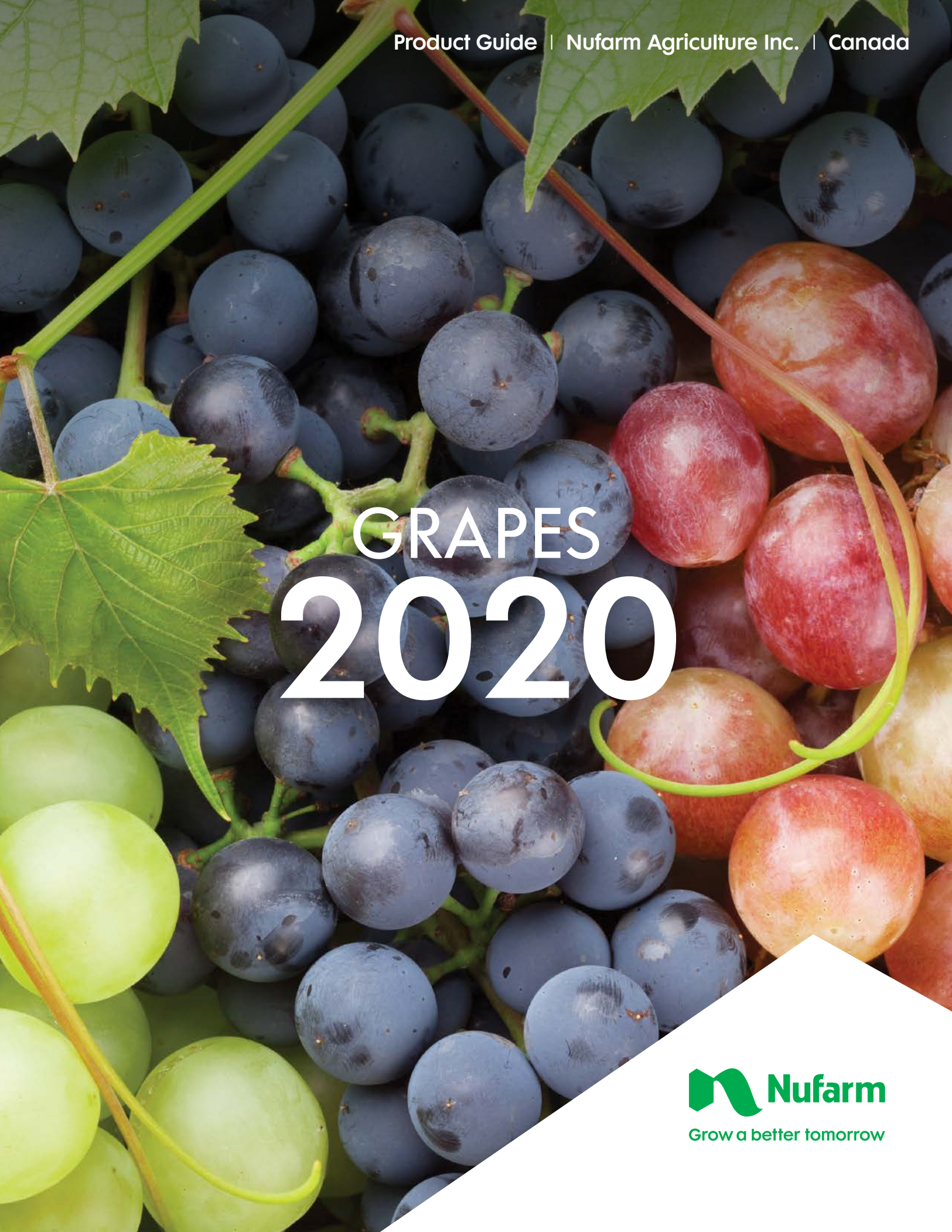

GRAPES 2020

Nufarm
Grow a better tomorrow

HERBICIDES

FUNGICIDES

INSECTICIDES

Table of contents

Grape growth stage calendar

DORMANT	BUD BREAK	SHOOT DEVELOPMENT	FULL BLOOM	BUNCH CLOSURE	VERAISON	RIPE FOR HARVEST/ POST HARVEST
Chateau						Chateau
	Parasol WG Intuity	Parasol WG Intuity	Parasol WG Intuity	Parasol WG Botector Intuity	Parasol WG Botector Intuity	Botector
	DiPel XenTari	DiPel XenTari	DiPel XenTari	DiPel XenTari	DiPel XenTari	

Chateau® WDG herbicide is a PPO inhibitor that works as a barrier on the soil surface providing season-long residual control of tough broadleaf and grass weeds.

Chateau® WDG

Benefits

- Long-lasting residual, pre-emergent broadleaf weed control with bonus grass suppression
- Chateau stays where it is sprayed and will not leach or volatilize
- Group 14 herbicide (PPO inhibitor) works differently than many other commonly used herbicides, helping to manage resistance
- The herbicide barrier cannot be disturbed after moisture activation
- Offers flexible application timing

Registered crops

- Asparagus
- Blueberry (highbush and lowbush)
- Broccoli
- Celery
- Dry bulb onion
- Established mint (peppermint and spearmint)
- Field pepper
- Garlic
- Grape
- Hops
- Nut trees
- Pome fruit
- Potato (Western Canada only)
- Stone fruit
- Strawberry
- Sweet potato

General usage information

- Moisture is necessary to activate Chateau in soil for weed control (½ inch of rain or irrigation)
- This product will not control emerged weeds
- Significant crop injury may occur from applications made to poorly drained soils and/or applications made under cool, wet conditions
- Do not apply to farm alleys or roads where traffic may result in treated dust settling onto crops or other desirable vegetation
- Application to non-dormant crops or when soils are flooded after application may result in non-acceptable crop injury, including yield loss
- Use appropriate water volumes to ensure good coverage
- Apply prior to weed emergence
- Undesirable crop injury may occur if Chateau comes in contact with fruit or foliage
- DO NOT tank-mix with Dual II Magnum®

Technical information

HERBICIDE GROUP

> Group 14

ACTIVE INGREDIENTS

> flumioxazin 51.1%

PACKAGING

> 4 x 1.13 kg case

RAINFAST

> Requires ½ inch of rain or irrigation for activation

PCP #

> 29231

Specific crop usage information

WEEDS CONTROLLED/ SUPPRESSED	RATE	PHI	APPLICATION INFORMATION
APPLE, GRAPE, NUT TREES, PEAR			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail Green pigweed Hairy nightshade Kochia Redroot pigweed	280 g/ha (113.3 g/ac.) on coarse-textured soils with <5% OM 420 g/ha (170 g/ac.) on medium-textured soils with <5% OM		**GENERAL USAGE INFORMATION** Chateau should be tank-mixed with glyphosate, present as isopropyl amine or potassium salt, for control of emerged weeds. Refer to the respective tank-mix partner label for rates, additional recommendations, restrictions and precautions. Follow the most restrictive label limitations and precautions of the tank-mix product(s) being used. Only apply to healthy, established trees. Do not apply when plants are under stress from insects, diseases, animals or winter injury, planting shock or any other stresses. Chateau should be applied as a uniform broadcast application to the orchard floor or as a uniform band directed at the base of the trunk Do not make more than 2 applications in a growing season Do not make a sequential application within 30 days of the first application Avoid direct or indirect spray contact to foliage and green bark (including non-barked vines; with the exception of undesirable suckers) Do not apply within 100 m of non-dormant pears
		60	**APPLICATION TO POME FRUIT (APPLE AND PEAR)** Do not apply to apple or pear trees established less than 1 year, unless protected from spray contact by non-porous wraps, grow tubes or waxed container For apples, do not apply after budbreak unless using hooded or shielded application equipment and applicator can ensure the spray drift will not contact the crop fruit or foliage All applications to pears, or within 100 metres of pears, must be made after final harvest in the fall or 2 months before budbreak in the spring Apply to dormant pears only
		60	**APPLICATION TO GRAPES** Do not apply to grapes established less than 2 years Do not apply to grapes that are not trellised or staked unless they are free standing New plantings of "own-rooted varieties", such as Concord, should be planted so that all roots are a minimum of 20 cm below the soil surface to be treated. In some situations, this may require hilling soil around newly planted vines so that the settled depth of the hill will be 10-12.5 cm above the vineyard floor. **APPLICATION TO JUICE, RAISIN AND WINE GRAPES** Do not apply during the period after budbreak through final harvest, unless using shielded application equipment and applicator can ensure the spray drift will not contact the crop fruit or foliage. Shielded applications during this time period should not be made with glyphosate, or products containing glyphosate. **APPLICATION TO TABLE GRAPES** Chateau may be applied during the period following final harvest in the fall Do not apply after budbreak in the spring

WEEDS CONTROLLED/ SUPPRESSED	RATE	PHI	APPLICATION INFORMATION
ASPARAGUS			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail Green pigweed Hairy nightshade Kochia Redroot pigweed	280 g/ha (113.3 g/ac.) 420 g/ha (170 g/ac.)		Apply only to dormant asparagus established for at least 1 year Applications should be made no sooner than **3 weeks** prior to emergence of spears and must be sprinkler or rainfall activated with 1-2 cm of water or some scoring may result Application to non-dormant asparagus may result in unacceptable crop injury Do not work soil within 60 days prior to application in the spring Soil can be worked after spear harvest in preparation for Chateau application prior to fern emergence Treated soil that is splashed onto the ferns may result in spotting If using Dual II Magnum® for added grass control, apply Chateau in the late fall after the ferns have been mowed and apply Dual II Magnum® in the spring. Applying Chateau in the fall will ensure product activation and reduce risk of crop injury – apply after mowing of ferns and before ground freezes. For fall applications ferns may be mowed to a height of approximately 12-18 inches. This will ensure adequate snow coverage and still allow spray to reach the ground. A spring mowing will not reduce residual control.
BLUEBERRY (highbush)			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail Green pigweed Hairy nightshade Kochia Redroot pigweed	280 g/ha (113.3 g/ac.) 420 g/ha (170 g/ac.)	7	Do not apply after budbreak unless using hooded or shielded application equipment and applicator can ensure the spray drift will not contact the crop fruit or foliage Do not make more than 2 applications in a growing season Do not make a sequential application within 30 days of the first application Do not apply to highbush blueberries established less than 2 years
BLUEBERRY (lowbush)			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green pigweed Hairy nightshade Kochia Redroot pigweed	140 g/ha (56.7 g/ac.) 210 g/ha (85 g/ac.)		All applications should be made to dormant lowbush blueberries Do not make more than 2 applications in a growing season Do not make a sequential application within 30 days of the first application Apply Chateau to dormant plants in the sprout year (spring and/or fall) or as a dormant post harvest (fall)
Moss (suppression)	280 g/ha (113.3 g/ac.) 420 g/ha (170 g/ac.)		

WEEDS CONTROLLED/ SUPPRESSED	RATE	PHI	APPLICATION INFORMATION
TRANSPLANTED BROCCOLI			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail (suppression) Green pigweed Hairy nightshade Kochia Redroot pigweed	210 g/ha (85 g/ac.)		Apply Chateau as a hooded or shielded application to the middle of the rows Do not apply more than 210 g/ha during a single application or growing season Plants should be grown on raised or plastic mulched beds that are at least 10 cm higher than the treated row middle and the mulched bed must have a minimum of a 60 cm bed width Spray must remain between raised beds with minimal contact with the plastic If the top of the bed is contacted, severe injury can occur and it is advised that 2.5 cm of rain or irrigation must occur prior to transplanting residues
CANEBERRY			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail Green pigweed Hairy nightshade Kochia Redroot pigweed	420 g/ha (170 g/ac.)	7	Do not make more than 2 applications in a growing season Apply as a uniform broadcast application to the ground or as a uniform band. Avoid direct or indirect spray contact to foliage and green canes. Do not apply over the top of the crop Do not make a sequential application within 30 days of the first application
CELERY			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail Green pigweed Hairy nightshade Kochia Redroot pigweed	140 g/ha (56.7 g/ac.) 210 g/ha (85 g/ac.) Coarse-textured with <5% OM– 140 g/ha Medium-textured with <5% OM– 210 g/ha		Do not apply more than 210 g of Chateau per hectare during a single growing season Plants should be grown on raised or plastic mulched beds that are at least 10 cm higher than the treated row middle and the mulched bed must have a minimum of a 60 cm bed width Spray must remain between raised beds If the top of the mulch beds are contacted, severe injury can occur due to foliage contact with treated plastic Use a hooded or shielded boom for application Irrigate treated field after application and prior to transplanting with minimum of ½ cm of water if rainfall does not occur between application and transplanting All applications must be made with hooded or shielded equipment Do not apply after crops are transplanted
For use in celery in muck soil	140 g/ha (56.7 g/ac.)		Weed control and length of residual may be reduced in muck soils
DRY BULB ONION			
Canada fleabane Common lamb's-quarters Common ragweed Eastern black nightshade Green pigweed Hairy nightshade Kochia Redroot pigweed	140 g/ha (56.7 g/ac.) Coarse- and medium-textured mineral soil with <5% OM and muck soils	45	Avoid spray overlap as severe crop injury may occur Apply to transplanted onions between the 2-leaf and 6-leaf stage and on direct seed onions between the 3-leaf and 6-leaf stage prior to the emergence of weeds Do not apply in a tank-mix (except with Prowl® H_20 herbicide) or with an adjuvant as significant crop injury may result Do not tank-mix with other formulations of pendimethalin Do not apply on soils that contain greater than 90% sand plus gravel

WEEDS CONTROLLED/ SUPPRESSED	RATE	PHI	APPLICATION INFORMATION
GARLIC			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail Green pigweed Hairy nightshade Kochia Redroot pigweed	Coarse-textured with <5% OM–280 g/ha (113.3 g/ac.) Medium-textured with <5% OM–420 g/ha (170 g/ac.)		**FOR PRE-EMERGENT WEED CONTROL** Apply prior to emergence of garlic, and within 3 days after planting garlic Avoid spray overlap as severe crop injury may occur Severe crop injury will result when soils are flooded following applications of Chateau Apply only once per growing season Do not apply on fine-textured soils Use appropriate water volumes to ensure good spray coverage This product will not control emerged weeds
HOPS			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail Green pigweed Hairy nightshade Kochia Redroot pigweed	Coarse-textured with <5% OM–280 g/ha (113.3 g/ac.) Medium-textured with <5% OM–420 g/ha (170 g/ac.)	30	**FOR PRE-EMERGENT WEED CONTROL** Apply in the fall prior to weed emergence Apply a band to each side of the hop row and ensure rain activation When weeds are present apply as a tank-mix with carfentrazone-ethyl Apply only to dormant hops **FOR SUCKER CONTROL** Apply as a directed application after hops have reached a minimum of 1.8 m (6 ft.) in height for sucker control Application should be directed to the lower 0.6 m (2 ft.) of the hops Do not allow spray to contact green stem (unless used for sucker control), foliage, flowers or cones Do not use with an adjuvant
FIELD PEPPER			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail (suppression) Green pigweed Hairy nightshade Kochia Redroot pigweed	140 g/ha (56.7 g/ac.) 210 g/ha (85 g/ac.) Coarse-textured with <5% OM–140 g/ha Medium-textured with <5% OM–210 g/ha		Do not apply more than 210 g of Chateau per hectare during a single growing season All applications must be made with hooded or shielded equipment Do not apply during or after bloom Spray must remain between raised beds Plants should be grown on raised or plastic mulched beds that are at least 10 cm higher than the treated row middle and the mulched bed must have a minimum of a 60 cm bed width If the top of the mulch beds are contacted, severe injury can occur due to foliage contact with treated plastic Do not apply after crops are transplanted
PEPPERMINT, SPEARMINT			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail Green pigweed Hairy nightshade Kochia Redroot pigweed	280 g/ha (113.4 g/ac.) Coarse-textured with <5% OM	80	Do not apply to row or baby mint, use only on established mint Apply as a single spring application to established, dormant mint for pre-emergent weed control In furrow-irrigated fields, corrugating that is done after a Chateau application will expose untreated soil and break the herbicide barrier, resulting in poor weed control Do not apply to stands established longer than 3 years

WEEDS CONTROLLED/ SUPPRESSED	RATE	PHI	APPLICATION INFORMATION
POTATO (Western Canada only)			
Suppression of: Canada fleabane Common lamb's-quarters Common ragweed Eastern black nightshade Green pigweed Hairy nightshade Kochia Redroot pigweed	105 g/ha (42.5 g/ac.) Coarse- and medium-textured with <5% OM		Do not apply more than 105 g Chateau per hectare during a single growing season Mechanical incorporation into the soil or disturbance of the soil surface will reduce weed control Chateau may be applied to potatoes after hilling A minimum of 5 cm of soil must cover the vegetative portion of the potato plant when Chateau is applied. Application to potatoes with less than 5 cm of soil cover may result in crop injury. Do not apply after cracking, this will result in severe crop injury Chateau will not be effective if applied prior to hilling Chateau must be activated before crop emergence (cracking) or serious crop injury could occur. Irrigation with at least ½-1 cm of water is recommended before ground crack occurs.
STONE FRUIT			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail Green pigweed Hairy nightshade Kochia Redroot pigweed	280 g/ha (113.3 g/ac.) 420 g/ha (170 g/ac.) Coarse-textured with <5% OM– 140 g/ha Medium-textured with <5% OM– 210 g/ha	60	Chateau should be tank-mixed with glyphosate, present as isopropyl amine or potassium salt, for control of emerged weeds. Refer to the respective tank-mix partner label for rates, additional recommendations, restrictions and precautions. Follow the most restrictive label limitations and precautions of the tank-mix product(s) being used. Only apply to healthy, established trees. Do not apply when plants are under stress from insects, diseases, animals, winter injury, planting shock or any other stresses. Chateau should be applied as a uniform broadcast application to the orchard floor or as a uniform band directed at the base of the trunk Do not make more than 2 applications in a growing season Do not make a sequential application within 30 days of the first application Do not apply within 100 m of non-dormant pears Do not apply after budbreak unless using hooded or shielded application equipment and applicator can ensure the spray drift will not contact the crop fruit or foliage
STRAWBERRY			
Canada fleabane Common lamb's-quarters Common ragweed Dandelion Eastern black nightshade Green foxtail (suppression) Green pigweed Hairy nightshade Kochia Redroot pigweed	210 g/ha (85 g/ac.) Coarse- and medium-textured with <5% OM		Broadcast applications may be made to dormant strawberries For non-dormant strawberries, applications must be made to row middles only, using a hooded or shielded sprayer Do not make more than 1 application per growing season Do not allow spray drift to come in contact with fruit or foliage Application after fruit set may result in spotting of fruit and should be avoided. Do not apply after fruit set.
SWEET POTATO			
Suppression of: Common lamb's-quarters Common ragweed Eastern black nightshade Green pigweed Hairy nightshade Redroot pigweed	105 g/ha (42.5 g/ac.) Coarse- and medium-textured with <5% OM		Do not apply more than 105 g of Chateau per hectare during a single growing season Apply Chateau prior to transplanting, do not apply after sweet potato slips have been transplanted Do not plant greenhouse grown transplants/slips into Chateau treated fields Do not use on any sweet potato variety other than "Beauregard", unless user has tested Chateau on other variety and has found crop tolerance to be acceptable Do not apply as part of any tank-mix, if tank-mix is applied before transplanting

Nufarm Agriculture Inc. is a distributor of Valent products in Canada.

Credit® Xtreme is a patented glyphosate formulation containing Dual-Salt Technology®. Its high-load formulation (540 g/L) provides fast and complete control of troublesome weeds.

Credit® Xtreme

Benefits

- Patented Dual-Salt Technology is a first of its kind innovation
- Provides broad-spectrum weed control through systemic activity
- More active ingredient in less volume – concentrated product means handling less
- Works quickly and mixes easily to make your job easier
- Excellent compatibility with tank-mixes
- Treats up to 60 acres with just one case (30 acres at standard rate)

Registered crops

- Apple
- Apricot
- Asparagus
- Blueberry (highbush and lowbush)
- Cherry
- Cranberry
- Ginseng
- Grape
- Peach
- Pear
- Plum
- Strawberry
- Sugar beet

General usage information

- Credit Xtreme is a non-selective herbicide that will kill or injure plants if it comes in contact with green tissue
- Allow at least 1 day after application before tillage
- Extreme care must be exercised to avoid the herbicide coming in contact or drifting onto foliage, suckers or fruit

Technical information

HERBICIDE GROUP

> Group 9

ACTIVE INGREDIENTS

> glyphosate 540 g/L

RAINFAST

> Do not apply if rainfall is in forecast during application

> No surfactant required

PACKAGING

> 2 x 10 L case

> 500 L tote

> Bulk

PCP

> 29888

Specific weed control information

WEEDS CONTROLLED/SUPPRESSED				RATE
Green foxtail Lady's-thumb	Stinkweed Volunteer barley	Volunteer canola Volunteer wheat	Wild mustard Wild oats	0.5 L/ha (0.2 L/ac.)
Flixweed	Kochia	Wild oats		0.67 L/ha (0.27 L/ac.)
Canada fleabane Cleavers Common ragweed Downy brome	Flixweed Giant foxtail Hemp-nettle Lamb's-quarters	Narrow-leaved hawk's-beard Persian darnel Redroot pigweed	Russian thistle Volunteer flax Wild buckwheat	0.83-1.27 L/ha (0.34-0.51 L/ac.)
Annual bluegrass Annual sow-thistle	Crabgrass Kochia	Narrow-leaved vetch Prickly lettuce	Shepherd's purse	1.5 L/ha (0.61 L/ac.)

Specific crop usage information

RATE	PHI	APPLICATION INFORMATION
APPLE, APRICOT, CHERRY, PEACH, PEAR, PLUM		
1.5-8 L/ha (0.61-3.2 L/ac.)	30	Maximum 3 applications per year
ASPARAGUS		
0.83-1.67 L/ha (0.34-0.68 L/ac.)	7	Apply in spring prior to emergence of crop shoots Maximum 1 application per year Controls fall seeded ryegrass
BLUEBERRY (CULTIVATED HIGHBUSH)		
1.87-3.75 L/ha (0.76-1.52 L/ac.)	30	Use as a directed spray Maximum 1 application per year
BLUEBERRY (LOWBUSH)		
1.87-3.75 L/ha (0.76-1.52 L/ac.)		Apply in non-bearing year only during the mid-summer Maximum 1 application per year Use a directed spray in mid-summer of the non-bearing year
CRANBERRY		
13.4% solution 0.62 L of Credit Xtreme in 4 L water	30	Apply using wick or wiper applicators Maximum 1 application per year
NORTH AMERICAN GINSENG		
NEW GARDENS (BC ONLY) 1.67 L/ha in 50-100 L of water per ha		Apply in fall after seeding but before freeze-up to control volunteer cereals Do not use fall application in established gardens
EXISTING/ESTABLISHED GARDENS 1.67 L/ha in 50-100 L of water per ha		Apply in the spring prior to crop emergence Do not use fall application in established gardens

RATE	PHI	APPLICATION INFORMATION
GRAPE		
1.5-8 L/ha (0.61-3.2 L/ac.)	14	Remove all suckers prior to spraying (except for Concords) Suckering should be completed 2 weeks prior to application Do not apply to vines that are less than 3 years established Maximum 3 applications per year
STRAWBERRY		
0.67-1.34% solution (spot application) 22% solution (wiper application)	30	Apply when weeds are at a susceptible growth stage Maximum 1 application per year
SUGAR BEET		
0.67-1.34% solution (spot application)		Treated crop **MUST NOT** be harvested Maximum 1 application per year

Botector® is a biological fungicide that is a great addition to an IPM program to help control many diseases in multiple crops.

Botector®

Benefits

- Effective protection against botrytis on grapes and strawberries
- Unique mode of action
- Reduces the amount of resistant pathogens in the population
- No PHI and no negative influence on the processing procedure
- Safe for humans and environment (not harmful to non-target organisms)

Registered crops

- Blueberry
- Cranberry
- Eggplant
- Endive
- Grape
- Lettuce
- Other berries
- Pepper
- Radicchio
- Raspberry
- Strawberry
- Tomato

GREENHOUSE

- Eggplant
- Endive
- Lettuce (head and leaf)
- Pepper
- Radicchio
- Strawberry
- Tomato

General usage information

- Agitate tank solution during application and use within 8 hours
- Apply Botector preventive before predicted infection conditions, from bloom until harvest
- Adjust the amount of product depending on the leaf wall area
- Botector is compatible with many other chemical products, for non-compatible products keep a spraying interval of +/-3 days. Contact your Nufarm Horticulture Specialist.
- Maximum storage period of 18 months at room temperature (20°C) or 30 months at cool storage (8°C) from the manufacturing date
- Add sufficient water to the tank, do not use hot water
- Add Botector to the water, while stirring
- Do not prepare highly concentrated pre-mixtures of Botector

Technical information

CHEMICAL CLASS

> N/A – Biological

ACTIVE INGREDIENTS

> *Aureobasidium pullulans*

PACKAGING

> 10 x 1 kg case

RAINFAST

> 3 hours

PCP #

> 31248

Biological fungicide

APPROVED FOR ORGANIC PRODUCTION

Specific crop usage information

DISEASE CONTROLLED	RATE	APPLICATION INFORMATION
BELL AND NON-BELL PEPPER, EGGPLANT, TOMATO (greenhouse and field)		
Gray mold *(Botrytis cinerea)* (suppression only)	1 kg/ha (500-1,000 L/ha water volume) 0.4047 kg/ac. (202-404 L/ac. water volume)	Make up to 5 applications per season Repeat on a 7-10 day interval as needed up to the day of harvest Apply as a preventative if conditions are favourable for infection as well as at first sign of disease onset
BLACKBERRY, CRANBERRY, BLACK AND RED CURRENT, ELDERBERRY, GOOSEBERRY, HUCKLEBERRY, JOSTABERRY, RED AND BLACK RASPBERRY		
Gray mold *(Botrytis cinerea)* (suppression only)	1 kg/ha (500-1,000 L/ha water volume) 0.4047 kg/ac. (202-404 L/ac. water volume)	6 applications per year (repeat as needed on a 7-10 day interval) up to harvest Apply as a preventative or at the first sign of disease
BLUEBERRY (highbush and lowbush)		
Anthracnose fruit rot *(Colletotrichum acutatum)* (suppression only) Gray mold *(Botrytis cinerea)* (suppression only)	1 kg/ha (500-1,000 L/ha water volume) 0.4047 kg/ac. (202-404 L/ac. water volume)	6 applications per year (repeat as needed on a 7-10 day interval) up to harvest Apply as a preventative or at the first sign of disease
ENDIVE, LETTUCE (field and greenhouse; head and leaf), **RADICCHIO**		
Gray mold *(Botrytis cinerea)* (suppression only)	1 kg/ha (500-1,000 L/ha water volume) 0.4047 kg/ac. (202-404 L/ac. water volume)	Make weekly applications if needed on a 7-day interval up to the day of harvest Begin preventative applications soon after emergence or transplant if conditions favour disease or at the first sign of disease onset
GRAPE		
Gray mold *(Botrytis cinerea)* (suppression only)	0.4 kg/ha (400 L/ha water volume) 0.16 kg/ac. (162 L/ac. water volume)	4 applications per year (2 days minimum interval) Timing: Late flowering to berries being ripe for harvest Pre-harvest applications – only in the bunch zone
STRAWBERRY (field and greenhouse)		
Anthracnose fruit rot *(Colletotrichum acutatum)* (suppression only) Gray mold *(Botrytis cinerea)* (suppression only) Phomopsis leaf blight *(Phomopsis obscurans)* (partial suppression only)	1 kg/ha (500-1,000 L/ha water volume) 0.4047 kg/ac. (202-404 L/ac. water volume)	6 applications per year (repeat as needed on a 7-10 day interval) up to harvest Apply as a preventative or at the first sign of disease

Intuity™ fungicide provides exceptional control of tough soft fruit diseases such as botrytis, powdery mildew and gray mold.

Intuity™

Benefits

- Strong preventative activity
- May be applied through irrigation equipment
- Low PHI

Registered crops

- Bilberry
- Blueberry (lowbush)
- Cloudberry
- Grape
- Lingonberry
- Muntries
- Partridgeberry
- Strawberry

General usage information

- Begin applications prior to infection
- Under high disease pressure use higher rates and shorter intervals
- Intuity should be used as part of a rotation in a resistance management program alternating with fungicides from other groups targeting the same pathogen

Technical information

CHEMICAL CLASS
> Group 11

ACTIVE INGREDIENTS
> mandestrobin 43.4%

PACKAGING
> 4 x 1.77 L case

RAINFAST
> 2 hours

PCP #
> 32288

Specific crop usage information

DISEASE CONTROLLED	RATE	PHI	APPLICATION INFORMATION
BERRIES			
Botrytis gray mold *(Botrytis cinerea)*	439-877 mL/ha (177.7-355 mL/ac.)	0	Target application timings are at 10% bloom and again on a 7-14 day interval Make 4-5 applications per season depending on disease pressure and rate Do not make more than 2 sequential applications
GRAPE			
Botrytis bunch rot/ gray mold *(Botrytis cinerea)*	439-877 mL/ha (177.7-355 mL/ac.)	10	Target application timings are early bloom, bunch closure and veraison Make 3-4 applications per season depending on disease pressure and rate
Suppression of Powdery mildew *(Uncinula necator)* on grape and Amur river grape			Target application timings are bud break and again on a 10-14 day interval Make 3-4 applications per season depending on disease pressure and rate Applications of Intuity or any other Group 11 fungicides are limited to 2 per vine crop

Nufarm Agriculture Inc. is a distributor of Valent products in Canada.

Parasol® WG provides growers with consistent, uniform copper coverage and enhanced disease protection through extremely small particle size and a high organic copper load.

Parasol® WG

Benefits

- Easy to handle and mix
- Eliminates clogging of sprayer and booms
- Highly compatible with other products
- Small active particle size to ensure superior coverage

Registered crops

- Bean
- Cranberry
- Cucumber
- Grapes
- Hops
- Pepper
- Potato
- Sugar beet
- Tomato

General usage information

- Use as a preventative/protective fungicide spray
- Use on a 7-14 day interval depending on disease conditions
- Adaptable for spraying with all types of equipment

Technical information

CHEMICAL CLASS

> M1 fungicide

ACTIVE INGREDIENTS

> copper hydroxide 50%

PACKAGING

> 10 kg bag

RAINFAST

> Avoid application when heavy rainfall is in the forecast

PCP #

> 29063

APPROVED FOR ORGANIC PRODUCTION

Specific crop usage information

DISEASE CONTROLLED	RATE	PHI	APPLICATION INFORMATION
BEAN			
Common bacterial blight *(Xanthomonas campestris pv. phaseoli)* Halo bacterial blight *(Pseudomonas syringae pv. phaseolicola)*	2.25-3.25 kg/ha (0.91-1.3 kg/ac.)	2	For protective sprays, apply first application when plants are 15 cm high Apply on 7-14 day schedule depending on local conditions Do not apply more than 6 treatments per year
CRANBERRIES			
Fruit rot complex (early rot *(Phyllosticta vacinii)*, end rot *(Godronia cassandrae, Fusicoccum putrefaciens)*, viscid rot *(Phomopsis vaccinii)*, botryosphaeria fruit rot and berry speckle *(Botryosphaeria vaccinii)*, ripe rot *(Coleophoma empetri)*, black rot *(Allantophomopsis lycopodina)*, yellow rot *(Botrytis cinerea)*, blotch rot *(Physalospora vaccinii)*, and bitter rot *(Colletotrichum gloeosporioides)*) Rose bloom *(Exobasidium oxycocci)* Monilinia tip blight *(Monilinia oxycocci)* Twig blight *(Lophodermium oxycocci, L. hypophyllum)* Red leaf spot *(Exobasidium rostrupii)*	4.71 kg/ha (1.9 kg/ac.)	2	For all diseases, do not make more than 3 applications per year with a minimum of 7 days between applications For boom application equipment: Use 500-1,000 L water/ha For chemigation: Use up to 3,000 L water/ha through solid set systems only. See application and calibration techniques for sprinkler chemigation under "Directions for Use". Please refer to label for specific use instructions for each disease
CUCUMBER			
Angular leaf spot *(Pseudomonas syringae pv. lachrymans)*	2.25-3.25 kg/ha (0.91-1.3 kg/ac.)	2	Apply weekly once the plants begin to vine Do not apply more than 5 treatments per year
GRAPES			
Black rot *(Guignardia bidwellii)* Phomopsis rot *(Phomopsis viticola)* Powdery mildew *(Uncinula necator syn. Erysiphe necator)* Downy mildew *(Plasmopara viticola)*	2.24-6.72 kg/ha (0.91-2.7 kg/ac.) in 400 to 600 L water/ha	2	The amount of product applied per ha in concentrate must be the same as the amount applied per ha in dilute spray Ensure crop is thoroughly covered with spray mixture For all diseases, begin application at bud break and repeat at 3 day intervals through the season if needed For all diseases, do not make more than 8 applications per year with a minimum of 3 days between applications May be applied using vertical boom or air-assisted sprayers. Note: Injury to foliage may occur in copper-sensitive varieties such as: Concord, Delaware, Niagara and Rosette. The addition of hydrated lime at a rate of 0.454-1.36 kg per 0.454 kg of Parasol WG Fungicide may reduce the severity of phytotoxicity. Add lime to the spray tank first and mix thoroughly before adding product.

DISEASE CONTROLLED	RATE	PHI	APPLICATION INFORMATION
HOPS			
Downy mildew *(Peronospora humuli)*	1.2 kg/ha (0.49 kg/ac.) in 400 to 1,000 L water/ha	14	Do not apply more than 5 treatments per year at a minimum interval of 10 days The amount of this product applied per ha in concentrate must be the same as the amount applied per ha in dilute spray Ensure crop is thoroughly covered with spray mixture Apply as a fungicide crown treatment after pruning, but before training After training, apply at 10 days interval if needed Discontinue use 2 weeks before harvest Do not make more than 5 applications per year with a minimum of 10 days between applications May be applied using vertical boom or air-assisted sprayers
PEPPER			
Bacterial spot *(Xanthomonas campestris pv. vesicatoria* and *X. vesicatoria)*	2.25-3.25 kg/ha (0.91-1.3 kg/ac.)	2	When disease threatens, apply on a 7-14 day interval depending on disease severity and rainfall Do not apply more than 10 treatments per year, with a minimum re-treatment interval of 3 days
POTATO			
Early blight *(Alternaria solani)* Late blight *(Phytophthora infestans)*	1.1-2.5 kg/ha (0.45-1.0 kg/ac.)	2	Apply at 7-10 day intervals starting when plants are 15 cm high until harvest Combine with 1.75-2.25 kg/ha of mancozeb Apply at 3.4 kg/ha at vinekill with a desiccant or alone after vinekill, prior to harvest for disease management This late treatment may reduce infection of tubers by the late blight fungus during harvesting Do not apply more than 10 treatments per year, with a minimum re-treatment interval of 5 days
SUGAR BEET			
Cercospora leaf spot *(Cercospora beticola)*	2.25-4.25 kg/ha (0.91-1.72 kg/ac.)	2	Start spray when disease threatens and continue for 4-6 applications Spray every 10-14 days depending on weather conditions at 2.25-4.25 kg/ha depending on disease severity Addition of a suitable non-herbicidal agricultural spray oil is recommended at 5.5 L/ha Do not apply more than 6 treatments per year
TOMATO			
Bacterial spot *(Xanthomonas campestris pv. vesicatoria)* Early blight *(Alternaria solani)* Late blight *(Phytophthora infestans)*	1.75-2.25 kg/ha (0.7-0.91 kg/ac.)	2	When disease threatens, apply 2.25 kg/ha on a 7-10 day interval, more frequently depending on disease severity and rainfall Combine with 1.75-2.25 kg/ha mancozeb Do not apply more than 10 treatments per year, with a minimum re-treatment interval of 3 days

DiPel® 2X DF is a leading biological insecticide with a high potency resistance management tool for proven control of Lepidoptera pests in both conventional and organic cropping systems.

DiPel® 2X DF

Benefits

- The most potent Bt insecticide on the market with a unique mode of action, making it an excellent tool for managing resistance
- Immediately deters insects from feeding – death occurs within 1-3 days
- The dry, flowable formulation is convenient and easy to handle with tank-mix flexibility
- Not harmful to bees or beneficial insects making it a great tool for spring feeding caterpillars
- No REI and safe for humans

Registered crops

- Apple
- Asian radish
- Berries and small fruit
- Blueberry (highbush and lowbush)
- Bok choy
- Broccoli
- Cabbage
- Cauliflower
- Chinese broccoli
- Chinese cabbage
- Chokecherry
- Collards
- Corn (sweet and field)
- Cranberry
- Ginseng
- Grape
- Greenhouse herbs
- Greenhouse ornamentals
- Greenhouse vegetables
- Herbs and spices
- Kale
- Lettuce
- Mustard greens
- Nut crops
- Ornamental and shade trees
- Parsley
- Pear
- Potato
- Raspberry
- Sea buckthorn
- Spinach
- Stone fruit
- Sunflower
- Timothy
- Tobacco
- Tomato
- Turnip greens

For a complete list of all crops registered and what is included for each crop group refer to the label

General usage information

- OMRI-certified for use in organic production
- Apply when insect pests are small (egg hatch to early instars) before crop damage occurs
- Apply using sufficient water volume for thorough crop coverage
- Repeat at an interval sufficient to maintain control, usually 3-14 days
- Use with a water pH 7 or lower
- **Use with a non-ionic surfactant for hard to wet foliage (such as cabbage or broccoli)**

Technical information

CHEMICAL CLASS

> Group 11

ACTIVE INGREDIENTS

> *Bacillus thuringiensis, var. kurstaki strain ABTS-351* (57%)

PACKAGING

> 24 x 0.5 kg case

> 5 kg bag

RAINFAST

> Avoid application when heavy rainfall is in the forecast

PCP

> 26508

Biological insecticide

APPROVED FOR ORGANIC PRODUCTION

Specific crop usage information

INSECT CONTROLLED	RATE	APPLICATION INFORMATION
APPLE, PEAR		
Leafrollers* (Fruitree, European, Oblique-banded, Three-lined)	1,125-1,675 g/ha (455-678 g/ac.)	*Apply in 600-800 L/ha at pink stage and, if populations are heavy, at petal fall using an air-blast orchard sprayer. Weekly applications may be necessary if egg hatch is asynchronous. Best results are obtained if applications are made in the evening or on a cloudy day **For use in combination with Ripcord™ or Cymbush® See the respective labels for specific instructions Follow the most restrictive label
Winter moth** (not registered for pears)	280 g/ha (113 g/ac.)	
ASIAN RADISH, BOK CHOY, CHINESE BROCCOLI, CHINESE CABBAGE		
Cabbage looper	275-550 g/ha (111-222 g/ac.)	Use in 400 L/ha A non-ionic surfactant is suggested for this crop Refer to General Information
Diamondback moth	275 g/ha (111 g/ac.)	
Imported cabbageworm	55-140 g/ha (22.3-56.7 g/ac.)	
BLUEBERRY (highbush), **CHERRY, CRANBERRY**		
Cherry fruitworm Fruitworm	1,680 g/ha (680 g/ac.)	Apply at egg hatch, from petal fall through to green fruit stage Use a minimum of 300 L/ha and an airblast sprayer Maximum of 4 applications per season Repeat on a 3-14 day interval if needed
BLUEBERRY (lowbush)		
Blueberry spanworm Chainspotted geometer Rannoch looper	550-1,125 g/ha (222-455 g/ac.)	Maximum of 4 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
BROCCOLI		
Cabbage looper	275-550 g/ha (111-222 g/ac.)	A non-ionic surfactant is suggested for this crop Refer to General Information
Diamondback moth Imported cabbageworm	55-140 g/ha (22.3-56.7 g/ac.)	
CABBAGE		
Cabbage looper	275-550 g/ha (111-222 g/ac.)	A non-ionic surfactant is suggested for this crop Refer to General Information
Diamondback moth	55-275 g/ha (22.3-222 g/ac.)	
Imported cabbageworm	275 g/ha (111 g/ac.)	

INSECT CONTROLLED	RATE	APPLICATION INFORMATION
CAULIFLOWER		
Cabbage looper	275-550 g/ha (111-222 g/ac.)	A non-ionic surfactant is suggested for this crop
Imported cabbageworm	55-140 g/ha (22.3-56.7 g/ac.)	Maximum of 5 applications per year
CHOKECHERRY ORCHARDS AND SHELTERBELTS		
Fall webworm	635 g/ha (257 g/ac.)	1 application per year Mix 0.288 kg of product in 1,000 L of water Apply at a rate of 22 L mixture per 100 m^2 Apply as soon as tents are visible
COLLARDS		
Cabbage looper	275-550 g/ha (111-222 g/ac.)	A non-ionic surfactant is suggested for this crop
CRANBERRIES		
Green and brown spanworm	275-550 g/ha (111-222 g/ac.)	Refer to general information
GINSENG		
Leafrollers	565-1,125 g/ha (228-455 g/ac.)	Ground application – apply in 760-1,250 L/ha water, maximum of 2 applications per year For best control apply when larvae are in early instar stage
GRAPE		
Grape berry moth	1,125 g/ha (455 g/ac.)	Begin applications after adult flight begins – before egg hatch Use a high water volume Repeat on a 7-10 day interval Maximum 6 applications per year
Leafrollers	125-250 g/ 400 L water	Repeat on a 3-14 day interval
GREENHOUSE CUCUMBER		
Alfalfa looper Cabbage looper *Duponchelia fovealis*	625 g/1,000 L 75-150 g/250 L	Make applications when egg hatch is complete and when larvae are small Repeat every 3-14 days if needed
GREENHOUSE EGGPLANT, PEPPER, TOMATO		
Cabbage looper	75-150 g/250 L	Make applications when egg hatch is complete and when larvae are small Repeat every 3-14 days if needed
GREENHOUSE FRUITING VEGETABLES		
Duponchelia fovealis	625 g/1,000 L	Make applications when egg hatch is complete and when larvae are small Repeat every 7 days if needed
Lepidopteran leafminers	500-1,000 g/ 1,000 L	Make applications when egg hatch is complete and when larvae are small Repeat every 7-10 days if needed

INSECT CONTROLLED	RATE	APPLICATION INFORMATION
GREENHOUSE HERBS, GREENHOUSE ORNAMENTALS		
Duponchelia fovealis	625 g/1,000 L	Make applications when egg hatch is complete and when larvae are small Repeat every 7 days if needed
GREENHOUSE WASABI		
Alfalfa looper Cabbage looper	75-150 g/250 L	Apply at the first signs of infestation Treat when larvae are young (early instars) Repeat applications on a 7-10 day interval if needed Maximum 8 applications per year
HOPS		
European corn borer	560-1,120 g/ha (226-453 g/ac.)	Apply at first sign of infestation Repeat on a 3-14 day interval if needed
Hop looper	275-550 g/ha (111-222 g/ac.)	
KALE, LETTUCE, MUSTARD GREENS, SPINACH, TURNIP GREEN		
Cabbage looper	275-550 g/ha (111-222 g/ac.)	A non-ionic surfactant is suggested for this crop
NUT CROPS – HAZELNUTS, PECANS, SWEET CHESTNUTS, WALNUTS		
Leafrollers (European, Fruitree, Oblique-banded, Three-lined)	1,125-1,675 g/ha (455-678 g/ac.)	Refer to general information
PARSLEY		
Cabbage looper	275 g/ha (111 g/ac.)	Refer to general information
QUINOA		
European corn borer	560-1,120 g/ha (226-453 g/ac.)	Apply when pinhole feeding is observed in at least 5% of the plants Repeat on a 7-day interval if needed Apply before larvae begin stalk-boring
RED RASPBERRY		
Early season Oblique-banded leafroller	550-1,125 g/ha (222-455 g/ac.)	Refer to general information
STONE FRUIT – APRICOT, CHERRY PEACH PLUM/PRUNE		
Fruitworm	1,125-1,675 g/ha (455-678 g/ac.)	Apply in 2,000 L/ha at pink stage to petal fall
Leafrollers (European, Fruittree, Oblique-banded, Three-lined)		Apply in 600-800 L/ha at pink stage and, if populations are heavy, at petal fall using an air-blast orchard sprayer. Weekly applications may be necessary if egg hatch is asynchronous.
SUNFLOWER		
Sunflower moth	315-625 g/ha (127-253 g/ac.)	Applied as an aerial application. Mix amount in 20 L of water. Apply when 20-50% of heads are in bloom Thorough coverage is needed, apply second application if required

INSECT CONTROLLED	RATE	APPLICATION INFORMATION
SWEET CORN		
European corn borer	560-1,120 g/ha (226-453 g/ac.)	Apply when pinhole feeding is observed in at least 5% of the plants Repeat on a 7-day interval if needed
TIMOTHY		
Essex (European) skipper	140-275 g/ha (56.7-111 g/ac.)	Refer to general information
TOBACCO		
Hornworm	55-140 g/ha (22.3-56.7 g/ac.)	Refer to general information
TOMATO		
Cabbage looper	275-550 g/ha (111-222 g/ac.)	Refer to general information
Tomato fruitworm	550 g/ha (222 g/ac.)	For tomato fruitworm apply every 5-7 days Refer to general information

XenTari® WG is a leading biological Bt insecticide that controls a broad range of pests with proven control on tomato looper in greenhouses, as well as armyworm and diamondback moth control in conventional and organic operations.

XenTari® WG

Benefits

- Unique mode of action making it an excellent tool for managing resistance
- Immediately deters insects from feeding – death occurs within 1-3 days
- Excellent product to rotate with conventional insecticides
- Not harmful to bees or beneficial insects making it a great tool for spring feeding caterpillars
- No REI and safe for humans

Registered crops

- Artichoke
- Beans (dry and succulent)
- Brassica leafy greens
- Brassica vegetables (head and stem)
- Bulb vegetables
- Camelina
- Canola
- Cardoon
- Celery
- Celtuce
- Chinese celery
- Fennel
- Fruiting vegetables
- Garden beets
- Ginseng
- Grapes
- Greenhouse beans
- Greenhouse cucumber
- Greenhouse fruiting vegetables
- Greenhouse lettuce
- Greenhouse ornamentals
- Hare's ear mustard
- Herbs and spices
- Hops
- Horseradish
- Kohlrabi
- Leafy greens
- Mustard seed
- Oil radish
- Outdoor ornamentals
- Pome fruit
- Poppy seed
- Radish (including oriental)
- Rhubarb
- Rutabaga
- Sea kale
- Stone fruit
- Sugar beets
- Sweet potatoes
- Sweet rocket
- Tobacco
- Tree nuts
- Turnip

For a complete list of all crops registered and what is included for each crop group refer to the label

General usage information

- Apply when insect pests are small (egg hatch to early instars) before crop damage occurs
- Apply in sufficient water volume for thorough crop coverage
- Use with a water pH 7 or lower
- Use a non-ionic surfactant for hard to wet foliage (such as cabbage or broccoli)
- XenTari is OMRI certified for use in organic production

Technical information

CHEMICAL CLASS

> Group 11

ACTIVE INGREDIENTS

> *Bacillus thuringiensis subsp. aizawai, Strain ABTS-1857* (48.1%)

PACKAGING

> 24 x 500 g case

RAINFAST

> Avoid application when heavy rainfall is in the forecast

PCP #

> 31557

Biological insecticide

APPROVED FOR ORGANIC PRODUCTION

Specific crop usage information

INSECT CONTROLLED	RATE	APPLICATION INFORMATION
ARTICHOKE		
Beet armyworm Corn earworm	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Use 1,000L water/ha (404 L/ac.) to ensure full coverage but not to the point of runoff
BEANS (dry and succulent)		
Beet armyworm Corn earworm	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Mix with sufficient water to ensure full coverage but not to the point of runoff
BRASSICA LEAFY GREENS, BRASSICA HEAD AND STEM VEGETABLES		
Cabbage looper Cross-striped cabbageworm Diamondback moth Imported cabbageworm	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
BULB VEGETABLES – CHIVE, DAYLILY, ELEGANS HOSTA, FRITILLARIA, GARLIC, KURRAT, LADY'S LEEK, LEEK, LILY, ONIONS, SHALLOT, WILD LEEK		
Leek moth	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 1,000 L/ha (404 L/ac.)
CANOLA, CAMELINA, HARE'S EAR MUSTARD, MUSTARD SEED, OIL RADISH, POPPY SEED, SWEET ROCKET		
Bertha armyworm Diamondback moths	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
CARDOON, CELERY, CHINESE CELERY, CELTUCE, FENNEL, RHUBARB, SEA KALE		
Beet armyworm Cabbage looper	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
FRUITING VEGETABLES		
Beet armyworm Cabbage looper Tobacco budworm Tomato fruitworm	500-1,000 g/ha (202-404 g/ac.)	Apply every 5-7 days Use 500-1,000 L/ha (202-404 L/ac.) to ensure full coverage, but not to the point of runoff
GARDEN BEETS, SUGAR BEETS, INCLUDING LEAVES		
Beet armyworm Beet webworm	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
GINSENG		
Oblique-banded leafroller	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
GRAPE		
Grape berry moth Grape leafroller Grape leaffolder Grapeleaf skeletonizer Oblique-banded leafroller Omnivorous leafroller	500-1,000 g/ha (202-404 g/ac.)	Begin applications at "black head stage" of eggs, 2 days before larvae hatch May be repeated if needed every 7-10 days up to 6 applications per year

INSECT CONTROLLED	RATE	APPLICATION INFORMATION
GREENHOUSE BEANS		
Beet armyworm Cabbage looper Corn earworm Tomato looper	500-1,000 g/ha (202-404 g/ac.)	Apply with sufficient water to ensure full coverage, but not to the point of runoff
GREENHOUSE CUCUMBER		
Beet armyworm Cabbage looper Corn earworm Tomato looper	500-1,000 g/ha (202-404 g/ac.)	Apply with sufficient water to ensure full coverage, but not to the point of runoff
GREENHOUSE EGGPLANT, PEPPER, TOMATO		
Beet armyworm Cabbage looper Tobacco budworm Tomato fruitworm Tomato leafminer Tomato looper	500-1,000 g/ha (202-404 g/ac.)	Apply with sufficient water to ensure full coverage, but not to the point of runoff
GREENHOUSE LETTUCE		
Beet armyworm Cabbage looper Corn earworm Tomato looper	500-1,000 g/ha (202-404 g/ac.)	Apply with sufficient water to ensure full coverage, but not to the point of runoff
GREENHOUSE ORNAMENTALS		
Beet armyworm Corn earworm Tomato looper	750-1,000 g/ha (303-404 g/ac.)	Apply with sufficient water to ensure full coverage, but not to the point of runoff
HERBS AND SPICES		
Beet armyworm Cabbage looper	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
HOPS		
Hop looper	500-1,000 g/ha (202-404 g/ac.)	Apply at first sign of infestation when larvae are small Use with sufficient water to ensure full coverage, but not to the point of runoff
KOHLRABI		
Cabbage looper Cross-striped cabbageworm Diamondback moth Imported cabbageworm	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
LEAFY GREENS		
Beet armyworm Cabbage looper	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
OUTDOOR ORNAMENTALS		
Corn earworm Beet armyworm Tomato looper	750-1,000 g/ha (303-404 g/ac.)	Apply with sufficient water to ensure full coverage, but not to the point of runoff

INSECT CONTROLLED	RATE	APPLICATION INFORMATION
POME FRUIT		
Cankerworms Codling moth Fruittree leafroller Oblique-banded leafroller Oriental fruit moth Redbanded leafroller Tufted apple budworm Varigated leafroller Winter moth	500-1,600 g/ha (202-648 g/ac.)	Apply using 500-1,600 L/ha (202-648 L/ac.) at pink stage and if populations are heavy at petal fall If egg hatch is asynchronous weekly applications may be necessary Follow general application instructions if multiple applications are needed
ROOTS, TUBERS AND LEAVES OF HORSERADISH, RADISH, ORIENTAL RADISH, RUTABAGA, TURNIP (cultivars, varieties and hybrids of these)		
Cabbage looper Cross-striped cabbageworm Diamondback moth Imported cabbageworm	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
STONE FRUIT		
Cankerworms Varigated leafroller Fruittree leafroller Oblique-banded leafroller Oriental fruit moth	500-1,600 g/ha (202-648 g/ac.)	Apply using 500-1,600 L/ha (202-648 L/ac.) at pink stage and if populations are heavy at petal fall If egg hatch is asynchronous weekly applications may be necessary Follow general application instructions if multiple applications are needed
SWEET POTATOES		
Beet armyworm	500-1,000 g/ha (202-404 g/ac.)	Apply sufficient spray volume to ensure uniform deposition on all plant surfaces Recommended 500 L/ha (202 L/ac.)
TOBACCO		
Beet armyworm Tobacco budworm Tomato fruitworm	500-1,000 g/ha (202-404 g/ac.)	Apply every 5-7 days Use 500-1,000 L/ha (202-404 L/ac.) to ensure full coverage, but not to the point of runoff
TREE NUTS		
Cankerworms Codling moth (on walnuts, heartnuts and butternuts) Fruittree leafroller Oblique-banded leafroller Varigated leafroller	500-1,600 g/ha (202-648 g/ac.)	Apply using 500-1,600 L/ha (202-648 L/ac.) at pink stage and if populations are heavy at petal fall If egg hatch is asynchronous weekly applications may be necessary Follow general application instructions if multiple applications are needed

Always read and follow the product label for more detailed information on control of weeds, insects or disease, application directions, and use precautions.

Please refer to label for more information including future label expansions that may include new crops, pests and use patterns.

Please refer to label for re-entry periods.