate protective equipment.

**Toxicity to bees.** Bees visit fields for nectar, water and pollen. Spraying may cause bee poisoning. Do not spray fields when wind is blowing. Avoid spray drift to roadsides and adjacent fields where plants may be in bloom. Spraying when bees are not foraging, late evening to early morning, will reduce the risks associated with bee poisoning. Follow all instructions on the pesticide label. High – Highly toxic: Severe losses may be expected if the following insecticides are used when bees are present at treatment time or within a few days following pesticide application. Moderate - Moderately toxic: These products may be used around bees if dosage, timing, and method of treatment are according to label instructions. Do not apply these products directly on bees, either in the field or in colonies. Low (L) – Low toxicity. None (N) – Not toxic.

**Hazard:** The signal words Danger, Warning and Caution appear on the pesticide label and indicate the level of hazard associated with handling or using the product. Products bearing the signal word **Danger** have an extreme or high hazard rating. Products labeled **Warning** have a moderate hazard rating and a **Caution** warning is associated with a low level of hazard. The degree of hazard may be due to toxicity, flammability, explosiveness or corrosiveness.

**Protective Equipment:** **a** - long-sleeved shirt and long pants, **b** - coveralls or disposable spray suit, **d** - coveralls or disposable spray suit over long sleeved shirt and pants, **e** - waterproof gloves, **f** - chemically-resistant gloves, **g** - shoes plus socks, **h** - chemically resistant footwear plus socks, **j** - protective eye wear, **i** - chemically resistant head gear for overhead application, **m** - approved respirator, **n** - chemical-resistant spray suit; **o** - goggles or face shield.

**Buffer Zone:** Distance between the closest point of direct pesticide application and the nearest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands). Water < 1m refers to wet areas with less than 1 metre of water depth. All buffer zones are for boom sprayers unless indicated. A buffer zone calculator is available here (Health Canada): <http://www.hc-sc.gc.ca/cps-spc/pest/agri-commerce/drift-derive/calculator-calculatrice-eng.php>.

Pesticide Emergency Information	
Poison Control Centres	
New Brunswick	Dial 911, ask for Poison Information
Newfoundland	Dr. Charles A. Janeway Child Healthcare Centre, St. John's (709) 722-1110
Nova Scotia Prince Edward Island	The Izaak Walton Killam Hospital for Children, Halifax 1-800-565-8161
Environmental Pesticide Spill	
New Brunswick Prince Edward Island Nova Scotia	1-800-565-1633
Newfoundland	1-800-563-9089
Pesticide Websites	
Pesticide Label Search	
Health Canada <a href="http://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php">http://pr-rp.hc-sc.gc.ca/lr-re/index-eng.php</a>	
Maximum Residue Limits (MRL)	
Health Canada <a href="http://pr-rp.hc-sc.gc.ca/mrl-lrm/index-eng.php">http://pr-rp.hc-sc.gc.ca/mrl-lrm/index-eng.php</a>	

Helpful Conversions
Units
kPa x 0.14 = pounds per square inch
hectares x 2.47 = acres
kilograms x 2.2 = pounds
1000 grams (g) = 1 kilogram (kg)
millilitres x 0.035 = fluid ounces
litres x 35 = fluid ounces
litres x 0.22 = imperial gallons
1000 millilitres (mL) = 1 Litre (L)
$^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5) + 32$
$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times 5/9$
miles per hour x 1.61 = km per
5 mL = 1 tsp
Volume per Area
kg per ha x 0.89 = pounds per ac
kg per ha x 0.40 = kilograms per ac
g per ha x 0.015 = ounces per ac
tonnes per ha x 0.45 = tons per ac
L per ha x 0.40 = litres per ac
L per ha x 0.09 = gallons per ac
L per ha x 14.17 = fluid ounces per ac
L per ha x 0.71 = pints per acre
mL per ha x 0.015 = fl. ounces per ac
L per ha x 0.11 = US gallons per ac
L per ha x 0.86 = US pints per ac

Abbreviations	
Formulation	Measurements
DF Dry flowable	ac acre
EC,E Emulsifiable concentrate	g gram
F Flowable	g.a.e. grams acid equivalent
G Granular	ha hectare
L Liquid	kg kilogram
LV Low Volatile	kPa kilopascal
SC Suspension concentrate	L litre
Sn Solution	m metre
SP Soluble Powder	mL millilitre
WDG Water Dispersible	psi pounds per square inch
WP,W Wetable Powder	% v/v percent volume to volume
WSP Water Soluble	
Personal Protection Equipment	
Gloves	
e - waterproof gloves f - chemical resistant gloves	
Head and Lung	
j - eye protection, application m - approved respirator	
l - chemically resistant headgear for overhead application	
Clothes	
a - long-sleeved shirt/pants b - coveralls or disposable spray suit	
d - coveralls or disposable spray suit over long sleeved shirt/pants	
n - chemical-resistant spray suit	
Footwear	
g - shoes plus socks h - chemically resistant footwear plus socks	