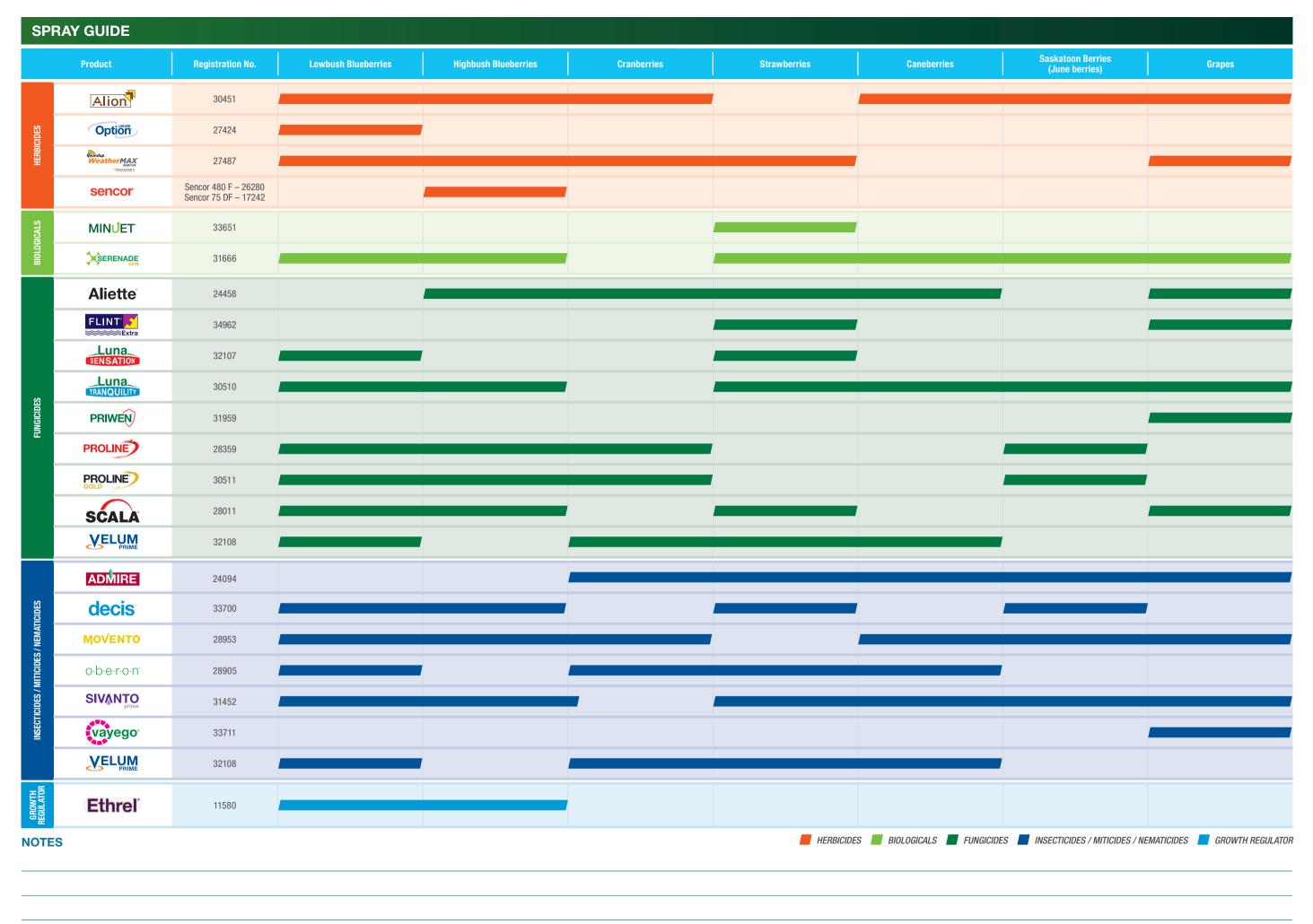
## Berry & Grape Crop Protection Guide





Bayer provides solutions to help you grow high-quality berries and grapes, increase yield potential and continuously improve the marketability of your crop.

Western Canada



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	Product	Features and Benefits	Caneberries (Crop Subgroup 13-07A)	Bushber op Subgroup	Low-growing berries/ strawberries Crop	Grapes	Key Pests / Diseases Controlled	WAMLEGS Mixing Order	Maximum Applications per Crop Season	Use Rte	Chemica Class Group N. / Active Ingrdient	Rainfast (hours)	REI (hours)	PHI (days)
HERBICIDES	Alion	A pre-emergent herbicide for excellent control of annual grass and broadleaf weeds	•‡	•		•	Annual grass and broadleaf weeds (Refer to product label for full list of weeds and for proper application timing)	L	Maximum 1 application Lowbush blueberries: Maximum 1 application per season (only one application in a 12-month period is allowed)	375 mL/ha (152 mL/ac.)	Group 29 (indaziflam)	N/A	12	14 Lowbush blueberries: 90
	Option	Provides broad-spectrum control of grassy and key broadleaf weeds		• ◊◊			Annual grass and broadleaf weeds Fescue: fine-leaf sheep, sheep, red, tall*	L	Maximum 1 application	Apply in spring of the sprout year 1.56 L/ha + 2.5 L/ha of 28% UAN (632 mL/ac. + 1.01 L/ac. of 28% UAN)	Group 2 (foramsulfuron)	2	When dry	N/A
	Roundup Weather MAX «зысок "ТRANSORR!!	Unsurpassed and consistent weed control under ideal and tough conditions. Enhanced efficiency with a 540 g/L formulation and a 30-minute rainfast guarantee.		•	•	•	Grass and broadleaf weeds (Refer to product label for full list of weeds)	G	Refer to Roundup WeatherMAX label	Refer to product label for details on use rates, application methods and timing	Group 9 (glyphosate)	0.5	12	Apples: 30 Grapes: 14 Highbush blueberries: 30 Lowbush blueberries: Apply in non-bearing years only Cranberries: 30 Strawberries: 30
R FUNGICIDES / MITICIDES / MIT	sencor	Proven broad-spectrum herbicide for outstanding weed control		•◊			Grass and broadleaf weeds (Refer to product label for full list of weeds)	Sencor 480 F – L Sencor 75 DF – W	Maximum 1 application	New plantings 1 kg/ha (405 g/ac.)	Group 5 (metribuzin)	6	12	2 years
	MINÚET <sup>.</sup>	A proven biological fungicide, Minuet® is a great addition to a full- season program to support increased crop quality and yield potential. OMRI- certified.			•0000		Rhizoctonia damping off and root rot (Rhizoctonia solani)*	L	N/A	0.5 to 2.8 L/ha (0.2 to 1.1 L/ac.)	FRAC Group BM02 ( <i>Bacillus subtilis</i> strain QST 713)	N/A	4	0
	SERENADE OPTI	Provides protection against foliar fungal and bacterial diseases through multiple sites of action with a flexible application. OMRI-certified.	•	•	•##	•	Botrytis grey mould* (all), mummy berry* (blueberries only), powdery mildew* (grapes only), bacterial blight* (caneberries and bushberries)	W	N/A	Bacterial blight: 0.6 to 1.7 kg/ha (0.24 to 0.69 kg/ac.) Botrytis grey mould: 1.7 to 3.3 kg/ha (0.69 to 1.34 kg/ac.) Mummy berry: 2.0 to 3.3 kg/ha (0.81 to 1.34 kg/ac.) Powdery mildew: 1.7 to 3.3 kg/ha (0.69 to 1.34 kg/ac.)	FRAC Group BM02 ( <i>Bacillus subtilis</i> strain QST 713)	2		
	Aliette	A fully systemic fungicide that inhibits pathogen growth at several life stages for better overall disease control	•	•◊	•0000	•	Phytophthora root rot (except in grapes), red stele (strawberries), anthracnose fruit rot and phomopsis canker* (highbush blueberries), downy mildew (grapes)	W	Caneberries: Maximum 4 applications – 2 in the spring and 2 in the fall Cranberries: Maximum 4 applications Grapes: Maximum 7 applications. Do not exceed 26.25 kg/ha (10.62 kg/ac.) per year. Highbush blueberries: Maximum 4 applications. Do not exceed 22.4 kg/ha (9.1 kg/ac.) per year. Strawberries: Maximum 4 applications	Highbush blueberries, strawberries: 5.6 kg/ha (2.27 kg/ac.) Caneberries, cranberries: 5.5 kg/ha (2.23 kg/ac.) Grapes: 3.75 kg/ha (1.52 kg/ac.)	P07 (Fosetyl AL)	1	24 <sup>§</sup>	Caneberries: 60 Cranberries: 3 Grapes: 15 Highbush blueberries: 1 Strawberries: 30
	FLINT SEEE Extra	Provides broad-spectrum, long-lasting preventive protection against important diseases in grapes and strawberries. Low use rates in an easy-to-use liquid SC formulation.			•0000	•†††	Powdery mildew** Black rot (grapes only)	L	Grapes: Maximum 4 applications. Maximum 580 mL/ha (235 mL/ac.) per year. Strawberries: Maximum 3 applications. Maximum 435 mL/ha (176 mL/ac.) per year.	Grapes: 110 to 145 mL/ha (45 to 58 mL/ac.) Strawberries: 145 mL/ha (58 mL/ac.)	Group 11 (trifloxystrobin)	2	12 <sup>§</sup>	Grapes: 14 Strawberries: 0
	Luna	Protects against key diseases resulting in increased yield potential			•		Anthracnose (strawberries only)***, botrytis grey mould, powdery mildew	L	Maximum 2 applications. Maximum 1,980 mL/ha (801 mL/ac.) per year.	Anthracnose, botrytis grey mould: 500 to 600 mL/ha (202 to 243 mL/ac.) Powdery mildew: 300 to 400 mL/ha (121 to 162 mL/ac.)	Group 7 & 11 (fluopyram, trifloxystrobin)	2	12	0
	Luna	Protects against key diseases throughout the growing season, resulting in improved plant health as well as high-quality crops	•	•	•††††	•	Small berries: botrytis grey mould powdery mildew Strawberries: botrytis grey mould, common leaf spot, powdery mildew Grapes: botrytis bunch rot/grey mould, powdery mildew	L	Powdery mildew (grapes): maximum 3 to 4 applications depending on total number of fungicide applications. Refer to product label for details.  Powdery mildew, common leaf spot (strawberry only): maximum 2 applications.  Botrytis grey mould (all): maximum 2 applications.  Maximum 4 L/ha (1.62 L/ac.) per year.	1,200 mL/ha (485 mL/ac.) Grapes: Powdery mildew: 600 mL/ha (242 mL/ac.) Botrytis bunch rot/grey mould: 1,200 mL/ha (485 mL/ac.)	Group 7 & 9 (fluopyram, pyrimethanil)	When dry	12	Blueberries, caneberries: 0 Grapes: 45 Strawberries: 1
	PRIWEN	Delivers highly effective protection against powdery mildew and is an excellent rotation and resistance management tool – the only Group 5 fungicide for wine grapes (spiroxamine)				•††	Powdery mildew	E	Maximum 1.2 L/ha (486 mL/ac.) per year.	400 to 600 mL/ha (162 to 243 mL/ac.)	Group 5 (spiroxamine)	When dry	12 <sup>§</sup>	35
	PROLINE	Flexible and cost-effective tool to manage economically important diseases in both the sprout and fruit year of lowbush blueberries. Helps increase floral bud numbers and yield potential.		•	• ◊ ◊ ◊		Fruit rot, leaf rust*, mummy berry (monilinia blight), septoria leaf spot*, valdensinia leaf spot*	L	Bushberry: Maximum 2 applications. Maximum 840 mL/ha (340 mL/ac.) per year. Low-growing berries: Maximum 2 applications. Maximum 730 mL/ha (295 mL/ac.) per year.	Fruit rot: 365 mL/ha (148 mL/ac.) Leaf rust, valdensinia leaf spot: 400 mL/ha (162 mL/ac.) Monilinia blight: 315 to 420 mL/ha (128 to 170 mL/ac.) Septoria leaf spot: 315 mL/ha (128 mL/ac.)	Group 3 (prothioconazole)	2	24	Bushberries: 7 Low-growing berries: 45
	PROLINE GOLD	Protects against key diseases throughout the growing season resulting in high-quality crops		•	• ◊◊◊		Fruit rot, leaf rust*, mummy berry (monilinia blight), septoria leaf spot*, valdensinia leaf spot*	L	Bushberries: Maximum 2 applications. Maximum 2,000 mL/ha (809 mL/ac.) per year. Low growing berries: Maximum 2 applications. Maximum 1,750 mL/ha (708 mL/ac.) per year.	Fruit rot: 875 mL/ha (354 mL/ac.) Leaf rust, valdensinia leaf spot: 1 L/ha (405 mL/ac.) Monilinia blight: 750 mL/ha (304 mL/ac.) Septoria leaf spot: 750 mL/ha (304 mL/ac.)	Group 3 & 7 (prothioconazole, fluopyram)	1-2 (when dry)	24 (3 days if performing hand-line irrigation in bushberries)	Bushberries: 7 Lowbush blueberries: 7 Low-growing berries: 45
	SCALA	A systemic fungicide for control of botrytis. It provides translaminar and vapour activity to protect both sides of the leaf and expand the protected area. In grapes, Scala® fungicide has the unique ability to reduce lacasse — an enzyme produced by botrytis that leads to unfavourable colour, aroma and poor storage stability of wine.	•	•	•††††	•	Botrytis grey mould	L	Grapes, gooseberry lowbush blueberries, strawberries: Maximum 3 applications. Highbush blueberries, raspberry: Maximum 2 applications.	2 L/ha (810 mL/ac.)	Group 9 (pyrimethanil)	2	12	Grapes: 7 Highbush blueberries, raspberries: 0 Lowbush blueberries, strawberries: 1
	<b>VELUM</b> PRIME	Moves from the plant's roots to the leaves to help suppress key diseases and maximize yield potential	•	•◊◊	•		Powdery mildew* Soil-dwelling, root-feeding nematodes (juveniles, adults)*	L	Maximum 500 g fluopyram/ha per yea , regardless of formulation or method of application.	500 mL/ha (202 mL/ac.)	Group 7 (fluopyram	N/A	12	0
	ADMIRE	Systemic insecticide that provides economical and enduring control of damaging insects	•	•†		٠	Aphids, Japanese beetle (adult), leafhoppers*, caneborers (rednecked)* (raspberries only)	L	Crop Subgroup 13-07A: Berry and small fruit: Maximum 3 applications.  Crop Subgroup 13-07B: Berry and small fruit <sup>1</sup> : Maximum 2 applications.  Grapes only:  Leafhopper – Maximum 1 soil application; maximum 2 foliar applications  Japanese beetle (adult), leafhopper – Maximum 2 foliar applications	For berries, apply post bloom only, with renovation after harvest  Aphids, leafhoppers: 175 mL/ha (71 mL/ac.)  Japanese beetle (adult): 175 to 230 mL/ha (71 to 93 mL/ac.)  Grape only: Japanese beetle (adult) – 175 to 200 mL/ha (71 to 81 mL/ac.), leafhoppers – 200 mL/ha (81 mL/ac.)  Raspberry only: caneborers (rednecked) – 467 mL/ha (189 mL/ac.)	Group 4A (imidacloprid)	6	12	Caneberries: 4 Bushberries: 3 Grapes (foliar application): 0 Grapes (soil application): 30
	decis	A powerful synthetic pyrethroid insecticide that works quickly on a broad range of insects at very low rates per acre		•	•††††		Bruce spanworm, leaf tier, tarnished plant bug	Е	Maximum 3 applications. Strawberries: Maximum 2 applications.	Leaf tier: 75 mL/ha (30 mL/ac.) Bruce spanworm: 62.5 mL/ha (25 mL/ac.) Tarnished plant bug: 100 mL/ha (40 mL/ac.)	Group 3 (deltamethrin)	1	12	Blueberries, strawberries: 14 Saskatoon berries: 21
	MOVENTO.	Features powerful, two-way movement throughout the plant to protect it from a broad range of insects	•	•		•††	Aphids, blueberry maggot, blueberry gall midge, cranberry tipworm, lecanium scale*, mealybugs, phylloxera, whiteflies	L	Grapes: Maximum 920 mL/ha (372 mL/ac.) per year. Crop Subgroup 13-07A: Berry and small fruit: Maximum 3 applications. Maximum 1,095 mL/ha (443 mL/ac.) per year. Crop Subgroup 13-07B: Berry and small fruit <sup>1</sup> : Maximum 1,833 mL/ha (742 mL/ac.) per year.	Apply post bloom in berries Aphids: 220 to 365 mL/ha (89 to 148 mL/ac.) Blueberry maggot, blueberry gall midge, cranberry tipworm, whiteflies: 365 to 435 mL/ha (148 to 176 mL/ac.) Lecanium scale, mealybugs, phylloxera: 365 to 585 mL/ha (148 to 237 mL/ac.)	Group 23 (spirotetramat)	When dry	12	Blueberries, cranberries, grapes: 7 Caneberries: 3
	o·b·e·r·o·n	Provides excellent control of mites and poses minimal risk to beneficial insects when used as directed, making it a good miticide choice that fits well in IPM systems	•	• ◊ ◊	•		Two-spotted spider mite, whiteflies, McDaniel spider mite	L	Maximum allowed per 7-day interval: 1,160 mL/ha (469 mL/ac.). Maximum 3 applications. Maximum 3,480 mL/ha (1,408 mL/ac.) per year.	880 to 1,160 mL/ha (356 to 470 mL/ac.)	Group 23 (spiromesifen)	When dry	12	3
	SIVANTO prime	Precisely targets key damaging pests while helping safeguard beneficial insects	•	•	•††††	•	Aphids, blueberry maggot Leafhoppers (grapes only)	L	Maximum 2,000 mL/ha (809 mL/ac.) per year.	Aphids: 500 to 750 mL/ha (202 to 304 mL/ac.) Blueberry maggot: 750 to 1,000 mL/ha (304 to 405 mL/ac.) Leafhoppers: Foliar application – 500 to 750 mL/ha (202 to 304 mL/ac.); Soil application – 1,500 to 2,000 mL/ha (607 to 809 mL/ac.)	Group 4D (flupyradifurone)	1	12	Blueberries: 3 Grapes (foliar application): 0 Grapes (soil application): 30 Caneberries, strawberries: 0
	vayego	A second generation diamide, combines excellent knockdown and systemic control of key pests in a variety of horticultural crops				•	Grape berry moth	L	Maximum 4 applications. Maximum 900 mL/ha (360 mL/ac.) per year.	Apply post bloom only 225 mL/ha (91 mL/ac.)	Group 28 (tetraniliprole)	1	12	14
	<b>VELUM</b> PRIME	With a unique mode of action and Group to suppress nematodes, Velum® Prime nematicide helps increase your crop's yield potential	•	•◊◊	•		Powdery mildew* Soil-dwelling, root-feeding nematodes* (juveniles, adults)	L	Maximum 500 g fluopyram/ha per yea , regardless of formulation or method of application.	500 mL/ha (202 mL/ac.)	Group 7 (fluopyram)	N/A	12	0
GROWTH	Ethrel	Growth regulator that accelerates fruit colouring and maturity in highbush blueberries and controls black barrenberries in lowbush blueberries***  **** Closed mixing/loading systems are required	♦ Hial		• ° ° ° ° † † † † † † † † † † † † † † †		Controls black barrenberries in lowbush blueberries and for concentration of maturity and earlier fruit colouring in highbush blueberries  † Excludes lowbush blueberries  ‡ Alion herbicid	<b>L</b> le should be used on dormant (	canes prior to * Suppression	5.5 to 8.5 L/ha (2.2 to 3.4 L/ac.)	Ethephon (not classified)	5	12 <sup>§§</sup>	Lowbush blueberries: 42 Highbush blueberries: 7 days for mechanical harvest and 14 days for hand harvest

\*\*\* Closed mixing/loading systems are required

° Highbush blueberries only
° Lowbush blueberries only
° Excludes strawberries
° Excludes strawberries
° ™ Do not apply
° Strawberries only
° ™ Excludes cra

† Excludes lowbush blueberries † Al to not apply to table grapes to to the Excludes cranberries † Recurring to the Excludes cranberries † Al to the Excludes cranbe

 Alion herbicide should be used on dormant canes prior to budbreak and new cane emergence, or after mowing but prior to new cane emergence
 Refer to product label for specific crops listed for Group 13-07 \* Suppression

\*\* Resistance to powdery mildew in grapes has been documented with Group 11 fungicides in Ontario. To avoid further development of fungicide resistance to Group 11, do not apply sequential applications of products in the same FRAC Group.

\*\*\* Resistance to anthracnose in strawberries has been documented with Group 11 fungicides in Ontario. To avoid further development of fungicide resistance to Group 11, do not apply sequential applications of products in the same FRAC Group.



For more information, visit cropscience.bayer.ca

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