APPLES 2021

Nufarm

Grow a better tomorrow

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Apple growth stage calendar

DORMANT	KING BLOOM	FULL BLOOM	PETAL FALL	FRUIT DEVELOPMENT	FRUIT PRESENT	POST HARVEST
Chateau						Chateau
Parasol FL	Blossom Protect Excalia	Blossom Protect Excalia	Excalia			Parasol FL
	Promalin	Promalin	MaxCel Promalin	MaxCel	ReTain (July-September)	
			Danitol DiPel XenTari	Danitol DiPel XenTari	Danitol 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
- Caneberry
- 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
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

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

Credit® LV

Benefits

- The patented Dual-Salt technology combines both potassium and IPA salts that allow for easier mixing and improved weed control.
- The low viscosity formulation flows and transfers easier in cooler conditions
- 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

Registered crops

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

General usage information

- Credit LV 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

> 33849

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

Blossom Protect™ is a biological fungicide that fits well in a fire blight protection plan in pome fruit.

Blossom Protect™

Benefits

- Effective protection against fire blight on pome fruit
- Unique mode of action
- Reduces the amount of resistant pathogens in the population
- No PHI
- Safe for humans and environment (not harmful to non-target organisms)

Registered crops

- Pome fruit

General usage information

- Agitate tank solution during application and use within 8 hours
- Apply Blossom Protect the day before predicted infection conditions. Further applications after 2 days if infection risk is still high and new blossoms open
- To be mixed with Buffer Protect™ ("Component A"), a citric acid buffer supplied together with Blossom Protect against fire blight. Use 1.5 kg Blossom Protect together with 6.0 kg Buffer Protect for trees of 2 m canopy height.
- Adjust the amount of product depending on the canopy height
- Reduce number of applications to 2 in case of varieties sensitive for russeting
- Tank-mixtures possible with wettable sulphur, fluopyram, anilinopyrimidines and some DMI. Other fungicides have to be applied separately from treatments with Blossom Protect the day before or 2 days after the application of Blossom Protect. Exception: lime sulfur can be applied 6 hrs after Blossom Protect. Contact your Nufarm Horticulture Specialist for more information on tank-mix partners.
- 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 Blossom Protect to the water, while stirring
- Do not prepare highly concentrated pre-mixtures of Blossom Protect

Technical information

CHEMICAL CLASS

> N/A – Biological

ACTIVE INGREDIENTS

> *Aureobasidium pullulans*

PACKAGING

> 10 x 1.5 kg Blossom Protect

> 6.0 kg Buffer Protect NT

RAINFAST

> 3 hours

PCP #

> 30552

Biological fungicide

APPROVED FOR ORGANIC PRODUCTION

Specific crop usage information

DISEASE CONTROLLED	RATE	APPLICATION INFORMATION
BEARING AND NON-BEARING POME FRUIT		
Fire blight *(Erwinia amylovora)*	1 m canopy height: 0.75 kg/ha (500 L/ha water volume) 0.3 kg/ac. (202 L/ac. water volume)	According to phenology: apply up to 4 times at 10%, 40%, 70% and 90% open blossoms (BBCH 61-69) According to a forecast system (e.g. Maryblyt): apply a maximum number of 5 times when model indicates risk of infection The solution should be stirred during application

Excalia® is a new and highly effective foliar fungicide for use in apples to control powdery mildew and scab and in sugar beets to control rhizoctonia.

Excalia®

Benefits

- Easy to handle and mix
- Tank-mix flexibility with several products
- Highly effective protective and post-infection activity against primary scab
- Translaminar movement through the leaf

Registered crops

- Apple
- Sugar beet

General usage information

- Excalia should be used as part of a rotation in a resistance management program alternating with fungicides from different groups targeting the same pathogen
- Tank-mix only with a non-group 7 fungicide that targets the same pathogen
- Always adhere to the re-entry interval and the number of applications for each crop listed on the label
- When targeting powdery mildew a silicone surfactant (Xiameter) must be used at 0.03-0.06% v/v
- For more information or questions on specific applications or tank-mix compatibility contact the Nufarm Horticulture Specialist

Technical information

CHEMICAL CLASS
> Group 7

ACTIVE INGREDIENTS
> Inpyrfluxam 31.25%

PACKAGING
> 8 x 475 mL case

RAINFAST
> 1 hour

PCP #
> 33819

Specific crop usage information

DISEASE CONTROLLED	RATE	PHI	APPLICATION INFORMATION
APPLE			
Apple scab *(Venturia inaequalis)* Powdery mildew *(Podosphaera leucotricha)*	146-219 mL/ha (59-89 mL/ac.)		Make applications from green tip to petal fall with a re-treatment interval of 10 days Do not apply prior to green tip or after petal fall Do not apply more than 438 mL/ha (173 mL/ac.) per year **FOR POWDERY MILDEW** Must apply with a silicone surfactant at 0.03-0.06% v/v (30-60 mL/100 L water)

Parasol® FL is one of the smallest and most consistent copper particle size formulations available. It disperses effortlessly in water providing protection from disease.

Parasol® FL

Benefits

- Easy to handle and mix
- Has a higher Metallic Copper Equivalent (MCE) than some other coppers on the market providing optimal control of tough diseases
- Superior formulation stays in suspension and quickly disperses in water
- Highly compatible with other products
- Superior rainfastness
- One of the smallest and most consistent sizes of copper particles available in Canada

Registered crops

- Apple
- Apricot
- Bean
- Cherries (sweet and sour)
- Cucumber
- Filberts
- Hazelnut
- Nectarine
- Peach
- Pears
- Pepper
- Potato
- 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
- No surfactants needed
- No buffer zone required when applied as spot treatment

Technical information

CHEMICAL CLASS

> M1 fungicide

ACTIVE INGREDIENTS

> copper hydroxide 24.4%

PACKAGING

> 2 x 10 L case

RAINFAST

> 2 hours

PCP #

> 25901

Specific crop usage information

DISEASE CONTROLLED	RATE	PHI	APPLICATION INFORMATION
APPLE TREES, PEAR TREES			
Fire blight *(Erwinia amylovora)* Bacterial blight *(Pseudomonas syringae)*	4.7 L/ha (1.9 L/ac.)	2	Apply a dormant application in sufficient water for complete coverage Use 2 applications per year; apply at Silvertip and after harvest with 50% leaf drop
APRICOT TREES			
Coryneum blight *(Coryneum carpophilum)*	4.5-6.7 L/ha (1.9-2.7 L/ac.)	2	Apply as a dormant application before foliage buds swell
CHERRY TREES (sweet and sour)			
Bacterial canker *(Pseudomonas spp.)*	8.8-13.1 L/ha (3.6 - 5.3 L/ac.)	2	Apply when 75% of the leaves have fallen Make a second application in early spring before bud break Use the low rate on small trees and the high rate on large trees
PEACH TREES, NECTARINE TREES			
Coryneum blight *(Coryneum carpophilum)* Leaf curl *(Taphrina deformans)*	Before bud swell in the spring: 4.5-6.7 L/ha (1.8-2.7 L/ac.) After leaf fall: 4.5-8.9 L/ha (1.8-3.6 L/ac.)	2	Apply as a dormant spray before bud swell in the spring (low rate) and after leaf fall in the fall (high rate) Use the higher rate when rainfall is very heavy and disease pressure is high

MaxCel® PGR delivers precision thinning, enhanced fruit size and return bloom for top quality apples.

MaxCel® PGR

Benefits

- Reduces hand thinning costs
- Promotes cell division and fruit growth beyond the thinning effect producing larger apples
- Improves return bloom
- Improves packout and marketable yield
- Does not stress the tree or cause stunting of fruit, even with multiple year use

Registered crops

- Apple
- Pear

General usage information

- Maximum rate of 22.5 L/ha (9.1 L/ac.) per season
- Adequate spray volume is required for thorough coverage (1,000 L/ha or 400 L/ac.)
- The optimum thinning application timing is between 8-14 mm fruit size
- The water spray solution pH should be as close to neutral as possible, and should not exceed pH 8.5
- Allow 7-10 days to observe the effects of application
- For more information on use pattern information or rates based on ppm please refer to the MaxCel label or contact the Nufarm Horticulture Specialist

Technical information

CHEMICAL CLASS

> Plant Growth Regulator

ACTIVE INGREDIENTS

> 6-Benzyladenine (6-BA) 1.9%

PACKAGING

> 10 x 1 L case

> 2 x 5 L case

RAINFAST

> 6 hours

PCP #

> 28851

Specific crop usage information

OBJECTIVE	RATE	PHI	APPLICATION INFORMATION
APPLE			
Size enhancement Enhanced return bloom	2.5 L/ha (1 L/ac.) 50 ppm	86	Make 2-4 applications starting at petal fall (3-10 day intervals) This rate is used for sizing (little to no thinning should occur at this rate)
Use for moderate thinning on easier to thin varieties such as McIntosh	3.75 L/ha (1.5 L/ac.) 75 ppm		Ideal thinning window is between 5-15 mm. MaxCel can be used at any time during this window.
Ideal rate for most thinning used on varieties such as Gala and Empire	5 L/ha (2 L/ac.) 100 ppm		The optimum timing for MaxCel to be used is at the 8-14 mm range
Use on hard to thin varieties (Fuji and Golden Delicious) or for a more aggressive thinning effect on varieties such as Gala	6.25 L/ha (2.5 L/ac.) 125 ppm		Apply MaxCel at the beginning of a warming trend when temperatures the few days following application are expected to be above 18°C
Use in orchards with hard to thin varieties or in orchards with a history of difficulty thinning	7.5-10 L/ha (3-4 L/ac.) 150-200 ppm		Increased thinning will occur when conditions are cloudy and warm
PEAR			
Size enhancement	2.5-5 L/ha (1-2 L/ac.) 50-100 ppm	86	Use this rate for sizing pears (little to no thinning should occur at this rate)
Thinning Enhanced return bloom	6.25-10 L/ha (2.5-4 L/ac.) 125-200 ppm		The optimum timing for MaxCel to be used is at the 8-14 mm range

All rates in the table above are based on a water volume of 1,000 L/ha (400 L/ac.).
Please refer to chart for ppm information.

COMPATIBILITY

MaxCel is compatible with some thinners and pesticides including formulations of SEVIN® and NAA. If compatibility of MaxCel with another product and the resulting plant response is unknown, it should be tested on a small scale. Do not apply tank-mix combinations unless your previous experience indicates the mixture is effective and will not result in application difficulties or result in plant injury. Please consult with a Nufarm Horticulture Specialist if you have questions on mixing MaxCel with other products.

If tank-mixing with NAA, do not use on Fuji, Mutsu, Golden Delicious, Red Delicious or varieties known to throw pygmy fruit – please consult the Horticulture Specialist at Nufarm if you are new to this tank-mix combination for more details on using MaxCel combined with NAA and concerns about pygmy fruit.

VOLUME OF MAXCEL PGR PER VOLUME OF SPRAY REQUIRED TO OBTAIN GIVEN PPM CONCENTRATIONS

SOLUTION VOLUME	CONCENTRATION								
Litres (L)	**10 ppm**	**25 ppm**	**50 ppm**	**75 ppm**	**100 ppm**	**125 ppm**	**150 ppm**	**175 ppm**	**200 ppm**
380	190 mL	475 mL	950 mL	1.42 L	1.9 L*	2.38 L	2.85 L	3.33 L	3.8 L
1,000	470 mL	1.25 L	2.5 L	3.75 L	5 L	6.25 L	7.50 L	8.75 L	10 L

*For a 100 ppm solution applied to 0.4 ha (1 ac.)

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

Promalin® PGR improves size and fruit shape (typiness) of many apple varieties by elongating fruit and giving them more pronounced calyx lobes.

Promalin® PGR

Benefits

- Increases fruit size and shape
- Delivers consistent results
- Provides an excellent return on investment
- Does not require an adjuvant

Registered crops

- Apple
- Cherries
- Pear

General usage information

- Adequate spray volume is required for thorough coverage (1,000 L/ha or 400 L/ac.)
- Thorough crop coverage is required for desired results
- Do not apply when temperatures are below freezing
- The spray solution pH should be neutral and not exceed 8.5
- Promalin should be applied alone
- Applications should be made during slow drying conditions to maximize absorption

Technical information

CHEMICAL CLASS

> Plant Growth Regulator

ACTIVE INGREDIENTS

> 6-Benzyladenine (6-BA) 1.8%

> Gibberellic Acid (GA4+7) 1.8%

PACKAGING

> 10 x 500 mL case

RAINFAST

> 6 hours

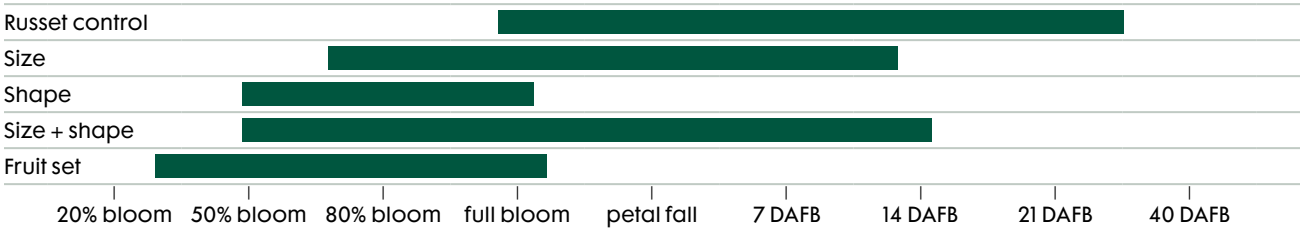
PCP #

> 16636

Specific crop usage information

OBJECTIVE	RATE	PHI	APPLICATION INFORMATION
APPLE			
Improve typiness Single application	1.2-2.3 L/ha (0.5-0.9 L/ac.)	28	Apply at early king bloom to early stages of petal fall (optimal timing is 80% king bloom)
Improve typiness Two applications	0.6-1.2 L/ha (0.2-0.5 L/ac.)		Make first application at early king bloom and the second 3-21 days later, when the remainder of the canopy comes into bloom
Reduce russet	250-500 mL/ha (100-200 mL/ac.)		Make a maximum of 4 applications starting between the bloom and petal fall (closer to petal fall is ideal) Follow up with sequential applications on a 7-12 day interval Earlier applications, shorter intervals and higher rates are recommended when conditions are long, cold and wet
Increase fruit set after a frost	1.2-2.3 L/ha (0.5-0.9 L/ac.)		Apply within 24 hours after a frost event when the crop is between early bloom and full bloom Allow trees to thaw before making application The trees MUST be in the bloom stage for this treatment to be effective
Branching – foliar application (nursery and orchard)	125-500 ppm (62.5-250 mL Promalin per 10 L of spray solution)		For orchard trees, apply at 1-3 in. of new terminal growth For nursery stock, treat after trees have reached a terminal height at which lateral branching is desired
Branching – latex application (nursery and orchard)	100-165.6 mL Promalin per 500 mL latex paint		Apply in the spring when terminal buds begin to swell but before shoots emerge
PEAR (non-bearing)			
Increase fruit set	250 mL/ha (100 mL/ac.)	28	Make first application at 10-30% open flowers on the old wood Make second application between full bloom and petal fall
Branching – foliar application (nursery and orchard)	250-1,000 ppm (125-500 mL Promalin per 10 L of spray solution)		For orchard trees, apply at 1-3 in. of new terminal growth For nursery stock, treat after trees have reached a terminal height at which lateral branching is desired
SWEET CHERRIES (non-bearing)			
Branching – foliar application (nursery only)	250-1,000 ppm (125-500 mL Promalin per 10 L of spray solution)	28	Treat after trees have reached a terminal height at which lateral branching is desired
Branching – latex application (orchard only)	100-165.6 mL Promalin per 500 mL latex paint		Apply in the spring when terminal buds begin to swell but before shoots emerge

OPTIMUM TIMINGS FOR PROMALIN APPLICATIONS



Note: DAFB = days after full bloom; Optimum timings based on 20 years of trials and commercial experience

OBJECTIVE	APPLICATION INFORMATION
USE MAXCEL AND PROMALIN COMBINED (for an optimal thinning, sizing and fruit finish program)	
Typy and well sized apples	Follow the Promalin recommendations above for improved typiness Apply the MaxCel treatment at 10-12 mm fruit size at 3.75-6.25 L/ha (1.5-2.5 L/ac.), depending on the variety
Well sized fruit with reduced russet	Follow the recommendations above for russet control Apply the MaxCel treatment at 8-12 mm fruit size at 3.75-6.25 L/ha (1.5-2.5 L/ac.), depending on the variety

The combination of these products in a program have proven to increase fruit quality and thus increasing overall packout. Do not use MaxCel and Promalin as a tank-mix.

Harvest the potential™ of your apple crop with ReTain®, a plant growth regulator that temporarily inhibits ethylene production to slow fruit maturation, ripening and fruit drop.

ReTain® PGR

Benefits

- Keeps fruit hanging longer
- Reduces watercore and stem bowl cracking
- Maintains and improves fruit firmness
- Provides greater uniformity in maturity across all fruit at each pick
- Increases fruit size as fruit grows longer
- Increased fruit set on cherries

Registered crops

- Apple
- Cherries

General usage information

- Adequate spray volume is required for thorough coverage (935 - 1,870 L/ha)
- A silicone surfactant must be used when applying ReTain – Xiameter® at 0.05-0.1% v/v
- Use the lower rate of surfactant when trees are stressed, or if there are extreme weather conditions like drought or excessive heat
- Maximum 1 application per season
- The spray solution pH should be neutral and not exceed 8.5
- If applying to trees under stress due to water, heat, disease or poor nutrition – be aware that the benefits and efficacy of ReTain may be reduced in these circumstances
- Please consult the Horticulture Specialist at Nufarm for specific use pattern information related to specific varieties and growing areas
- Do not mix ReTain with any other products other than Xiameter
- Do not apply in high heat
- We do not recommend applying close application intervals of ReTain and Captan and/or Maestro®. Please contact Nufarm for more details and support with respect to using ReTain and these fungicides safely.

Technical information

CHEMICAL CLASS

> Plant Growth Regulator

ACTIVE INGREDIENTS

> Aviglycine hydrochloride (AVG) 15%

PACKAGING

> 20 x 333 g case

RAINFAST

> 8 hours

PCP #

> 25609

Specific crop usage information

OBJECTIVE	RATE	PHI	APPLICATION INFORMATION
APPLE			
Delayed fruit maturity Improved harvest management Reduced pre-harvest fruit drop Additional time for increase in fruit size Additional time for colour development Maintenance of fruit firmness Improved fruit quality Enhanced storage quality	1 pouch/0.4 ha (1 pouch/ac.)	7	Apply 4 weeks prior to the anticipated beginning of the normal harvest for the specific variety you are spraying. Applying ReTain at this time will help delay and better manage harvest. When temperatures are high (above 32°C) it is important to use the 0.05% v/v rate of a silicone surfactant (Xiameter)
PLEASE NOTE Under difficult colouring conditions, colour development of certain bi-colour apple cultivars such as Gala and Honeycrisp™ may be delayed when ReTain is applied at 1 pouch per 0.4 hectare (1 acre)			
SWEET CHERRY			
Fruit set	1 pouch/0.4 ha (1 pouch/ac.)	7	Make a single application of ReTain during bloom. Efficacy requires thorough coverage of the product on the flower buds and flowers. Use appropriate water volume based on tree size Applications between balloon stage to first bloom are more effective than earlier or later applications Do not apply after petal fall Do not apply when fruit are present ReTain on cherries is not meant to be used as a harvest management aid

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

Danitol® insecticide is an effective option to control spotted wing drosophila (SWD), as well as other tough insects in horticulture crops.

Danitol®

Benefits

- Trusted product for control of tough insects including spotted wing drosophila
- Broad label of insects controlled on multiple crops
- Tank-mix flexibility with several products

Registered crops

- Bushberry
- Caneberry
- Cucurbit vegetables
- Fruiting vegetables
- Pome fruit
- Stone fruit
- Succulent peas
- Tree nuts

General usage information

- Always adhere to the limit of applications per crop
- It is recommended that no more than 2 Danitol applications be made per season as part of a resistance management program. Use non-pyrethroid products at other timings to control pests.
- Always refer to and follow the label for re-entry interval (REI) and pre-harvest interval (PHI) for each registered crop
- Do not use in greenhouses

Technical information

CHEMICAL CLASS

> Group 3

ACTIVE INGREDIENTS

> fenpropathrin 30.9%

PACKAGING

> 4 x 3.785 L case

RAINFAST

> Avoid application when heavy rainfall is in the forecast

PCP #

> 33817

Specific crop usage information

INSECT CONTROLLED	RATE	APPLICATION INFORMATION
POME FRUIT		
Leafhopper Spotted tentiform leafminer	779-1,559 mL/ha (315-630 mL/ac.)	Begin applications at delayed dormant through first cover as common to the production area and the target pest Apply by ground with airblast equipment as a full coverage spray and repeat as needed to maintain control but not more often than every 10 days
Apple maggot Codling moth European red mite Japanese beetle Oblique-banded leafroller Oriental fruitmoth Red-banded leafroller Spotted-wing drosophila Tufted apple budmoth Two-spotted spider mite **FOR USE ON PEARS ONLY** Green fruitworm Pear psylla (suppression)	1,169-1,559 mL/ha (473-630 mL/ac.)	**CODLING MOTH** Make first application at Biofix + 250 degree days and repeat as needed to maintain control but not more often than every 10 days **OVERWINTERING OBLIQUE-BANDED LEAFROLLERS** Apply at pink stage of tree growth **PEAR PSYLLA (OVERWINTERING ADULTS)** Apply in a minimum of 750 L/ha by ground with airblast equipment in the dormant/delayed period. Apply with a petroleum spray oil as recommended on the spray oil label. **CODLING MOTH** Make application at Biofix + 250 degree days Danitol EC Spray may be mixed with and/or alternated with commonly used insecticides and miticides to comply with local IPM and resistance management programs Limit to 1 application per season
STONE FRUIT		
Codling moth Japanese beetle Leafhopper Oblique-banded leafroller Peach twig borer Spotted-wing drosophila Tarnished plant bug Two-spotted spider mite	779-1,559 mL/ha (315-630 mL/ac.)	Apply by ground in a minimum water volume of 1,000 L/ha (404 L/ac.) with airblast equipment as a full coverage spray Ensure thorough coverage Apply in sufficient water volume for tree size. Use of higher water volume will assure better coverage. Begin applications as common to the production area and the target pest Limit to 1 application per season

Important re-entry information for Danitol

CROP	POST-APPLICATION ACTIVITY	RESTRICTED-ENTRY INTERVAL (REI) AND/OR PRE-HARVEST INTERVAL (PHI)
POME AND STONE FRUIT CROP GROUPS	Thinning	23 days
	Hand harvesting, mechanically assisted harvesting	16 days
	Mechanical harvesting of pome fruit	14 days
	Scouting, hand pruning	7 days
	Mechanical harvesting of stone fruit	3 days
	All other activities	24 hours

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

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
- 36 month shelf life when stored at room temperature
- Not harmful to bees or beneficial insects making it a great tool for spring feeding caterpillars
- Very low REI of 4 hours or until spray is dried

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 with a spray solution of 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.)	
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.

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
- Very low REI of 4 hours or until spray is dried

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
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
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

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.
Refer to the product labels for re-entry periods.

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