FMC An Agricultural Sciences Company

2021

EASTERN CANADA

PRODUCT GUIDE

FMC An Agricultural Sciences Company

BRINGING CHEMISTRY TO THE FARM GATE

2020 has been a year for the history books. Throughout the season, our passion never wavered, and we found different ways to communicate, to educate and to deliver. We strive to provide our best to our customers whether that is in service, products or even delivery timelines, in a regular season or through extraordinary circumstances like 2020.

We continue to be dedicated to researching new chemistries in products, application options and technologies, bringing new solutions that will enable our end users to achieve higher yields more economically, more efficiently and more sustainably.

At FMC, we continue to listen to you. We want to be the leader in innovative products that make a difference in your business. We want you to be successful and we hope that FMC can be a part of your success today and in the future.

Thank you for making us a part of your success in 2020. We wish you a healthy, safe, productive and profitable 2021.

Table of Contents



Herbicide



Herbicide

A flexible tank-mix partner for enhanced burnoff and harvest-aid

- Controls a wide range of troublesome weeds and provides a quicker burndown of hard-to-control species
- Controls many glyphosate-resistant weed biotypes
- Potato harvest aid[1]: provides broadleaf weed control and potato leaf and stem dessication for improved harvestability and tuber quality
- Sucker control in grapes, stone fruit, pome fruit, tree nuts and primocane control in caneberries

Crops: Harvest-aid: Potatoes, dry beans, soybean, barley, millet, oats, sorghum, triticale, wheat and legume vegetables. *Refer to the label pre-harvest interval table for appropriate application timing.*

Pre-plant burnoff: Legume vegetables, fruiting vegetables, cucurbits, cereals, oilseeds and mint

Hooded sprayer application: Root vegetables, bulb vegetables, leafy vegetables, Brassicas, legumes, fruiting vegetables, cucurbits, pome fruit, stone fruit, tree nuts, berries and mint

Herbicide Group: Group 14

Packaging: 8 x 1.2 L jugs per case

Crop Rotation: Legumes, fruiting vegetables, cucurbits, cereals, oilseeds and potatoes can be planted at any time after application. All other crops can be planted after 12 months.

Weeds Controlled and Application Information		
Weeds	**Rate**	**Application Information**
Lamb's-quarters (up to 7.5 cm tall), morning glory (up to 3 leaves), black nightshade (up to 5 cm tall), eastern black nightshade (up to 5 cm tall), pigweed (redroot), velvetleaf, tall waterhemp (up to 5 cm tall)	15 mL/ac	Water volume: 10 gal/ac (100 L/Ha) Labeled tank-mixes[3]: Glyphosate, 2,4-D ester, Nufarm Koril® 235, IPCO® Brotex® 240, 480 and IPCO Brotex® 4AT, Express® SG herbicide Control of weeds up to 10 cm tall, or as specified. Apply with adjuvant: Agral® 90 (0.25% v/v), Ag-surf® (0.25% v/v), or Merge® (1% v/v) See label for instructions regarding use of AIM® EC herbicide in sucker management.
All above plus: Flixweed, lamb's-quarters, mallow (round-leaved), morning glory, nightshade (hairy), pigweed (prostrate, smooth, tumble), purslane (common), Pennsylvania smartweed (seedling), stinkweed, mustard (tansy), waterhemp (common, tall)	24 mL/ac	
All above plus: Carpetweed, cleavers, cocklebur, jimsonweed, kochia, black nightshade, eastern black nightshade, Russian thistle (up to 5 cm tall),shepherd's purse, volunteer canola (all types)	30 mL/ac	
All above plus: Burclover, lettuce (prickly), mallow, corn spurry	47 mL/ac	

[1] For maximum pre-harvest benefits, tank-mixing Aim® EC herbicide + Reglone® Desiccant is recommended.
[2] Refer to label for complete crop listing.
[3] Adjuvant not required for some tank mixes, see label.

AUTHORITY® 480 HERBICIDE

Extended control of tough broadleaf weeds

- Pre-plant/pre-emergent extended control of tough broadleaf weeds in a wide range of crops
- Group 14 for resistance management
- Liquid formulation for ease of use and mixing

Crops: Soybeans, chickpeas, field peas, flax, sunflower, tame mustard, asparagus, faba bean, mint, strawberry, horseradish, cabbage (transplants only), tomato (transplants only), walnuts, grapes, caneberries, bushberries, apples, and spring and durum wheat

Herbicide Group: Group 14

Packaging: 4 x 3.79 L jugs per case

Crop Rotation

Crop	Rotation Interval
Broccoli, cabbage, cauliflower, chickpea, faba bean, field pea, flax, horseradish, potato, soybean, sunflower, tomato (transplants)	Any time
Winter wheat	4 months
Alfalfa, barley, canola, field corn, spring and durum wheat (high rate)	12 months
Sweet and pop corn, lentils, sorghum	24 months
Tame mustard (as per label): low rate only; spring and durum wheat (low rate only)	Any time

Weeds Controlled and Application Information			
Weeds	**Rate**	**Application Timing**	**Application Information**
Kochia	43 ac/jug (89 mL/ac)	Apply pre-plant or post-seed (up to 3 days after seeding).	Early application (pre-plant) increases activation potential via spring showers. Post-seed application should be considered in higher disturbance situations. A minimum of 10 gal/ac (100 L/Ha) provides best uniform soil coverage with medium to coarse droplet sizes. To supplement broadleaf control, tank-mix with metribuzin or imazethapyr or Express® SG herbicide. To control grass weeds, tank-mix with Focus® herbicide, Boundary® LQD, or Conquest® LQ.
Cleavers[1] Common purslane Common waterhemp Eastern black nightshade Kochia Lamb's-quarters Large crabgrass Powell pigweed Redroot pigweed Smooth crabgrass Wild buckwheat Yellow woodsorrel	32 ac/jug (118 mL/ac)		

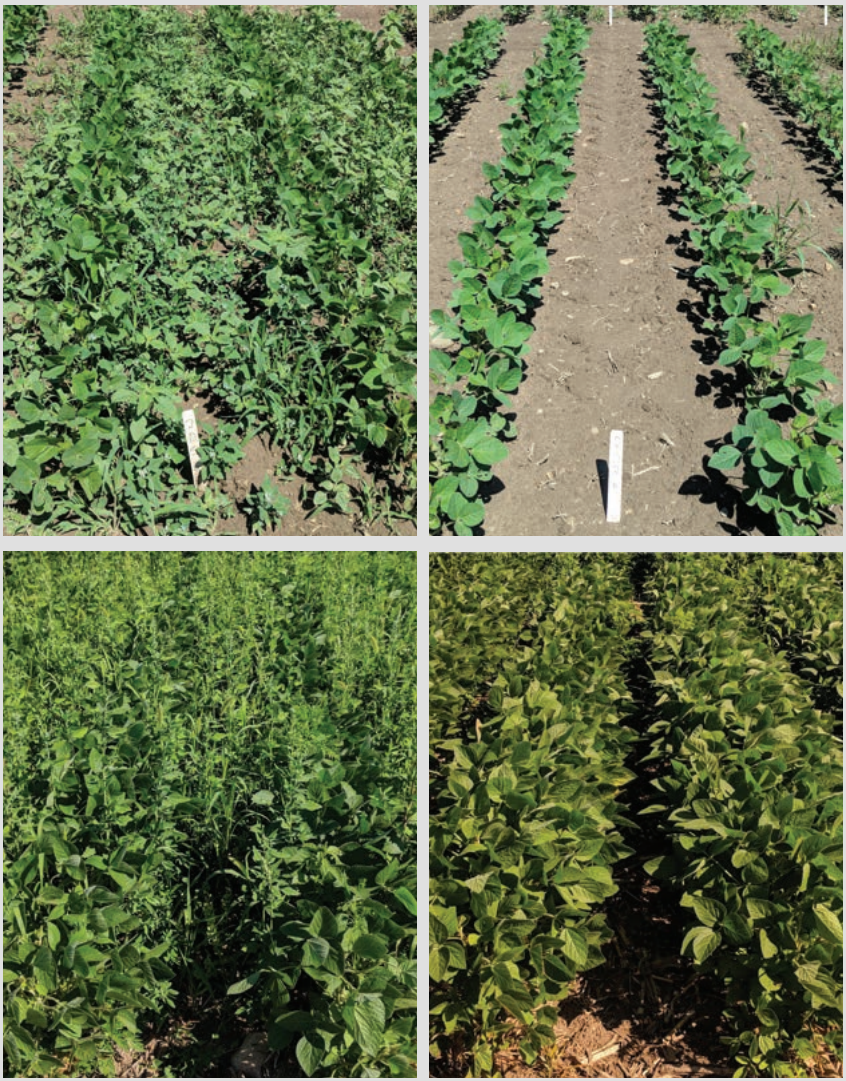
[1]Suppression

AUTHORITY® 480 HERBICIDE

Excellent Pre-Emergent Weed Control

38 Days After Application

61 Days After Application



Untreated Check

Authority® 480 herbicide 118 mL/ac (292 mL/Ha)
+ Boundary® LQD 1 L/ac (2.5 L/Ha)

Your next line of defense against grassy weeds, broadleaf weeds and resistance

- Pre-plant/pre-emergent grassy and broadleaf extended weed control for soybeans, field peas and chickpeas
- Consistent performance on tough to control weeds
- Multiple rate options: lower rate in herbicide-tolerant soybeans for critical early season weed control or higher rate for longer, extended weed control
- Multiple modes of action for resistance management

Crops: Soybeans, field peas and chickpeas

Herbicide Groups: Groups 14 & 15

Packaging: 2 x 8 L jugs per case

Crop Rotation

Crop	Rotation Interval
Soybeans, chickpeas, field peas	Any time
Winter wheat	4 months
Barley, canola, field corn, mustard, oats, spring and durum wheat, sunflowers	12 months
Lentils	24 months
Sugar beet	36 months

Weeds Controlled and Application Information

Weeds	Rate	Application Timing	Application Information
Grass weeds Barnyard grass Brome (downy, Japanese) Crabgrass (large, smooth) Foxtail (green, yellow, giant) Witchgrass Wild oats[1] **Broadleaf weeds** Cleavers Common groundsel Common purslane Common ragweed[1] Common waterhemp Cow cockle Eastern black nightshade Kochia Lamb's-quarters Pigweed (redroot, Powell) Stinkweed Wild buckwheat Wild mustard[1] Yellow woodsorrel	**Setup Treatment** (early season control only) 50 ac/jug (162 mL/ac) **Extended Control** 40 ac/jug (202 mL/ac) (medium texture, O.M. 1- 3%) 33 ac/jug (243 mL/ac) (medium-fine/ fine texture, O.M. 3 - 6%)	Apply pre-plant or post-seed (up to 3 days after seeding).	Early application (pre-plant) increases activation potential via spring showers. Post-seed application should be considered in higher disturbance situations. A minimum of 10 gal/ac (100 L/Ha) provides best uniform soil coverage with medium to coarse droplet sizes. Authority® Supreme herbicide can be applied on its own or mixed with one or more herbicide products, provided that the tank-mix product labels do not prohibit such mixing. Authority® Supreme herbicide can be tank-mixed with labelled rates of glyphosate (that are registered for the same uses). Express® SG herbicide + Glyphosate tank-mix: Pre-plant only (soybean). Injury to pulse crops may occur on coarse-textured soils, low in organic matter (less than 3%), or in fields with variable soils, gravely areas, sandy areas or eroded knolls. Avoid planting pulse crops in soils containing more than 50% sand.

[1]Suppression

AUTHORITY® SUPREME HERBICIDE

Broadleaf and Grassy Weed Control

Untreated Check **Authority® Supreme herbicide (202 mL/ac)**

51 Days After Application

BARRICADE® M HERBICIDE

POWERED BY SOLUMAX® SOLUBLE GRANULES CLEARLY DIFFERENT

Systemically controls your toughest broadleaf weeds with multiple modes of action

- Controls a wide range of troublesome weeds, including chickweed, dandelion, lamb's-quarters, perennial sow thistle and pigweeds, along with suppression of Canada thistle, and more
- Gentle on the crop and has outstanding re-cropping flexibility the following year
- Powered by Solumax® soluble granules for effective and consistent weed control, as well as easier, more consistent sprayer cleanout to reduce risk to subsequently sprayed crops

Crops: Wheat (winter, spring, durum), spring barley, oats

Herbicide Groups: Groups 2 & 4

Packaging: Case - 486 g + 3.4 L + 7.6 L (case treats 40 acres)

Crop Rotation: Alfalfa, barley, canola, corn, dry beans, faba beans, flax, forage grasses, lentils, mustard, oats, peas, potatoes, rye, soybeans, sugar beets, sunflowers and wheat can be seeded the following year.

Weeds Controlled and Application Information

Crop	Weeds	Rate	Application Timing
Wheat (winter, spring, durum), spring barley, oats.	Canada thistle[1] Cleavers (1 to 9 whorls) Common chickweed (1-6 leaf) Cow cockle Dandelion (spring and fall rosettes up to 15 cm) Flixweed Hemp-nettle (1-8 leaf) Kochia (<8 leaf) Lamb's-quarters Narrow-leaved hawk's-beard Night-flowering catchfly Perennial sow thistle Redroot pigweed Round-leaved mallow (1-5 leaf) Russian thistle Scentless chamomile Shepherd's purse (up to 20 cm) Smartweed (green, lady's thumb) Stinkweed Stork's-bill (1-6 leaf) Tufted vetch (up to 15 cm) White cockle Wild buckwheat Wild mustard Volunteer canola (2-4 leaf) Volunteer flax (up to 12 cm)	40 ac/jug Add a registered non-ionic surfactant (NIS) at 2 L per 1000 L of spray solution (0.2% v/v). When tank-mixing with a grass herbicide, use the surfactant provided with that product. Do not use additional surfactant unless otherwise indicated on the label.	Spring wheat & barley and oats - 3 leaf to initiation of stem elongation. Winter wheat - 3 tiller to just before flag leaf. Minimum water volume of 5 gal/ac (50 L/Ha) recommended.

[1]Suppression

Barricade® M herbicide on Dandelion

16 DAA

47 DAA

Barricade® M herbicide on Perennial Sow Thistle

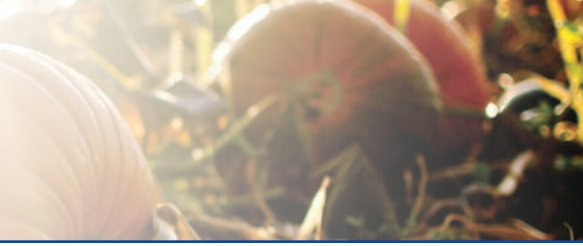
9 DAA

47 DAA

Barricade® M herbicide on Canada Thistle

16 DAA

47 DAA



COMMAND® 360 ME HERBICIDE

Broadleaf and grassy weed control in a variety of horticultural crops

- Microencapsulated (ME) formulation
- Controls broadleaf and grassy weeds in processing pumpkins, squash and cucurbits
- Excellent tank-mix partner
- Effective in conventional tillage, reduced tillage and no-till practices

Crops: Soybeans, field cucumbers, melons, squash, peppers, processing pumpkins, cilantro, field sweet potatoes, canola and asparagus

Herbicide Group: Group 13

Packaging: 2 x 9.46 L jugs per case

Crop Rotation

Rate of Command® 360 ME herbicide	Crop	Rotation Interval
101-134 mL/ac	Soybeans, spring canola	Any time
	Winter wheat	4 months
	Beans (white, kidney, snap), corn (field, sweet), peas, peppers (transplant, plugs), broccoli (transplant, plugs), cucumbers, melons, pumpkins, squash, potatoes, spring wheat, durum wheat, spring barley, oats, lentils	Following Spring
316-951 mL/ac	Soybeans	Any time
	Beans (white, kidney, snap), corn (field, sweet), peas, peppers (transplant, plugs), broccoli (transplant, plugs), cucumbers, melons, pumpkins, squash, potatoes, spring canola, spring wheat	Following Spring
	All other crops	16 months

Weeds Controlled and Application Information				
Crop	**Weeds**	**Rate**	**Application Timing**	**Application Information**
Soybean, peppers, asparagus	Velvetleaf Lamb's-quarters Lady's thumb (smartweed) Eastern black nightshade Redroot pigweed[2] Common ragweed[2] Barnyard grass Green foxtail Yellow foxtail[1]	**Based on soil type** Light: 627 mL/ac Medium: 790 mL/ac Heavy: 951 mL/ac	Soybean - apply between seeding and soybean emergence Peppers - apply before transplanting and prior to weed emergence Asparagus - apply prior to spear emergence or after a clean harvest	Minimum water volume of 10 gal/ac (100 L/Ha) is recommended.

Weeds Controlled and Application Information				
Crop	**Weeds**	**Rate**	**Application Timing**	**Application Information**
Cilantro, melons	Velvetleaf[2] Lamb's-quarters[2] Barnyardgrass[2]	316 mL/ac	Apply as a single, soil-applied, pre-emergent treatment after seeding and prior to weed and crop emergence.	Apply in 10-40 gal/ac (100-375 L/Ha) of spray water
Cucumbers, squash	Velvetleaf[2] Lamb's-quarters[2] Barnyardgrass[2]	316-474 mL/ac Use lower rate on light (coarse) soils and higher rate on heavy (fine) soils	Apply as a single, soil-applied, pre-emergent treatment after seeding and prior to crop and weed emergence.	Apply in 10-40 gal/ac (100-375 L/Ha) of spray water
Sweet potato	Velvetleaf Lamb's-quarters Lady's thumb (smartweed) Eastern black nightshade Redroot pigweed[2] Common ragweed[2] Barnyardgrass Green foxtail Yellow foxtail[2]	630 mL/ac[3]	Apply as a single, soil-applied application after transplanting and prior to weed emergence.	Apply in a minimum of 10 gal/ac (100 L/Ha) spray water
Canola	Cleavers	101-135 mL/ac (Suppression only at 101 mL/ac rate)	Apply as a single, soil-applied application prior to seeding canola and prior to weed emergence.	Apply in a minimum of 10 gal/ac (100 L/Ha) spray water

[1]Controlled only at the 950 mL/ac rate of Command® 360 ME herbicide when not tank-mixed.
[2]Suppression
[3]Coarse (light) soils: sandy-loam

EXPRESS® SG HERBICIDE

POWERED BY SOLUMAX® SOLUABLE GRANULES

Burn weeds to the roots with Express® SG herbicide

- Supports a weed-free start to the growing season
- Systemic activity on the weeds for complete control from shoots to roots
- Fall or spring application keeps your options open with flexible recropping

Timing: Pre-seed burnoff, chemfallow and post-harvest applications.

Herbicide Group: Group 2

Packaging: 8 x 243 g jugs per case (each jug treats 40 acres)

Registered Tank-mixes:

Express® SG herbicide must be tank-mixed with glyphosate for pre-seed, chemfallow and post-harvest applications.

Aim® EC herbicide + glyphosate and Authority® 480 herbicide + glyphosate. Consult the tank-mix partner label for specific application use and restrictions. (Always follow the most restrictive label)

Crops and Rotation:

Express® SG herbicide timing	Crop	Rotation Interval
Spring Pre-seed Application	Wheat (spring, winter, durum), barley, oats, pulse crops* (dry beans, soybean, faba beans, field peas, lupin, lentil, chickpea), alfalfa*, clover (red & alsike)*, bromegrass (smooth & meadow)*, timothy*, creeping red fescue*, canary seed	24 hours
	Canola, flax	2 months
	Any other crop	Following year
Fall / Post-harvest Application	Winter wheat	24 hours
	Any crop listed above for 24 hour spring application PLUS: Field corn, canola, flax	Following spring

*Note: Injury to pulse crops may occur on coarse-textured soils, low in organic matter (less than 3%) or in fields with variable soils, gravely areas, sandy areas or eroded knolls. Avoid planting pulse crops in soils containing more than 50% sand.

Crop	Weeds	Rate	Application Timing	Application Information
Wheat (spring, durum, winter), spring barley, oats, canary seed, and pulse crops (including dry bean, soybean, faba bean, field pea, lupin, chickpea and lentil), red clover, alsike clover, alfalfa, bromegrass (smooth and meadow), timothy, creeping red fescue	Canada fleabane** (8 cm) Canada thistle[1] (rosette) Common chickweed (up to 8 leaf) Common ragweed Cow cockle (3-leaf) Dandelion Downy brome Foxtail (giant, green) Flixweed Hemp-nettle Kochia Lady's-thumb Lamb's-quarters Narrow-leaved hawk's beard (8 cm) Persian darnel Redroot pigweed Russian thistle Scentless chamomile[1] (8 cm) Stinkweed Volunteer barley, wheat Volunteer canola Volunteer flax Wild buckwheat (3-leaf) White cockle[1] (rosette) Wild mustard Wild oat	6 g/ac + 0.5 L/ac REL* glyphosate	Pre-seed, chemfallow and post-harvest	Minimum water volume of 5 US gal/ac (50 L/ha) is recommended
Tribenuron-tolerant sunflowers	Lamb's-quarters Wild buckwheat[1]	6 g/ac + Hasten® NT adjuvant at 0.5% v/v	In-crop: 2-8 leaf stage of sunflowers	Minimum water volume of 5 US gal/ac (50 L/ha) is recommended Can be tank-mixed with Assure® II plus Merge (0.5-1.0 % v/v) or Sure-Mix™ (0.5% v/v).
Pasture and rangeland	Narrow-leaved hawk's beard Tall buttercup	6 g/ac +NIS at 0.2% v/v	In-crop	Minimum water volume of 5 US gal/ac (50 L/ha) is recommended
	Above weeds plus: Common tansy Dandelion White cockle	12 g/ac + NIS at 0.2% v/v		

[1] Suppression
*REL - Original 365 g/L formulation. Can tank-mix with glyphosate of choice
**Will not control Gr. 2 and Gr. 9 resistant Canada Fleabane
***Grassy weed control from glyphosate portion of tank-mix. All weeds sizing up to 15 cm unless otherwise stated

Express® SG Herbicide on Dandelions
Fall 2018 Application – Spring 2019 Photos

Untreated

Express® SG herbicide (6 g/ac) + Glyphosate (1 REL/ac)

Location: Bright, ON

FOCUS®
HERBICIDE

Superior pre-emergent, extended control of grassy weeds, plus effective broadleaf activity

- This pre-formulated product with two active ingredients provides long-lasting, extended control of grassy weeds, with good activity on several broadleaf weeds
- Ideal pre-plant/pre-emergent solution to fight weed resistance and maximize yield
- Tank-mixes easily for broader spectrum control

Crops: Field corn, soybeans, wheat (spring and winter, excluding durum) and lentils

Herbicide Groups: Groups 14 & 15

Packaging: 4 x 4.5 L jugs per case

Crop Rotation

Crop	Rotation Interval
Field corn, soybeans, wheat (winter and spring, excluding durum), and lentils	Any time
Chickpeas, field peas, flax, safflower, sunflower, barley, canola, mustard, oats and durum wheat	12 months
Sugar beets	24 months

Weeds Controlled and Application Information

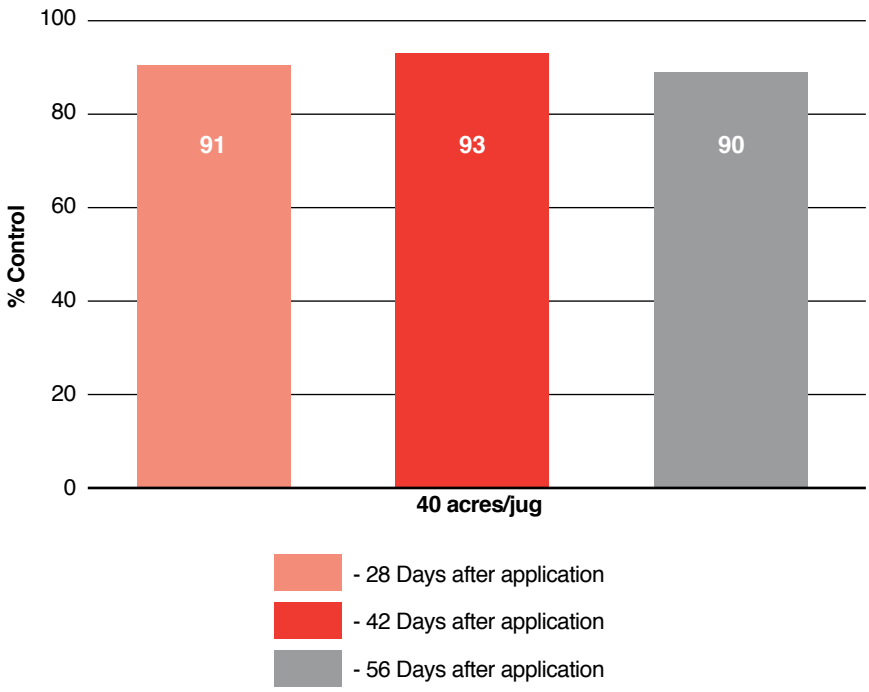
Crop	Weeds	Rate	Application Timing	Application Information
Field corn, soybeans, wheat (spring and winter), lentils.	**Annual grasses** Wild oats[1] Foxtail (green, yellow, giant[1]) Foxtail barley[1] Barnyard grass Downy brome Japanese brome Italian ryegrass Large crabgrass **Annual broadleafs** Pigweed (green, redroot) Cleavers Common waterhemp Stinkweed[1] Velvet leaf Wormseed mustard Kochia[1] Lamb's-quarters[1] Wild buckwheat[1] Wild mustard[1]	**Setup Treatment** (early season control only) 50 ac/jug (91 mL/ac) **Residual Treatments** 40 ac/jug (113 mL/ac) (coarse/medium texture, O.M. 1- 3%) 33 ac/jug (136 mL/ac) (medium-fine/fine texture, O.M. >3 - 7%)	Apply pre-plant or post-seed (up to 3 days after seeding).	Only apply pre-seed if using low disturbance seeding equipment that does not move soil laterally. Minimum water volume of 10 gal/ac (100 L/Ha) Depending on the crop, Focus® herbicide is compatible with atrazine, Authority® 480 herbicide, glyphosate, metribuzin and imazethapyr. Focus® herbicide may be applied with glyphosate in the fall to control emerged winter annuals such as stinkweed and mustard. A fall application of Focus® herbicide will also provide early season control of wild oats the following spring.

[1]Suppression

Grassy Weed Control
35 Days After Application

Untreated Check | Focus® herbicide (136 mL/ac) | Untreated Check | Focus® herbicide (136 mL/ac)

2011-2014 Green Foxtail Control In Ontario



MUSTER® TOSS-N-GO® HERBICIDE

- Proven broadleaf weed control in canola, sunflower and Laurentian rutabaga
- Control of wild mustard

Crops: Sunflower, canola, Laurentian rutabaga

Chemical Group: Group 2

Timing:

Canola (spring seeded): 2 leaf stage to beginning of bolting

Sunflower: 2-8 leaf stage

Weeds: Apply early when weeds are small and actively growing

Application Information:

Rates: See charts below. Make only one application per growing season.

Surfactant: Add a registered non-ionic surfactant (NIS) at 2 L per 1000 L of spray solution (0.2% v/v).

Water Volume: 10 US gal/ac (100 L/ha)

Region	Rates	Weed Controlled	Recropping*
Canola (Spring Seeded)			
Southern Ontario	6 g/ac	Wild mustard (cotyledon to 6 leaf)	Year of treatment: winter wheat 10 months: soybeans, spring wheat, barley, oats
Quebec and the Maritimes			Year of treatment: winter wheat 10 months: spring wheat, barley, oats
Okanagan & Creston Valley areas of British Columbia	8 g/ac	Flixweed (spring seedlings), green smartweed, hempnettle, wild mustard, stinkweed[1]	10 months: spring wheat, barley, oats
	12 g/ac	Flixweed (spring seedlings), green smartweed, hempnettle, wild mustard, stinkweed, and redroot pigweed[1]	

[1] Suppression
*Refer to the label for additional recropping information
Do not harvest canola within 60 days of treatment.

Sunflower			
Canada	8 g/ac	Flixweed (spring seedlings), green smartweed, hempnettle, wild mustard, stinkweed[1]	10 months: spring wheat, barley, oats
	12 g/ac	Flixweed (spring seedlings), green smartweed, hempnettle, wild mustard, stinkweed, and redroot pigweed[1]	

[1] Suppression
Do not harvest sunflower within 60 days of treatment.

Laurentian Rutabaga			
Canada	6 g/ac	Wild mustard (cotyledon to 6 leaf)	Year of treatment: Winter wheat 10 months: soybeans, spring wheat, barley, oats

Do not harvest Laurentian rutabaga within 45 days of treatment.

Refer to the Muster® Toss-N-Go® herbicide label for complete use instructions.

PINNACLE®
SG TOSS-N-GO®
HERBICIDE

POWERED BY SOLUMAX®

Controls select broadleaf weeds in soybeans and field tomatoes

- Pinnacle® SG Toss-N-Go® herbicide with Solumax® soluble granules is a next-generation sulfonylurea herbicide for soybeans and field tomatoes
- Recognized leader for post-emergent control of lamb's-quarters
- Powered by Solumax® soluble granules for effective and consistent weed control, and easier, more consistent sprayer cleanout that reduces risk to subsequently sprayed crops

Crops: Soybeans, field tomatoes

Herbicide Group: Group 2

Packaging: 96 g pouch containing 8 pre-measured water soluble bags (12 g per bag). Each pouch treats 20 acres at the high rate (4.8 g/ac) or 29 acres at the low rate (3.3 g/ac).

Crop Rotation: Any crop the following year

Weeds Controlled and Application Information

Crop	Weeds	Rate	Application Timing	Application Information
Soybeans, field tomatoes	Lady's-thumb Redroot pigweed Wild mustard	3.3 g/ac + NIS	**Soybeans:** Apply post-emergent from the first fully expanded trifoliate leaf to before the initiation of flowering. Target weeds when they are small. **Tomatoes:** Apply post-emergent 3 weeks after transplanting in the field. Weeds should be less than 10 cm (4 in.) tall or across. Weeds that emerge after treatment will not be controlled. Because varieties differ in their tolerance to herbicides, limit the first use of Pinnacle® SG Toss-N-Go® herbicide to a small area of each variety prior to adoption as a field practice.	**Soybeans:** Add a registered non-ionic surfactant (NIS) such as Agral® 90 or Ag-Surf® at 1 L per 1000 L of spray solution (0.1% v/v). For more consistent control of velvetleaf, add 28% UAN at 4 L per 100 L of spray solution (4% v/v). **Tomatoes:** Add a registered non-ionic surfactant (Agral® 90 only) at 2.0 L per 1,000 L of spray solution (0.2% v/v). For a wider spectrum of weeds, apply a tank-mix of Prism® herbicide and Pinnacle® SG Toss-N-Go® herbicide 3 weeks after processing tomatoes are transplanted.
	Lady's-thumb Lamb's-quarters Redroot pigweed Velvetleaf Wild mustard	4.8 g/ac + NIS		

REFINE M
HERBICIDE

POWERED BY SOLUMAX®

Proven control of annual and perennial broadleaf weeds

- Broad-spectrum control of broadleaf weeds, including problem weeds such as dandelion, lamb's-quarters, chickweed and redroot pigweed. Suppression of perennial sow thistle and Canada thistle
- Two modes of action for effective resistance management
- Powered by Solumax® soluble granules for effective and consistent weed control, and easier, more consistent sprayer cleanout that reduces risk to subsequently sprayed crops

Crops: Barley, oats, spring wheat, winter wheat, durum wheat

Herbicide Groups: Groups 2 & 4

Packaging: Case - 486 g + 7.6 L (case treats 40 acres)

Crop Rotation: Any crop the following year

Weeds Controlled and Application Information				
Crop	**Weeds**	**Rate**	**Application Timing**	**Application Information**
Barley, oats, durum wheat, spring wheat, winter wheat, (not underseeded to legumes or grasses)	Ball mustard Canada thistle[1] Chickweed (1-6 leaf) Cleavers[1] (1-3 whorls) Common groundsel Corn spurry Cow cockle Dandelion (spring and fall rosettes; < 15 cm diameter) Flixweed Green smartweed Hemp-nettle Kochia (excluding Gr. 2 resistant biotypes) Lady's-thumb Lamb's-quarters Narrow-leaved hawk's-beard Redroot pigweed Round-leaved mallow[1] Russian thistle, Scentless chamomile[1] Shepherd's purse Sow thistle[1] Stinkweed Stork's-bill[1] (2-6 leaf) Tartary buckwheat Toadflax[1] Volunteer canola (all types) Volunteer sunflower (excluding ExpressSun® sunflowers) Wild buckwheat (up to the 5-leaf stage) Wild mustard	40 ac/jug (12 g/ac Refine® SG herbicide + 190 mL/ac MCPA Ester 600) Add a registered non-ionic surfactant (NIS), such as Agral® 90 or Ag-Surf® at 2 L/1000 L of spray solution (0.2% v/v).	Can be safely applied from the 3-leaf to just before the flag leaf growth stage of the crop.	**Canada thistle:** Apply when the majority of thistles have emerged and are actively growing. Later emerging thistles will not be controlled. **Dandelion:** Optimal control is achieved when dandelions are small and actively growing. Minimum water volume of 5 gal/ac (50 L/Ha) is recommended.

[1]Suppression

REFINE® SG HERBICIDE

POWERED BY SOLUMAX® SOLUBLE GRANULES

Reliable control of broadleaf weeds

- One of the most reliable broadleaf products on the market, with activity on weeds like lamb's-quarters, chickweed and redroot pigweed
- No recropping restrictions the year after treatment, allowing flexibility in recropping
- Powered by Solumax® soluble granules for effective and consistent weed control, and easier, more consistent sprayer cleanout that reduces risk to subsequently sprayed crops
- Wide window of application and excellent crop safety

Crops: Barley, oats, spring wheat, winter wheat, durum wheat

Herbicide Group: Group 2

Packaging: 486 g jug (treats 40 acres)

Crop Rotation: Two months: alfalfa, canola, flax, lentils
Following Year: no recropping restrictions

Weeds Controlled and Application Information				
Crop	**Weeds**	**Rate**	**Application Timing**	**Application Information**
Barley, oats, durum wheat, spring wheat, winter wheat, (not underseeded to legumes or grasses)	Ball mustard Canada thistle[1] Chickweed (1-6 leaf) Cleavers[1] (1-3 whorls) Common groundsel Corn spurry Cow cockle Flixweed Green smartweed Hemp-nettle Kochia (excluding Gr. 2 resistant biotypes) Lady's thumb Lamb's-quarters Narrow-leaved hawk's-beard Redroot pigweed Round-leaved mallow[1] Russian thistle Scentless chamomile[1] Shepherd's purse Sow thistle[1] Stinkweed Stork's-bill[1] (2-6 leaf) Tartary buckwheat Toadflax[1] (<15 cm) Volunteer canola (excluding Clearfield® canola) Volunteer sunflower (excluding ExpressSun® sunflowers) Wild buckwheat (up to 5-leaf) Wild mustard	40 ac/jug (12 g/ac) Add a registered non-ionic surfactant (NIS), such as Agral® 90 or Ag-Surf®, at 2 L/1000 L of spray solution (0.2% v/v).	Can be safely applied from the 2-leaf to the full flag leaf stage of the crop.	For best results, apply to young, actively growing weeds that are less than 10 cm in height or diameter unless otherwise specified. Thorough coverage of target weeds is essential. Tank-mix Refine® SG herbicide with: • MCPA LV500 – Amine or Ester, at 0.33 L/ac to 0.45 L/ac • 2,4-D LV500 – Amine or Ester, at 0.34 L/ac to 0.44 L/ac **Common Ragweed:** Use a minimum of 0.33 L/ac MCPA LV500 or a minimum of 0.34 L/ac 2,4-D Amine 500 for control. **Wild buckwheat:** Under environmental stress, such as dry weather, control may be reduced. Large plants may regrow after treatment.

[1]Suppression

SPARTAN®
HERBICIDE

Control of hard-to-kill weeds in blueberries

Crop: Lowbush blueberries

Herbicide Group: Group 2

Packaging: 8 x 160 g pouches per case

Weeds Controlled and Application Information				
Crop	**Weeds**	**Rate**	**Application Timing**	**Application Information**
Lowbush blueberries	Bunchberry	16 g/ac	Apply in the spring of the sprout year, when the majority of the emerged bunchberry plant leaves have unfolded to form a 45° angle but no later than when the first white blossoms are visible on the most advanced plants OR, a fall application can be made 1 to 4 weeks after the completion of harvest.	Must be applied with a registered non-ionic surfactant (NIS) such as Agral® 90 at 2 L per 1000 L of spray solution (0.2% v/v). 16 -26 gal/ac (150-250 L/Ha) water volume. Make only one application per crop cycle (2 or 3 years) in the sprout year.
	Bracken fern Speckled alder Wild rose Yellow loosestrife	Mix 0.25 grams of Spartan® herbicide per litre of water and apply as a spot treatment.	Spot treatment application should be made in mid-summer of the prune or vegetative year of the crop to fully expanded foliage of bracken fern and yellow loosestrife. Wild rose and speckled alder may also be controlled by early fall applications. Stunting and reduction of fruit buds may occur if the crop is sprayed directly.	Must be applied with a registered non-ionic surfactant (NIS) such as Agral® 90 at 2 L per 1000 L of spray solution (0.2% v/v). Apply enough spray solution to thoroughly wet weed foliage.

UPBEET®
HERBICIDE

Broadleaf weed control for beets

Crop: Sugar beets, garden beets, root chickory

Herbicide Group: Group 2

Packaging: 10 x 117 g jugs per case

Crop Rotation:

Crop	Rotation Interval
Sugar beets	30 days in case of crop failure
Winter wheat, spring wheat, durum wheat, barley	These crops may be planted the following year after UpBeet® herbicide application

Weeds Controlled and Application Information				
Crop	**Weeds**	**Rate**	**Application Timing**	**Application Information**
Sugar beet	Velvetleaf	14-28 g/ac Add a registered non-ionic surfactant (NIS) at 2.5 L per 1000 L of spray solution. (0.25% v/v)	Apply post-emergent and before the initiation of flowering. Target weeds when they are small.	Maximum seasonal use rates: Sugar beets - 40.5 g/ac Garden beets - 43.7 g/ac Root chickory - 28.3 g/ac Apply in 10-40 gal/ac (100-375 L/Ha) of spray water For a wider spectrum of weeds, apply a tank-mix of UpBeet® herbicide + Betamix®. No additional adjuvant is required with this mix.
	Tankmix of UpBeet® herbicide + Betamix® Green foxtail[1] Kochia[2] Lamb's-quarters Redroot pigweed Velvetleaf	14-28 g/ac UpBeet® herbicide + 0.7-1.4 L/ac Betamix®	Make 2 applications 5 - 10 days apart or as weeds germinate.	

[1]Suppression
[2]Rosette stage, <2.5 cm diameter and when preceded by a pre-plant or pre-emergence treatment

NOTES

NOTES



Insecticide



Insecticide

ALTACOR®
INSECTICIDE

Control insect pests in horticultural crops through a novel mode of action

- Active ingredient has a unique mode of action with no cross resistance to other chemistries
- Consistent residual activity as an ovicide, ovi-larvicide, and larvacide through to adult stages
- Very low use rates
- Minimal impact on beneficials and low applicaton restrictions
- Resistance Management - DO NOT make a foliar application of Altacor® insecticide for a minimum of 60 days following an in-furrow or soil application or planting of seed or seed pieces treated with any Group 28 insecticide

Crops: Caneberries, cranberries, bushberries, grapes, pome fruit, stone fruit, tree nuts

Insecticide Group: Group 28

Packaging: 8 x 454 g jugs per case (includes a convenient measuring guide)

Re-entry Period: 12 hours

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information** Apply in minimum 50 gal/ac (450 L/Ha) spray volume
Pome Fruits: (Group 11) Apple, crabapple, pear, etc.	Spotted tentiform leafminer Western tentiform leafminer	59-87 g/ac	5	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.
	Oriental fruit moth	59-87 g/ac		Apply at 1st egg hatch of the targeted generation. Monitor populations using pheromone traps and reapply 10 – 14 days later if required.
	European apple sawfly	59-87 g/ac		Apply at early petal fall, and repeat if needed after petal fall.
	Green fruitworm	59-87 g/ac		Apply at the pink stage. Repeat if necessary at petal fall.
	Codling moth	59-87 g/ac		For control of 1st generation apply before first egg hatch (80 – 110 degree days Celsius after biofix). Monitor populations and reapply 10 – 14 days later if required. For 2nd generation timing of the first application is based on first egg hatch after establishing a new biofix. Monitor populations and reapply 10 – 14 days later if required.
	Three-lined leafroller Eyespotted bud moth Redbanded leafroller Tufted apple bud moth Variegated leafroller	59-115 g/ac		Apply when the larvae are active in the pink to petal fall period.

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information** Apply in minimum 50 gal/ac (450 L/Ha) spray volume
Pome Fruits (continued)	Obliquebanded leafroller	59-115 g/ac	5	For over-wintering generations, apply when over-wintering larvae become active, from pink stage through petal fall. For summer generations, monitor adult moth flight, and apply at first egg hatch (170 – 240 degree days Celsius) after the first sustained moth catch. A repeat application approximately 10 days after the initial application may be needed to control the extended emergence of the small larvae.
	Apple maggot[1] White apple leafhopper[1]	87-115 g/ac		For apple maggot, begin applications when flies are first captured, and repeat 10 – 14 days later. A third application may be made in 10 – 14 days if flies are still being captured.
	Dogwood borer	87-115 g/ac		Apply specified amount as a spray to wet application to the bottom 60 cm of tree trunk, at the first sign of dogwood borer feeding.
	Japanese beetle[1]	115 g/ac		Apply when feeding is first observed and repeat in 10 – 14 days if required.
Grapes	Grape berry moth	59-115 g/ac	14	Begin applications after moth flight begins and prior to egg hatch. Monitor populations and reapply 7 – 10 days later if required.
	Climbing cutworm	87-115 g/ac		Monitor bud development and the presence of cutworm damage. Begin applications when treatment thresholds have been reached. Monitor populations and reapply 7 – 10 days later if required.
	Japanese beetle[1]	115 g/ac		Apply when feeding is first observed and repeat in 10 – 14 days if required.

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information** Apply in minimum 50 gal/ac (450 L/Ha) spray volume
Stone Fruits: (Group 12-09) Apricot, cherry, plum, nectarine, peach, prune, chokecherry, etc.	Oriental fruit moth	87-115 g/ac	1	Apply at 1st egg hatch of the targeted generation. Monitor populations using pheromone traps and reapply 7 – 10 days later if required.
	Peach twig borer	87-115 g/ac		For spring/overwintering or first summer generation larvae: Apply within 7 days of first trap catch of adult male moths. For second summer generation larvae: continue monitoring for second brood moths until at least mid-August. If required, apply a second spray within 7 days of first trap catch of adult male moths.
	Cherry fruit fly[1]	87-115 g/ac		Apply when flies are first detected in the orchard, and repeat in 10 – 14 days.
	Obliquebanded leafroller	59-115 g/ac		For control of over-wintering generations, monitor larval population in the spring, and apply when over-wintering larvae become active, from pink stage through petal fall. For summer generations, monitor adult moth flight, and apply at first egg hatch (170 – 240 degree days Celsius) after the first sustained moth catch. A repeat application approximately 10 days after the initial application may be needed.
	Three-lined leafroller Redbanded leafroller	59-115 g/ac		Apply in the pink to petal fall period.
	Japanese beetle[1]	115 g/ac		Apply when feeding is first observed and repeat in 10 – 14 days if required.

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information** Apply in minimum 50 gal/ac (450 L/Ha) spray volume
Tree Nuts: (Group 14-11) Hazelnuts, etc.	Codling moth	59-87 g/ac	10	For control of 1st generation apply before first egg hatch (80-110 degree days Celsius after biofix). Monitor populations and reapply 10 – 14 days later if required. For 2nd generation, timing of the first application is based on first egg hatch after establishing a new biofix. Monitor populations and reapply 10 – 14 days later if required. Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.
	Obliquebanded leafroller	59-115 g/ac		For control of over-wintering generations, monitor larval population in the spring, and apply when over-wintering larvae become active, from pink stage through petal fall. For summer generations, monitor adult moth flight, and apply at first egg hatch (170 – 240 degree days Celsius) after the first sustained moth catch. A repeat application approximately 10 days after the initial application may be needed. Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.
	Three-lined leafroller	59-115 g/ac		
Low growing berries (Subgroup 13-07G)	Obliquebanded leafroller Three-lined leafroller Climbing cutworm	87-115 g/ac	1	Begin applications when treatment thresholds have been reached. Monitor populations and reapply a minimum of 7 days later if required. Thorough coverage is important to obtain optimum control.
	Japanese beetle[1]	87-115 g/ac		Apply when feeding is first observed and repeat in 10-14 days if required.
Caneberries (Subgroup 13-07A)	Raspberry cane borer Raspberry crown borer	87-115 g/ac	3	Apply to first-instar when insects are actively feeding in the cambium, before they tunnel into the root, crown or canes.
Bushberries (Subgroup 13-07B)	Cranberry fruitworm Cherry fruitworm Obliquebanded leafroller Three-lined leafroller Lesser appleworm Redstriped fireworm Blueberry spanworm Japanese beetle[1]	87-115 g/ac	1	Begin applications when treatment thresholds have been reached. Thorough coverage Is essential for optimal control. Monitor populations and reapply a minimum of 7 days later if required. A single application may not control cherry fruitworm or cranberry fruitworm. Either a second application of Altacor® insecticide, or a subsequent application of a different pest control product registered for this use may be required.

ALTACOR®
INSECTICIDE

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information** Apply in minimum 50 gal/ac (450 L/Ha) spray volume
Cranberries	Cranberry fruitworm Sparganothis fruitworm Blackheaded fireworm	59-115 g/ac	1	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control.
	Sparganothis fruitworm Blackheaded fireworm	115 g/ac		**Chemigation:** - Apply in a minimum spray volume of 3000 L/ha - Do not make more than 2 applications per season - Do not exceed a total of 570 grams of Altacor® per ha per season - The minimum interval between applications is 7 days

[1]Suppression

BELEAF® 50SG INSECTICIDE

Aphid control in potatoes and other fruit and vegetable crops

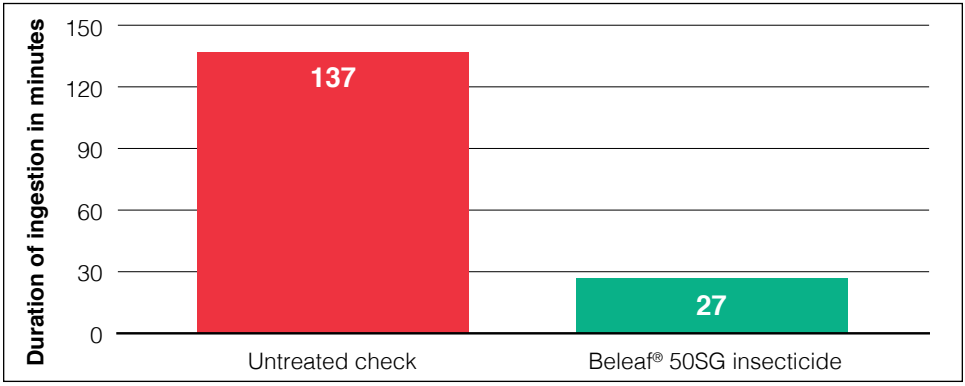
- Unique anti-feeding action. Targets piercing and sucking pests so effectively, that both immature and adult stages begin to stop feeding within 30 minutes of application

Crops: Potato, strawberry, root vegetables, pome fruit, stone fruit, fruiting vegetables, cole crops / Chinese vegetables, leafy vegetables, seed alfalfa

Insecticide Group: Group 29

Packaging: 6 x 0.68 kg jugs per case

Re-entry Period: 12 hours



Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Brassica Leafy Vegetables (Group 5-13): Broccoli, Brussels sprouts, cabbage, cauliflower, kale, etc. Cucurbit Vegetables (Group 9): Cucumber, melon, cantaloupe, pumpkin, squash, watermelon, etc. Fruiting Vegetables (Group 8-09): Bell pepper, eggplant, tomato, okra, etc.	Aphids	49-65 g/ac	0	Use higher rates for greater pest populations and/or dense foliage. Apply in sufficient water to ensure good coverage; use a minimum of 10 gal/ac (94 L/ha) when applied by ground. Allow a minimum of 7 days between applications. Do not apply more than 3 applications per year.
Leafy Vegetables (Group 4): Lettuce, spinach, arugula, celery, Swiss chard, etc. (Subgroup 22B): Celery, rhubarb, etc.	Aphids	49-65 g/ac		
	Suppression of tarnished plant bug	81 g/ac (3 applications) 121 g/ac (2 applications)		

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Hops	Aphids	49-65 g/ac	31	Use higher rates for greater pest populations and/or dense foliage. Apply in sufficient water to ensure good coverage; use a minimum of 10 gal/ac (94 L/ha) when applied by ground. Allow a minimum of 7 days between applications. Do not apply more than 3 applications per year.
Tuberous and Corm Vegetables (Subgroup 1C): Artichoke, potato, sweet potato, etc.	Aphids	49-65 g/ac	7	
	Psyllid (suppression) in potato.	81 g/ac		
Root Vegetables (subgroup 1B): Beet, carrot, ginseng, radish, etc.	Aphids	49-65 g/ac	3	
Pome Fruit (Group 11-09): Apple, pear, etc.	Aphids	49-65 g/ac	21	Allow a minimum of 7 days between applications. Do not apply more than 3 applications per year. Do not allow worker entry for the purposes of performing thinning activities in treated areas during the restricted entry interval of 3 days
	Suppression of tarnished plant bug	81 g/ac		
Stone Fruit (Group 12-09): Apricot, cherry, peach, plum, etc.	Aphids Suppression of tarnished plant bug (81 g/ac)	49-81 g/ac	14	Allow a minimum of 7 days between applications. Do not apply more than 3 applications per year. Do not allow worker entry for the purposes of performing thinning activities in treated areas during the restricted entry interval of 3 days
Non-grass Animal Feeds (Group 18): Alfalfa, clover, vetch, etc. Alfalfa for seed	Aphids	49-65 g/ac	7	Apply in sufficient water to ensure good coverage; use a minimum of 10 gal/ac (100 L/Ha) when applied by ground. Allow a minimum of 7 days between applications. Do not apply more than 3 applications per year.
	Tarnished plant bug	81 g/ac (3 applications) 121 g/ac (2 applications)		
Mint: Spearmint, peppermint	Aphids	49-65 g/ac	7	Apply in sufficient water to ensure good coverage; use a minimum of 10 gal/ac (94 L/Ha) when applied by ground. Allow a minimum of 14 days between applications. Do not apply more than 3 applications per year.

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Cucumber (greenhouse)	Thrip Aphid Lygus bug Whitefly[1]	30 g/100 L	0	Foliar application. Apply sufficient volume to ensure good coverage, up to 1000 L/Ha. Do not apply more than 1 foliar application per crop cycle.
		12.5 mg/ plant	0	Apply using drip irrigation or drench by hand using sufficient water volume to ensure delivery of the product to the roots.
Peppers (greenhouse)	Thrip Aphid Lygus bug	30 g/100 L	0	Foliar application. Apply sufficient volume to ensure good coverage, up to 1000 L/Ha. Do not apply more than 1 foliar application per crop cycle.
		30 mg/m2	0	Apply using drip irrigation or drench by hand using sufficient water volume to ensure delivery of the product to the roots.
Tomato (greenhouse)	Whitefly	20 g/100 L	0	Foliar application. Apply sufficient volume to ensure good coverage, up to 1000 L/Ha. Do not apply more than 2 foliar applications per crop cycle.
Ornamentals (greenhouse)	Thrip Aphid	30 g/100 L	n/a	Foliar application. Apply sufficient volume to ensure good coverage, up to 1000 L/Ha. Do not apply more than 1 foliar application per crop cycle.
	Whitefly	20 g/100 L		Foliar application. Apply sufficient volume to ensure good coverage, up to 1000 L/Ha. Do not apply more than 2 foliar applications per crop cycle.
	Drench: Thrip Aphid Whitefly Lygus bug	122 g/ac		Apply using drip irrigation or drench by hand using sufficient water volume to ensure delivery of the product to the roots. Do not apply more than 2 applications per crop cycle.
Strawberry (greenhouse)	Aphids Lygus bugs (including tarnished plant bug)	30 g/100 L	0	Beleaf® will stop aphid and lygus bug feeding rapidly but it may take several days to see a reduction in pest numbers. Do not apply more than 1 application per crop cycle. Max spray volume of 650 L

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Ornamentals (outdoors) (excluding conifers)	Aphids	49-65 g/ac	n/a	Use higher rates for greater pest populations and/or dense foliage. Apply in sufficient water to ensure good coverage; use a minimum of 10 gal/ac (94 L/Ha) when applied by ground. Allow a minimum of 7 days between applications. Do not apply more than 3 applications per year.
Low growing berry (Subgroup 13-07G): Lowbush blueberry, cranberry, strawberry, etc.	Aphids	49-65 g/ac	0	Apply before aphid populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Allow a minimum of 7 days between applications. Do not apply more than 3 applications per year.
	Lygus bugs including tarnished plant bug[1]	81 g/ac		Apply when lygus bugs first appear in the field and before populations reach high levels. Beleaf® 50SG insecticide will stop lygus bug feeding rapidly but it may take several days to see a reduction in lygus bug numbers. Reapply when new insects are detected.
Edible-podded legume vegetables (Subgroup 6A), Succulent shelled pea and bean (Subgroup 6B), Dried shelled bean except soybean (Subgroup 6C)	Aphids	49-65 g/ac	7	Apply before aphid populations reach economic thresholds, or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary. Use higher rates for greater pest populations and/or dense foliage.
	Lygus bugs[1] including tarnished plant bug	81 g/ac		Apply when lygus bugs first appear in the field and before populations reach high levels. Beleaf® 50SG insecticide will stop lygus bug feeding rapidly but it may take several days to see a reduction in lygus bug numbers. Reapply when new insects are detected.

[1] Reduces the number of lygus bugs

CORAGEN®
INSECTICIDE

Innovative, targeted insect control you can count on

- Provides extended control and translaminar movement
- Active ingredient from a novel group of chemistry with no cross resistance to other chemistries
- Controls hatching insects all the way through to adult stages of development
- Provides reliable control of Western bean cutworm
- Resistance Management - DO NOT make a foliar application of Coragen® insecticide for a minimum of 60 days following an in-furrow or soil application or planting of seed or seed pieces treated with any Group 28 insecticide.

Crops: Corn (field, sweet, seed and pop), dry beans, brassicas, cereals, cucurbits, fodder, fruiting vegetables, forage grass, green onion, hay, hops, leafy vegetables, legumes, mint, non-grass animal feeds, oilseeds, root vegetables, tuber vegetables, and greenhouse cucumber, eggplant, pepper and tomato

Insecticide Group: Group 28

Packaging: 4 x 3.79 L jugs per case

Re-entry Period: 12 hours

Residual control of key insect pests like Western bean cutworm

Source: Purdue University, Department of Entomology

Feeding by Western bean cutworm and damage to ears

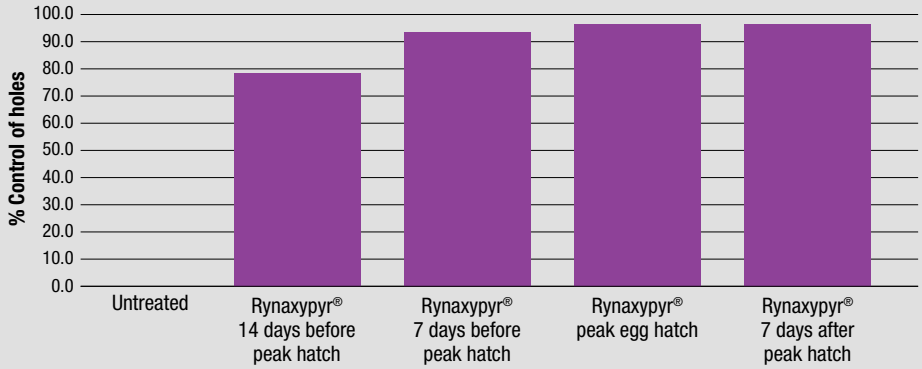
WBC damage to corn ears in an untreated plot (left), and a plot treated with Coragen® insecticide (right) near Rodney, Ontario (October 3, 2014).

Insects Controlled and Application Information

Crop	Pest	Rate	PHI (days)	Application Information
Corn (field, sweet, seed, and pop)	Black cutworm	101 mL/ac	14 days (field and pop corn) 1 day (sweet and seed corn)	Begin applications when treatment thresholds have been reached. Apply either by ground or aerial application equipment.
	Armyworm Fall armyworm Beet armyworm Variegated cutworm	101-152 mL/ac		
	Corn earworm Tomato fruitworm European corn borer **Western bean cutworm**			Time the applications to coincide with peak egg hatch. Scout by monitoring egg laying and egg hatch to determine application timing. Reapply if necessary. Apply either by ground or aerial application equipment.

CORAGEN®
INSECTICIDE

Coragen insecticide provides extended control of European corn borer
% Control of holes caused by European corn borer



Source: Canadian Research Trials, PEI, 2007
Rynaxypyr® applied at 75 g ai/ha

Insects Controlled and Application Information

Crop	Pest	Rate	PHI (days)	Application Information
Legume Vegetables (Group 6): Dry beans, chickpea, field pea, faba bean, lentil, etc.	Grasshoppers	50-101 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Cabbage looper Cutworms	101 mL/ac		
	Armyworm Fall armyworm Beet armyworm Corn earworm European corn borer Western bean cutworm	101-152 mL/ac		
Potato	Colorado potato beetle	101-202 mL/ac	1 day	Use the higher application rate under heavy pest pressure and/or when larger larvae are present. Apply by either ground or aerial application equipment. Do not apply Coragen® insecticide for Colorado potato beetle if any Group 28 insecticide was used at planting as an infurrow, soil or treatment was used.
	European corn borer	101-152 mL/ac	1 day	Time application to coincide with peak egg hatch. Scout for European corn borer by monitoring egg laying and egg hatch to determine application timing. Apply by either ground or aerial application equipment.

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Root and Tuber Vegetables (Group 1): Carrot, sugar beet, ginseng, potato, sweet potato, etc.	Diamondback moth Cabbage looper Black cutworm Imported cabbageworm Swede midge	101 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Corn earworm European corn borer Tobacco hornworm Tomato hornworm Armyworm Variegated cutworm Fall armyworm Beet armyworm Leafminers: *Liriomyza sativae* *Liriomyza trifolii*	101-152 mL/ac		
Leafy Vegetables (Group 4): Lettuce, spinach, arugula, celery, Swiss chard, etc.	Cabbage looper Black cutworm	101 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Armyworm Fall armyworm Corn earworm Beet armyworm Leafminers: *Liriomyza sativae* *Liriomyza trifolii*	101-152 mL/ac		
Brassica Leafy Vegetables (Group 5): Broccoli, Brussels sprouts, cabbage, cauliflower, kale, etc.	Imported cabbage worm Diamondback moth Cabbage looper Black cutworm Swede midge	101 mL/ac	3 days	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. For optimum control, apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Contentrate with Leci-Tech® at an application rate of 0.5% v/v.
	Armyworm Fall armyworm Beet armyworm Corn earworm Leafminers: *Liriomyza sativae* *Liriomyza trifolii*	101-152 mL/ac		

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Fruiting Vegetables (Group 8): Eggplant, pepper, tomato, etc.	Colorado potato beetle Armyworm Fall armyworm Beet armyworm Variegated cutworm Tobacco hornworm Tomato hornworm Tomato fruitworm (Corn earworm) European corn borer	101-152 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. Do not apply Coragen® insecticide for Colorado potato beetle if any Group 28 insecticide was used at planting as an infurrow, soil or seed treatment was used.
	Cabbage looper Black cutworm	101 mL/ac		
Cucurbit Vegetables (Group 9): Cucumber, melon, pumpkin, squash, etc.	Cabbage looper Black cutworm	101 mL/ac	1 day	
	Armyworm Fall armyworm Corn earworm Leafminers: *Liriomyza sativae* *Liriomyza trifolii*	101-152 mL/ac		
Cereal Grains Barley, oats, rye, wheat, etc.	Grasshoppers	50-101 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Cutworms	101 mL/ac		
	Armyworm Fall armyworm Beet armyworm Corn earworm European corn borer	101-152 mL/ac		
Grass Forage and Hay group	Grasshoppers	50-101 mL/ac	0 days	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Armyworm Fall armyworm Beet armyworm Corn earworm	101-152 mL/ac		
Non-Grass Animal Feeds (Group 18): Alfalfa, clover, vetch, etc.	Beet armyworm	101-152 mL/ac	0 days	
	Alfalfa weevil[1]	152-202 mL/ac		
	Grasshoppers	50-101 mL/ac		

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Oilseeds (Group 20): Canola, sunflower, etc.	Diamondback moth	50 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Grasshoppers	50-101 mL/ac		
	Bertha armyworm	50-152 mL/ac		
	Cabbage looper Imported cabbage worm Swede midge Cutworms	101 mL/ac		
	Sunflower head moth Reduces damage caused by banded sunflower moth.	101-152 mL/ac		
Mint	Cabbage looper	101 mL/ac	3 days	
Okra	Beet armyworm Corn earworm	101-152 mL/ac	1 day	
Hops	Cutworms Armyworm	101-152 mL/ac	0 days	
	Cabbage looper	101 mL/ac		
Greenhouse Cucumbers, tomato, peppers, and eggplant	Cabbage looper	125 mL/1000 L spray volume	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. Repeat applications if monitoring indicates it is necessary.
	Lepitoptera leafminer (not registered pest on greenhouse cucumbers)	200 mL/1000 L spray volume		Apply at egg hatch. Reapply if monitoring indicates it is necessary. Thorough coverage is important to obtain optimum control.
Green Onions (subgroup 3-07B)	Cutworms Leek moth[1] Leafminers: *Liriomyza sativae* *Liriomyza trifolii*	101-152 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
Garden and Sugar beet	Beet webworm	101-152 mL/ac	1 day	

[1]Suppression

CYGON® 480-AG
SYSTEMIC INSECTICIDE

Reliable aphid and spider mite control in your soybean crop

- Systemic insecticide for the control of insects on listed vegetable, fruit and field crops

Crops: Cole crops, leafy vegetable, soybeans, beans, potatoes, pepper, alfalfa, cereals, canola, hazelnut, peaches, apples, eggplant, asparagus, pastures, forage crops, pear, blueberry and strawberry

Insecticide Group: Group 1B

Packaging: 2 x 10 L jugs per case

Re-entry Period: 12 hours (unless otherwise indicated on label)


Two-spotted spider mite


Adult nymph soybean aphid

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Cole Crops: Broccoli, Brussels sprouts, cauliflower	Aphids	283-405 mL/ac	7 days (broccoli, cauliflower) 21 days (Brussels sprouts)	Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging.
Chinese broccoli, pak choi, chicory	Aphids	243-405 mL/ac	7 days	
Leafy Vegetables: Beet greens, turnip greens, kale, lettuce, Swiss chard.	Aphids Leafhoppers	283 mL/ac	14 days	
Peppers	Aphids Pepper maggots	283-405 mL/ac	3 days	
Potatoes, tomatoes (field)	Aphids Leafhoppers	223-405 mL/ac	7 days	
Alfalfa	Aphids, Leafhoppers, reduction of alfalfa weevil larvae Lygus bugs	172 mL/ac	2 days	
	Blotch leaf miners	223 mL/ac	2 days	
	Grasshoppers - nymphs	223 mL/ac	28 days	
	Grasshoppers - adults	344-364 mL/ac	28 days	
Alfalfa (seed)	Lygus bugs Plant bugs	445 mL/ac	10 days	

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Forage crops (grain)	Lygus bugs Plant bugs	172 mL/ac	2 days	Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging.
	Grasshoppers – Low infestations	172-223 mL/ac	2 days	
	Grasshoppers- nymphs	223 mL/ac	2 days	
	Grasshoppers- adults	344-405 mL/ac	28 days	
Sweet clover, red clover, alsike clover	Sweet clover weevils	344-445 mL/ac	28 days	
Pastures	Grasshoppers- nymphs	223 mL/ac	2 days	
	Grasshoppers- adults	344-405 mL/ac	28 days	
Canola	Aphids Leafhoppers Grasshoppers	344-364 mL/ac	21 days	Repeat application only when necessary. Toxic to bees. Do not apply during the crop blooming period or during the 5-day period before the crop blooms.
Eggplant	Tarnished plant bug	202-283 mL/ac	7 days	Apply when bugs are found and flowering is seen. Treat again in 7 to 10 days if bugs are found. Do not apply when bees are foraging.
Peas	Aphids	111-154 mL/ac	3 days	May be applied by air or ground equipment. Do not feed or allow livestock to graze treated vines within 21 days after application. Do not apply when bees are foraging.
Asparagus	Asparagus aphid	931 mL/ac	Apply post harvest only	For mature asparagus, sprays begin July 1, after crop has been harvested, and continue at 3 to 4 week intervals until defoliation in October. For immature asparagus, begin application mid-May. If applied on immature asparagus do not harvest for feed or food.
Beans	Aphids Bean beetles Leafhoppers Leaf miners Lygus bugs Mites Tarnished plant bugs	283-405 mL/ac	7 days	Do not feed or allow livestock to graze treated forage. Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging.
Soybean	Spider mites	405 mL/ac	30 days	

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Wheat	Orange blossom wheat midges Says stink bug (For Say's stink bug must use a water volume of at least 10 gal/ac (100 L/Ha) for ground or 5 gal/ac (50 L/Ha) for air).	405 mL/ac	35 days	If adult midges are present sprays should be applied when 25% of the wheat head has fully emerged but before flowering. Applications should be made in the late afternoon or evening when temperatures exceed 15°C and the wind speed is less than 10 km/h. High volume sprays will improve penetration of the crop.
Wheat, oats, barley	Thrips	405 mL/ac	35 days	
	Aphids Russian wheat aphid[1]	172 mL/ac		
Flax	Potato aphids	177 mL/ac	21 days	One application per season; apply from late flowering to early green bole stage in sufficient water to provide good coverage. Do not apply when bees are foraging.
Pear	Aphids Mites Pear psyllas	1-1.25 L/1000 L water (max 1.2 L of product per acre)	28 days	Apply when insects first appear, using sufficient water for good coverage. Apply up to 2 applications per year.
	Tarnished plant bugs	625 mL/1000 L water (max 1.2 L of product per acre)		
Lowbush blueberry	Blueberry maggots	235-336 mL/ac	21 days	Apply in sufficient water for good coverage one week after first berries ripen. Do not apply foliar spray when daytime temperatures exceed 25°C. Use no more than 1,000 L spray/ha. Apply second spray in 10 - 12 days if needed.
Highbush blueberry	Blueberry maggot	336 mL/ac	21 days	Apply post-harvest only, to control spotted wing drosophila (adults and larvae in fruit) that may otherwise infest adjacent crops. Timing varies, depending on variety of highbush blueberry.
	Spotted wing drosophila	336 mL/ac	Post-harvest application	
Peaches (non-bearing)	Tarnished plant bug	688 mL/ac	40 day	Spray when insects first appear and repeat as necessary using sufficient water for good coverage.
	Aphids Mites	1-1.5 L/1000 L water (max 1.2 L of product per acre)		

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Strawberries (bearing)	Tarnished plant bugs	1.1 L/ac	7 days	Apply first spray when first blooms appear and the second application 10 to 12 days after if needed.
Strawberries (bearing and non-bearing)	Aphids Mites	911 mL/ac	7 days	Spray when insects first appear and repeat as necessary using sufficient water for good coverage.
Sweet cherries Sour cherries	Black and western cherry fruit fly maggots	911 mL/ac	21 days	Apply no later than 6 days after the first adult fly has been trapped. Apply once only.
Hazelnuts	Aphids	2 L/ac	45 days	One application per season; apply when aphids appear. Primarily for use on young plantings.

[1]Suppression

EXIREL®
INSECTICIDE

One step closer to a strong crop

- Applied early in the season, Exirel® insecticide provides protection for pome fruit, stone fruit, blueberries and root vegetables during the most critical stages of development
- Designed for superior foliar protection against a cross-spectrum of sucking and chewing pests
- Exirel® insecticide is rapidly absorbed into foliage and provides translaminar and locally systemic movement for rainfast and extended control
- Exirel® insecticide is a highly effective IPM product with excellent crop safety
- Resistance Management - DO NOT make a foliar application of Exirel® insecticide for a minimum of 60 days following an in-furrow or soil application or planting of seed or seed pieces treated with any Group 28 insecticide.

Crops: Brassica vegetables, bulb vegetables, bush berries, caneberries, corm and tuberous vegetables, cucumbers, cucurbits, eggplants, fruiting vegetables, greenhouse tomatoes, leafy vegetables, legumes, low growing berries, peanuts, peppers, pome fruit, root vegetables (except sugar beet), stone fruit, strawberries, tobacco and tree nuts.

Insecticide Group: Group 28

Packaging: 4 x 3.79 L jugs per case

Re-entry Period: 12 hours

Insects Controlled and Application Information

Crop	Pest	Rate	PHI	Application Information
Tuberous and Corm Vegetables (Sub-group 1C): Artichoke, potato, sweet potato, etc.	Colorado potato beetle	304-405 mL/ac	7 days	Begin applications when treatment thresholds have been reached. **Aphids:** apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech® at an application rate of 0.5% v/v.
	Cabbage looper	101-202 mL/ac		
	Armyworm Beet armyworm Fall armyworm	202 mL/ac		
	Variegated cutworm European corn borer	202-304 mL/ac		
	Corn earworm Tobacco hornworm[1] Tomato hornworm[1]	304 mL/ac		
	Flea beetles	202-405 mL/ac		
	Aphids	202-607 mL/ac		

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Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Root Vegetables (except sugar beet) (Sub-group 1B): Carrot, ginseng, potato, sweet potato, etc.	Cabbage looper	101-202 mL/ac	7 days	Begin applications when treatment thresholds have been reached. **Aphids:** apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech® at an application rate of 0.5% v/v. **Carrot weevil:** begin applications at the 2-3 leaf stage or when scouting indicates the presence of weevils. **Colorado potato beetle:** use the higher application rate with larger larvae are present. **European corn borer:** time the application to coincide with peak egg hatch. Use sufficient water volume to ensure thorough coverage. Recommended minimum water volume of 200L/ha for control of carrot weevil. Use the higher rate and a higher water volume when pest pressure is high.
	Armyworm Beet armyworm Fall armyworm	202 mL/ac		
	Variegated cutworm European corn borer	202-304 mL/ac		
	Corn earworm	304 mL/ac		
	Flea beetle	202-405 mL/ac		
	Aphids	202-607 mL/ac		
	Carrot weevil control	405 - 607 mL/ac		
Bulb Vegetables: (Sub-group 3-07) Garlic, onion, leek, etc.	Thrips[1]	405-607 mL/ac	1 day	Begin applications when thrips populations are low. Thorough coverage is essential for optimum control. For optimum control, apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech® at an application rate of 0.5% v/v. If thrips populations are high, use a registered insecticide with a different mode of action to reduce thrips populations before applying Exirel® insecticide.
Leafy Vegetables (Group 4): Lettuce, spinach, arugula, celery, Swiss chard, etc.	Cabbage looper	101-202 mL/ac	1 day	Begin applications when treatment thresholds have been reached. **Cutworm:** apply to foliage when rain is not expected in the next 24 hours. Apply to smaller plants or when lower portions of plant can receive adequate coverage. **Aphids:** apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech® at an application rate of 0.5% v/v.
	Armyworm Beet armyworm Fall armyworm	202 mL/ac		
	Corn earworm	304 mL/ac		
	Dipteran leafminers (larvae)	405-607 mL/ac		
	Flea beetles	202-405 mL/ac		
	Cutworms	202-304 mL/ac		
	Aphids	202-607 mL/ac		

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Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Brassica Vegetables (Group 5): Broccoli, Brussels sprouts, cabbage, cauliflower, kale, etc.	Cabbage looper Imported cabbageworm Diamondback moth	101-202 mL/ac	1 day	Begin applications when treatment thresholds have been reached. **Cutworm:** apply to foliage when rain is not expected in the next 24 hours. Apply to smaller plants or when lower portions of plant can receive adequate coverage. **Aphids:** apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech® at an application rate of 0.5% v/v.
	Beet armyworm Fall armyworm	202 mL/ac		
	Dipteran leafminers (larvae)	405-607 mL/ac		
	Flea beetles	202-405 mL/ac		
	Corn earworm	304 mL/ac		
	Sweet midge Cutworms	202-304 mL/ac		
	Aphids	202-607 mL/ac		
Fruiting Vegetables (except cucurbits) (Group 8-09): Bell pepper, eggplant, tomato, okra, etc.	Cabbage looper	101-202 mL/ac	1 day	Begin applications when treatment thresholds have been reached. **Cutworm:** apply to foliage when rain is not expected in the next 24 hours. Apply to smaller plants or when lower portions of plant can receive adequate coverage. **Aphids:** apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech® at an application rate of 0.5% v/v. **Pepper Maggot:** must be controlled at the adult life stage. Control may not be possible once oviposition has occurred. **Colorado potato beetle resistance management:** DO NOT apply Exirel® insecticide for Colorado potato beetle control if any Group 28 insecticide was used at planting as an in-furrow, soil or seed treatment.
	Armyworm Beet armyworm Fall armyworm	202 mL/ac		
	Tomato fruitworm (corn earworm) Tobacco hornworm[1] Tomato hornworm[1]	304 mL/ac		
	European corn borer Cutworms	202-304 mL/ac		
	Flea beetles	202-405 mL/ac		
	Colorado potato beetle	304-405 mL/ac		
	Aphids	202-607 mL/ac		
	Pepper maggot Pepper weevil[1]	405-607 mL/ac		

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Cucurbit Vegetables (Group 9): Cucumber, melon, cantaloupe, pumpkin, squash, watermelon, etc.	Cabbage looper	101-202 mL/ac	1 day	Begin applications when treatment thresholds have been reached. **Cutworm:** apply to foliage when rain is not expected in the next 24 hours. Apply to smaller plants or when lower portions of plant can receive adequate coverage. **Aphids:** apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech® at an application rate of 0.5% v/v.
	Armyworm Fall armyworm	202 mL/ac		
	Cutworms	202-304 mL/ac		
	Corn earworm	304 mL/ac		
	Aphids	202-607 mL/ac		
	Dipteran leafminers (larvae)	304-405 mL/ac		
	Flea beetles	202-405 mL/ac		
Legume Vegetables (Group 6): Beans, chickpea, peas, lentil, soybean, etc.	Cabbage looper	101-202 mL/ac	7 days	Begin applications when treatment thresholds have been reached. **Cutworm:** apply to foliage when rain is not expected in the next 24 hours. Apply to smaller plants or when lower portions of plant can receive adequate coverage. **Aphids:** apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech® at an application rate of 0.5% v/v.
	Armyworm Beet armyworm Fall armyworm	202 mL/ac		
	Cutworms European corn borer	202-304 mL/ac		
	Soybean aphid	304-607 mL/ac		
	Bean leaf beetle[1]	405-607 mL/ac		

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Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Pome Fruits: (Group 11-09) Apple, crabapple, pear, etc.	Codling moth Oriental fruit moth Spotted tentiform leafminer Western tentiform leafminer	202-304 mL/ac	3 days	Begin applications when treatment thresholds have been reached. **1st generation codling moth:** apply before first egg hatch (80 - 110 degree days Celsius after biofix). Monitor populations and reapply 10 - 14 days later if required. For 2nd generation codling moth, timing of the first application is based on first egg hatch after establishing a new biofix. Monitor populations and reapply 10 - 14 days later if required. **Oriental fruit moth:** apply at 1st egg hatch of the targeted generation. Monitor populations using pheromone traps and reapply 10 - 14 days later if required. **Oblique banded leafroller:** monitor larval population in the spring, and apply when over-wintering larvae become active, from pink stage through petal fall. For summer generations, monitor adult moth flight, and apply at first egg hatch (170 - 240 degree days Celsius) after the first sustained moth catch. A repeat application approximately 10 days after the initial application may be needed to control the extended emergence of the small larvae. **Apple maggot:** apply 7-10 days after the first apple maggot fly is caught on the traps in orchard. Repeat in 10 -14 days if populations warrant. **Plum curculio:** monitor trees along the edge of the orchard for the first sign of feeding damage after bloom. Repeat after 10 - 14 days if population warrants. **Japanese beetle:** monitor adult populations and insect damage. Follow provincial guidelines for treatment thresholds.
	Obliquebanded leafroller Threelined leafroller Fruittree leafroller European leafroller Eyespotted bud moth Tufted apple bud moth European sawfly	202-405 mL/ac	3 days	
	Green peach aphid Rosy apple aphid Apple leafhopper	304-607 mL/ac	3 days	
	Apple maggot Plum curculio Japanese beetle	405-607 mL/ac	3 days	

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Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Stone Fruit: (Group 12-09) Apricot, cherry, plum, nectarine, peach, prune	Oriental fruit moth	202-304 mL/ac	3 days	Begin applications when treatment thresholds have been reached. **Obliquebanded leafroller:** monitor larval population in the spring, and apply when over-wintering larvae become active, from pink stage through petal fall. For summer generations, monitor adult moth flight, and apply at first egg hatch (170 – 240 Celsius degree days) after the first sustained moth catch. A repeat application approximately 10 days after the initial application may be needed to control the extended emergence of the small larvae. **Green peach aphid, plum aphid, cherry fruit fly, western cherry fruit fly, and spotted wing drosophila:** tank-mix Exirel® insecticide with Xiameter® OFX-0309 Fluid at 0.03 % v/v. It is recommended that a small area be tested to demonstrate safety to fruit and leaves before using in large areas. Do not tank-mix Exirel® insecticide with any surfactant except as directed on its label. **Plum curculio:** monitor trees along the edge of the orchard for the first sign of feeding damage after bloom. Repeat 10 – 14 days if populations warrant. **Peach twig borer:** use pheromone traps to monitor the male moth activity. Follow local recommendations for thresholds information. For spring/overwintering or first summer generation larvae: Apply within 7 days of first trap catch of adult male moths. For second summer generation larvae: continue monitoring for second brood moths until at least mid-August. If required, apply a second spray within 7 days of first trap catch of adult male moths. **Spotted wing drosophila:** begin applications when populations are low. Exirel® insecticide targets the adult life stage of spotted wing drosophila. If populations are high, use a registered insecticide with a different of mode of action to reduce the pest populations. Apply a subsequent application of Exirel® insecticide if required.
	Obliquebanded leafroller Threelined leafroller Fruittree leafroller European leafroller Eyespotted bud moth	202-405 mL/ac		
	Green peach aphid Plum aphid Cherry fruit fly Western cherry fruit fly	304-607 mL/ac		
	Plum curculio Japanese beetle Spotted wing drosophila	405-607 mL/ac		
	Peach twig borer	304-405 mL/ac		

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Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Bushberries (Subgroup 13-07B): Blueberry (low and high bush), currant, highbush cranberry, etc.	Blueberry gall midge	304-405 mL/ac	3 days	Begin applications when treatment thresholds have been reached. **Blueberry aphid, spotted wing drosophila, blueberry maggot, and blueberry gall midge:** tank-mix Exirel® insecticide with an MSO surfactant at 0.5- 1.0% v/v. It is recommended that a small area be tested to demonstrate safety to fruit and leaves before using in large areas. Do not tank-mix Exirel® insecticide with any surfactant except as directed on its label. **Blueberry maggot:** begin applications when populations are low. If blueberry maggot populations are high, use a registered insecticide with a different mode of action to reduce the pest populations before applying Exirel® insecticide. **Spotted wing drosophila:** begin applications when populations are low. Exirel® insecticide targets the adult life stage. If Spotted wing drosophila populations are high, use a registered insecticide with a different mode of action to reduce the pest populations. Apply a subsequent application of Exirel® insecticide if required.
	Blueberry maggot[1] Plum curculio Japanese beetle Spotted wing drosophila Black vine weevil adults Clay coloured weevil adults	405-607 mL/ac		
	Flea beetles Cranberry fruitworm Obliquebanded leafroller Threelined leafroller Fruittree leafroller European leafroller Eyespotted bud moth	202-405 mL/ac		
	Blueberry aphid	304-607 mL/ac		
Low growing berries (Subgroup 13-07H): (except strawberry): Lowbush blueberry, cranberry, etc.	Cranberry fruitworm Black headed fire worm Sparganothis fruitworm	304-607 mL/ac	14 days	Begin applications when treatment thresholds have been reached.

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Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Strawberries	Aphids	202-607 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control. For optimum control apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech® at an application rate of 0.5% v/v. If thrips populations are high, use a registered insecticide with a different mode of action to reduce thrips populations before applying Exirel® insecticide. For spotted wing drosophila begin applications when populations are low. Exirel® insecticide targets the adult life stage of Spotted wing drosophila. If Spotted Wing Drosophila populations are high, use a registered insecticide with a different mode of action to reduce the pest populations. Apply a subsequent application of Exirel® insecticide if required.
	Thrips[1] Spotted wing drosophila	405-607 mL/ac		

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Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Tree Nuts (Group 14-11): Hazelnut etc.	Codling moth Oriental fruit moth	202-304 mL/ac	5 days	Begin applications when treatment thresholds have been reached. **1st generation codling moth:** apply before first egg hatch (80 – 110 degree days Celsius after biofix). Monitor populations and reapply 10 – 14 days later if required. For 2nd generation codling moth, timing of the first application is based on first egg hatch after establishing a new biofix. Monitor populations and reapply 10 – 14 days later if required. **Oriental fruit moth:** apply at 1st egg hatch of the targeted generation. Monitor populations using pheromone traps and reapply 7 – 10 days later if required. **Oblique banded leafroller:** monitor larval population in the spring, and apply when over-wintering larvae become active, from pink stage through petal fall. For summer generations, monitor adult moth flight, and apply at first egg hatch (170 – 240 degree days Celsius) after the first sustained moth catch. A repeat application approximately 10 days after the initial application may be needed to control the extended emergence of the small larvae. **Peach twig borer:** use pheromone traps to monitor the male moth activity. Follow local recommendations for thresholds information. For spring/overwintering or first summer generation larvae: Apply within 7 days of first trap catch of adult male moths. For second summer generation larvae: continue monitoring for second brood moths until at least mid-August. If required, apply a second spray within 7 days of first trap catch of adult male moths.
	Obliquebanded leafroller Threelined leafroller Fruittree leafroller European leafroller Eyespotted bud moth	202-405 mL/ac		
	Peach twig borer	304-405 mL/ac		
Tobacco	Tobacco hornworm[1] Tomato hornworm[1]	304 mL/ac	7 days	Begin applications when treatment thresholds have been reached.
	Flea beetle	202-405 mL/ac		

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Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Greenhouse: Cucumbers, pepper, tomato, eggplant	Cabbage looper	101 mL/ac	0 days (cucumber) 1 day (peppers, eggplant, tomato)	Begin applications when treatment thresholds have been reached. Thorough coverage is required to obtain optimum control. Select a spray volume appropriate for the size of plants and density of foliage. Use the higher listed rate and higher spray volumes for large plants or dense foliage. Repeat applications if monitoring indicates it is necessary. **Thrips and whiteflies:** apply Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v or MSO Concentrate with Leci-Tech®* at an application rate of 0.5% v/v. If thrips populations are above threshold, use a registered knockdown product before applying Exirel® insecticide.
	Thrips[1]	202-405 mL/ac		
	Whiteflies	304-405 mL/ac		
Greenhouse pepper	Pepper maggot Pepper weevil[1]	404-607 mL/ac	1 day	**Pepper maggot:** must be controlled at the adult life stage. Control may not be possible once oviposition has occurred.
Caneberry (Subgroup 13-07A): Blackberry, raspberry, etc.	Black vine weevil adults Obscure root weevil adults Spotted wing drosophila Japanese beetle	404-607 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control. **Obscure root weevil:** begin applications when adults are observed. **Black vine:** apply when most of adults have emerged but before they begin to lay eggs (early summer). **Spotted wing drosophila:** begin applications when populations are low. If spotted wing drosophila populations are high, use a registered insecticide with a different mode of action to reduce thrips populations before applying Exirel® insecticide. **Spotted wing drosophila, black vine weevil and obscure root weevil:** tank-mix Exirel® insecticide with Hasten® NT Spray Adjuvant at an application rate of 0.25% v/v.

[1]Suppression

POUNCE® 384EC INSECTICIDE

Economical, broad spectrum insecticide for horticultural crops

- Broad spectrum insect control registered on a wide variety of horticultural and row crops
- More light stable than other synthetic pyrethroids

Crops*: Apples, asparagus, barley, beets, blueberry, canola, carrot, cereals, cole crops, corn (field and sweet), cucumbers, flax, ginseng, grapes, horseradish, lentils, lettuce, mushrooms, nectarines, onions, ornamentals, pak-choi, peaches, pears, peas, peppers, plums, potatoes, radishes, snap peas, sugar beets, sunflowers, tobacco, tomatoes, turnips

*Do not apply during crop blooming period

Insecticide Group: Group 3

Packaging: 12 x 1 L jugs per case

Re-entry Period: 12 hours

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Asparagus, beets, canola, carrots, cereals, cole crops, corn (excluding sweet corn), flax, lentils, lettuce, onions, peas, peppers, potatoes, sugar beets, sunflower	Cutworms: Army, Black, Dark-sided, Pale Western, Red-backed, White	73-158 mL/ac	Beets, carrots, sugar beets, and asparagus: 2 days Cabbage, cauliflower, Brussels sprouts: 3 days Lettuce, onions, peppers, potatoes: 1 day Corn: 30 days Canola, flax, sunflower: NA (application staging is up to 5 leaf) Cereals, broccoli, lentils, peas: 7 days	**Ground application:** To control these insects attacking seedlings (up to 5 leaves) and/or transplants of these crops, apply 73 mL/ac in sufficient water for good coverage. Under dry soil conditions, or on muck soil, or where cutworms are near full maturity (2.5 - 4 cm) apply 119-156 mL/ac. Applications should be made under warm, moist conditions in the evening or at night when cutworm activity is highest.
	Pale western cutworm	73-158 mL/ac		**Aerial application:** To control this insect attacking seedlings; specifically crops up to 5 leaves, apply 73 mL/ac in sufficient water for good coverage. Under dry soil conditions or where cutworms are near full maturity (2.5 to 4 cm) use 119-156 mL/ac. Can only be applied by air once per season.
Asparagus	Cutworms	73 mL/ac	2 days	To control cutworms during the cutting season, make 1 broadcast application by ground to bare soil after cutting when damage is first noticed.

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Canola	Crucifer flea beetle Striped flea beetle	36-73 mL/ac	NA (application staging is up to 5 leaf)	**Ground application:** Apply in sufficient water for good coverage when insects are present. Application should be made when the beetles are actively feeding. For severe infestations, use 73 mL/ac (180 mL/Ha). **Aerial application:** Apply in 1- 4 gal/ac (11-35 L/Ha) spray water. Can only be applied by air once per season.
Cabbage, cauliflower, broccoli, Brussels sprouts	Cabbage looper Imported cabbage worm Diamondback moth (larvae) Crucifer flea beetle	36-73 mL/ac	Cabbage, cauliflower, Brussels sprouts: 3 days Broccoli: 7 days	**Ground application:** Apply in 40-70 gal/ac (400-650 L/Ha) spray water on a 7-10 day schedule when insects or insect damage first appears. For severe infestations, use 73 mL/ac. Add Agral® 90 wetting agent at 300 mL per 1000 L of water to improve wetting and coverage. Do not apply by air.
Sweet corn	European corn borer Corn earworm	111-152 mL/ac	1 day	**Ground application:** Apply specified dosage in 35-50 gal of water/ac (325-450 L/Ha). Use the higher rate when severe insect pressure is anticipated. Spray when first feeding is observed. For second brood borers in plantings, apply before tassels show. For control of corn earworm, direct the spray to ensure coverage of ears and silks. **Aerial application:** Application by air is permitted. Apply specified rate in 1- 4 gal/ac (11-35 L/Ha) spray water. Do not apply more than twice per year by air.
	Fall armyworm	73 mL/ac		
Greenhouse: Tomato, cucumber	Whitefly	260 mL/ 1000 L	1 day	Apply to thoroughly cover all foliage. Repeat as necessary. Do not allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.
Ginseng	Cutworms: Army, Black, Pale western, Red-backed, White, Variegated	73-158 mL/ac	40 days	**Ground application:** Apply in sufficient water to give thorough coverage of the plants. Use the higher rate if the infestation is heavy; maximum of two applications per year. Apply when scouting indicates presence of cutworms. Under dry soil conditions or where cutworms are near full maturity (2.5 to 4 cm) use 119-158 mL/ac.
	Four-lined plant bug	73-105 mL/ac		**Ground application:** Apply a maximum of 2 applications per year.

POUNCE® 384EC INSECTICIDE

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Pak-choi, Chinese cabbage, Chinese broccoli	Cabbage looper Imported cabbage worm Diamondback moth (larvae)	73 mL/ac	Pak-choi, Chinese cabbage: 3 days Chinese broccoli: 7 days	**Ground application:** Apply in 40-70 gal/ac (400-675 L/Ha) spray water on a 7-10 day schedule when insects or insect damage first appears. Add Agral® 90 wetting agent at 300 mL per 1000 L of water to improve wetting and coverage.
Peppers	European corn borer	73 mL/ac	1 day	**Ground application:** Apply when borer is first observed between end of July to mid-September. Repeat every 7 days.
Potato	Colorado potato beetle Potato flea beetle Potato leafhopper Tarnished plant bug	73-105 mL/ac	1 day	**Ground application:** Apply in sufficient water for thorough coverage. Use the higher rate for heavy infestations. Repeat as necessary. **Aerial application:** Application by air is permitted, provided there is no hazard of drift to other crops or to areas occupied by people or livestock. Apply specified rate in 11-35 L water/hectare. Can be applied by air once per season.
	Variegated cutworm	73 mL/ac		**Ground application:** Apply when insects or damage appears - usually late July or during August, depending on location. Good control is dependent on spray penetration of dense foliage.
	European corn borer	73 mL/ac		**Ground application:** Apply in sufficient water for good coverage. Apply when egg masses begin to hatch. **Aerial application:** Application by air is permitted. Apply specified rate in 1-4 gal/ac (11-35 L/Ha) spray water. Can only be applied by air once per season.
Radish, horseradish, turnip	Crucifer flea beetle	73 mL/ac	2 days (1 day in turnip)	**Ground application:** Apply when insects or insect damage appears. Repeat if required.

POUNCE® 384EC INSECTICIDE

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Snap beans	European corn borer	105 mL/ac	7 days	**Ground application:** Apply at the first sign of infestation. Repeat if necessary. **Aerial application:** Apply in 2-5 gal/ac (20-45 L/Ha) at the first sign of infestation. Can be applied by air twice per season.
Tobacco (field)	Darksided cutworm White cut-worm	71-142 mL/ac	55 days	Do not apply by air. **Ground application:** Apply in 20-50 gal/ac (220-450 L/Ha) spray water using nozzle pressure of 71 ml/ac (175-350 kPa.) Cutworm activity is greatest during the late evening and night. Application should be timed as close as possible to insect feeding activity. **Cover crop treatment:** Apply 71 mL/ac once to a rye or wheat cover crop when the crop is 10-15 cm high, 4 to 5 days before ploughdown. Application should also be made to fence rows and a 15 m strip into nearby cover crop. Cover crops treated should not be used as a green feed for animals. **Soil treatment:** Apply 71-142 mL/ac once 5 days before transplanting. Use the higher rate when the top 1 cm or more of soil is dry. Do not incorporate. Application should also be made to fence rows and a 15 m strip into nearby cover crop. Do not disturb the soil surface for at least 5 days after treatment. **Post transplanting treatment:** Apply 71 mL/ac once to transplants immediately prior to anticipated cutworm feeding damage. Under conditions of severe insect pressure, applications should also be made to fence rows and a 15 m strip into nearby cover crops.

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Tomato (field)	Colorado potato beetle Potato flea beetle Tomato hornworm Variegated (climbing) cutworm	73-105 mL/ac	1 day	**Ground application:** Apply in sufficient water to give thorough coverage. Do not apply by air.
	Tomato fruitworm (Corn earworm)	105-148 mL/ac		**Ground application:** Apply using the higher rate for heavy infestations. NOTE: Tomato fruitworm that has entered the fruit will not be controlled. Repeat above sprays as needed.

POUNCE® 384EC INSECTICIDE

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
For the fruit crops listed below, mL per 1000 L is for use as a dilute foliar spray. Millilitres per acre is for use with concentrate sprays.				
Apple	Winter moth Eastern tent caterpillar Eyespotted bud moth	105-210 mL/ac (90-175 mL/ 1000 L)	7 days	**Apple bark border and Dogwood border:** Mix 22 mL in 100 L of water with 2 L of Superior Oil. When monitoring indicates adults are active (late June to early August) apply to apple trunks as drench spray to runoff using a knapsack, handgun, or airblast sprayer. A second application may be applied 14 days later.
	Tentiform leafminer Green fruitworm Apple maggot Codling moth Leafrollers Tarnished plant bug Mullein plant bug Lesser appleworm	210 mL/ac (175 mL/ 1000 L)		
	Apple bark borer Dogwood borer	mix 22mL in 100L of water with 2L of superior oil		
	Plum curculio White apple Leafhopper	145-210 mL/ac (125-175 mL/ 1000 L)		
Blueberries (vegetative year only)	Thrips	73 mL/ac	N/A (vegetative year)	Make one application between mid-May and early June when plants are 1-2 cm tall.

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Pear (Eastern Canada only)	Pear psylla (adults & nymphs) Codling moth Green fruit-worm	210 mL/ac (175 mL/ 1000 L)	7 days	
Pear (British Columbia)	Pre-bloom pear psylla (over-wintering adults) Codling moth	210 mL/ac (175/ 1000 L)		**Pre-bloom pear psylla (over-wintering adults):** Apply up to 1 cm green stage of pear foliage growth.
	Post-bloom pear psylla	210-405 mL/ac (175-350 mL/ 1000 L)	7-14 days	Do not apply less than 7 days before harvest at the 210 mL/ac (175 mL/1000 L) rate and less than 14 days before harvest at the 405 mL/ac (350 mL/1000 L) rate.
Peaches, nectarines	Oriental fruit moth	111-210 mL/ac (90-175 mL/ 1000 L)	7 days	
	Plum curculio Plant bugs	210 mL/ac (175 mL/ 1000 L)		
Plums	Plum curculio	210 mL/ac (175 mL/ 1000 L)		
Grapes	Grape berry moth	146 mL/ac (125 mL/ 1000 L)	21 days	**Climbing cutworm:** Apply in 50 gal/ac (450 L/Ha) spray water. Maximum 2 applications per year, 7-10 days apart. Apply at the first sign of cutworm damage in the spring. Apply spray mixture to the trunk and soil surface within a radius of 0.5 m of the trunk base in the evening. Use low rate for small cutworms and high rate for larger cutworms (2-3 cm). Do not disturb soil for 5 days after application.
	Grape leaf-hopper	71 mL/ac (90 mL/ 1000 L)		
	Climbing cutworm	73-146 mL/ac		

VERIMARK®

INSECTICIDE

The right start for a strong finish

- Delivers fast root uptake to protect the root system from early season pest damage
- Excellent cross-spectrum insect control of both sucking and chewing pests
- Verimark® insecticide is a highly effective IPM product that will help manage resistance
- Resistance Management - DO NOT make a foliar application of any Group 28 insecticide for a minimum of 60 days following an in-furrow or soil application of Verimark® insecticide.

Crops: Potatoes, brassica vegetables, root vegetables

Insecticide Group: Group 28

Packaging: 4 x 2.365 L jugs per case

Re-entry Period: 12 hours

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Potatoes	Colorado potato beetle Potato flea beetle (early season control of spring adults)	6.75-9 mL/ 100 m of row	n/a	**In-furrow application:** Apply as a narrow band in-furrow. For best results, direct spray on the seed pieces in the furrow. Thorough coverage of seed pieces is important to obtain optimum control.
Root Vegetables (except sugar beets), carrot, radish, turnip, ginseng, garden beet, etc.	Flea beetle (early season damage reduction)	6.75-9 mL/ 100 m of row	21 days	**In-furrow application:** Apply as a narrow band in-furrow. For best results, direct spray on the seed in the furrow. Thorough coverage of seed is important to obtain optimum control.
	Cabbage maggot	10-15 mL/ 100 m of row		
Brassica Leafy Vegetables (Group 5): Broccoli, Brussels sprouts, cabbage, cauliflower, kale, etc.	Imported cabbage worm Diamondback moth Cabbage looper Flea beetles (early season damage reduction) Swede midge (early season damage reduction)	304-405 mL/ac	n/a	Apply specified dosage as an in-furrow spray, in the transplant water, or as a banded surface application at the time of transplanting.
	Cabbage maggot	10-15 mL/ 100 m of row		

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Fungicide



Fungicide

FULLBACK® 125 SC FUNGICIDE

Always on the offensive

- One of the most systemic fungicides in its class
- Has both preventative and curative disease control activity
- Ideal choice as the foundation of any pest management program and can be easily tank-mixed to complement other modes of action

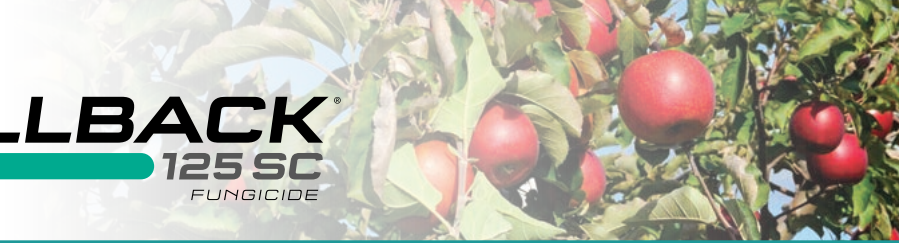
Crop: Apples, grapes, strawberries, dry soybeans

Fungicide Group: Group 3

Packaging: 4 x 1.5 L jugs per case

Re-entry Period: 12 hours

Disease Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Apple	Scab *(Venturia inaequalis)* (Green tip- cover sprays) Fullback® 125 SC fungicide tank-mixed with a protectant fungicide (Dithane™ DG 75 fungicide, Maestro® 80 DF fungicide or Supra® Captan 80 WDG)	385 mL/ac	14 days	Initiate applications at green tip or when environmental conditions are favourable for primary scab development. Applications should continue through the duration of primary scab. Spray Intervals: 7-10 days through petal fall, 10-14 days after petal fall.
	Powdery mildew *(Podosphaera leucotricha)* Quince rust *(Gymnosporngium clavipes)* Cedar apple rust *(Gymnosporangium juniperi-virginianae)*	237-355 mL/ac		Initiate applications at green tip and continue through cover sprays. Spray Intervals: 10-14 days.
Grape	Powdery mildew *(Erysiphe necator syn. Uncinula necator)* Black rot *(Guignardia bidwellii)*	237-296 mL/ac	14 days	Apply as a foliar spray beginning at 15 to 25 cm shoots. Use the higher rate and/or shorter intervals when disease pressure is high. Spray Intervals: 14 – 21 days for powdery mildew, 14 days for black rot.
Strawberry	Powdery mildew *(Sphaerotheca aphanis syn. S. macularis)*	207-415 mL/ac	8 days	Apply as a foliar spray when conditions are favourable for disease development. Use the higher rate and/or shorter spray intervals under severe sustained disease pressure. Non-ionic surfactant at 0.25% v/v may be added to the spray solution. Spray Intervals: 7-10 days.



Disease Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
Dry soybeans	Asian soybean rust *(Phakopsora pachyrhizi)*	207-415 mL/ac	21 days	Apply as a broadcast foliar spray when conditions are favourable for development of soybean rust. Repeat after first application if environmental conditions are favourable for continued disease development. May be tank-mixed with Headline® EC fungicide at the label rates for resistance management. Spray Interval: 21-35 days. Do not feed forage or hay to animals or permit animals to graze
	Frogeye leaf spot *(Cercospora sojina)* Cercospora blight and leaf spot *(Cercospora kikuchii)* Brown spot *(Septoria glycines)*	207-415 mL/ac	21 days	Apply as a broadcast foliar spray to soybean plants in R3 growth stage (early pod fill) or when environmental conditions are favourable for disease development. Apply second application if conditions are conducive for heavy disease development. Use the higher rate and shorter spray interval under severe sustained disease pressure. Spray Interval: 14-21 days. Do not feed forage or hay to animals or permit animals to graze.

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Other



Other

Herbicide Mixing Instructions

1. Start with a clean empty sprayer. Ensure sprayer is equipped with 50 mesh screens or filters.
2. Fill sprayer tank half full with clean water.
3. With agitator running, add the FMC products according to their formulation as shown below in the WAMLEGS chart. Add the products slowly. Ensure agitation reaches all parts of the tank.
4. If using a mix & fill tank, add the FMC product to as large a volume of water as possible in a chemical handler.
5. Add product to tank and agitate for 10 minutes.
6. Proceed with adding additional products as per the WAMLEGS chart and water while maintaining agitation. Ensure each product is agitated sufficiently, before proceeding to the next tank-mix partner.
7. For repeat tank loads, start off with an empty tank or ensure spray solution is reduced to 10% or less of the original volume.
8. (Recommended) For the last load of the day, add 10 L of household ammonia (containing at least 3% ammonia) to the tank heel PRIOR to the addition of the FMC product, water and glyphosate. Follow steps 2 through 6.
9. (Recommended) When spraying an FMC product for multiple days in a row, it is important at the end of each day to fill the sprayer with water, overnight, to prevent any film from developing on the spray tank walls.

Wettable powders, dispersible granules, soluble granules (WG, DF, SG, WP, SP)
Agitate tank-mix thoroughly
Micro-encapsulated suspensions (ME)
Liquid flowables and suspensions (SC, SL, SN, Li, SU, SE)
Emulsifiable concentrate formulations (EC)
- Fill spray tank nearly full with water

Glyphosate formulations
Surfactants
- Complete filling the spray tank to the desired level

Special mixing instructions for soluble granule (SG) herbicides when using a CHEM HANDLER:

1. Ensure the chem handler is clean (rinsed with ammonia).
2. For best results, add the SG herbicide to the top of the sprayer tank.
3. If you do use a chem handler, make sure that all of the SG herbicide is completely dissolved and injected into the main tank with agitation, before adding other chemicals.
4. Low water volumes in some chem handlers can cause the water to become saturated with soluble granules, leaving undissolved granules. In that case, rinse the chem handler with clean water before adding any other chemicals.
5. Always dissolve the soluble granules with agitation in the main tank before adding a tank-mix partner.

Note: Follow the clean-out procedure recommended for sprayer tanks for the chem handler.

The Benefits of Solumax® soluble granules

The convenience and benefits of a dry herbicide, that works like a liquid

Many sulfonylurea herbicides from FMC are formulated using the unique technology of Solumax® soluble granules, which deliver active ingredients that completely dissolve in water and create a clear solution. That means you get all the convenience and benefits of a dry herbicide that works just like a liquid.

Here are the three (3) key benefits:

1. **Solumax® will save you time, money and water with easier sprayer cleanout.**

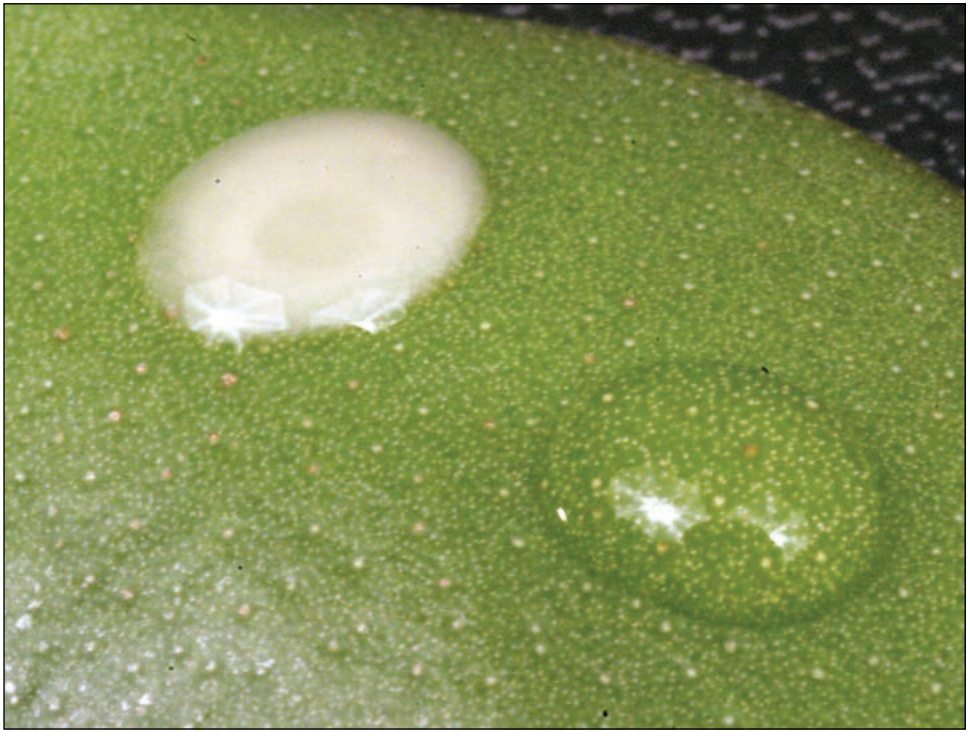
   Products powered by Solumax® fully dissolve into solution so less active ingredient adheres to the sides of the tank, and particles won't clog nozzles or become trapped in filters and other pinch points. In tests, cleanout times were reduced by up to 70% when compared to the older dry flowable herbicide formulations.

2. **Lower risk to sensitive crops.**

   It is easier to remove product residue from the tank, thus the impact to subsequently sprayed sensitive crops is minimized.

3. **Consistent weed control.**

   Solumax® increases the bioavailability of the active ingredient to the weed. The active is rapidly absorbed into the weed, which provides fast, effective and consistent weed control.



The clear liquid on the leaf surface is a herbicide powered by Solumax®. It is completely dissolved into a clear solution. The DF herbicide is cloudy because its particles are merely in suspension.

FMC

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Always read and follow label instructions. Member of CropLife Canada.