CROP PRODUCTION GUIDE 2025

BAYER

ROUNDUP
CANOLA
CEREALS
CORN
PULSES
SOYBEANS
RESOURCES

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BayerValue™

SAVINGS THAT GROW FROM SEED TO HARVEST

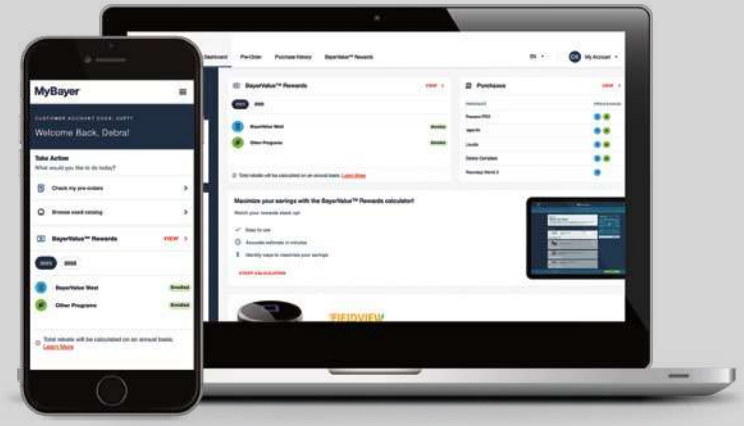
The BayerValue Rewards Program lets you maximize your savings on every acre. With a large selection of participating seed and crop protection products, it's never been easier to save.

QUICKLY CALCULATE YOUR SAVINGS

Try our rebate calculator on **GrowerPrograms.ca** to get an estimate of your savings and to guide you through all the qualifying products specific to your farming operation.

WELCOME TO MYBAYER

MyBayer is a new portal for managing your Crop Science Canada information, including tracking your past purchases, reviewing your BayerValue Rewards, and updating your personal information. Access it anywhere, anytime, with a few clicks. Create your MyBayer account today on **My.Bayer.ca** for easy and convenient access to your Bayer information.



NOT A BAYERVALUE MEMBER YET?

It only takes a few minutes. Sign up today and save on the crop protection products you need all-season long. Visit **GrowerPrograms.ca** or call **1 888-283-6847** to join BayerValue today. Terms and conditions apply.

ROUNDUP

Roundup Transorb HC

Roundup WeatherMAX with Transorb 2 Technology

Roundup Transorb® HC HERBICIDE

GROUP 9

HERBICIDE

CROPS FOR USE

Barley
Canola
Corn
Oats
Soybeans
Wheat

ACTIVE INGREDIENT

Glyphosate
- Group 9

Present as: Potassium salt of N-(phosphonomethyl) glycine {Potassium salt of glyphosate}

FORMULATION

Liquid concentrate herbicide
Water soluble
540 g/L formulation

PACKAGING

10 L jug = 8 to 30 ac.

RATE	TREATMENT
0.33 L/ac.	30 ac.
0.50 L/ac.	20 ac.
0.67 L/ac.	15 ac.
0.83 L/ac.	12 ac.
1.00 L/ac.	10 ac.
1.17 L/ac.	9 ac.
1.33 L/ac.	8 ac.

115 L Drum
450 L Tote
800 L Tote

WEEDS CONTROLLED

ANNUAL GRASS WEEDS
Barnyard grass
Bluegrass (annual)
Crabgrass (large)
Crabgrass (smooth)
Dodder
Downy brome grass
Fall panicum
Giant foxtail
Green foxtail
Persian darnel
Volunteer barley
Volunteer corn
Volunteer wheat
Wild oats
Wild proso millet
Yellow foxtail

ANNUAL BROADLEAF WEEDS
Canada fleabane
Chickweed
Cleavers
Cocklebur
Corn spurry
Cow cockle
Eastern black nightshade
Flixweed
Green smartweed
Hemp-nettle
Kochia
Lady's-thumb
Lamb's-quarters
Narrow-leaved hawk's beard
Narrow-leaved vetch
Night-flowering catchfly
Pennsylvania smartweed
Prickly lettuce
Ragweed
Redroot pigweed
Round-leaved mallow
Russian thistle
Shepherd's-purse
Smooth pigweed
Sow thistle (annual)
Stinkweed
Stork's-bill
Velvetleaf
Volunteer canola
Volunteer flax
Wild buckwheat
Wild mustard
Wild tomato

PERENNIAL GRASS WEEDS
Bluegrass (Canada)
Bluegrass (Kentucky)
Brome grass (smooth)
Cattail (common)
Cottongrass
Foxtail barley
Quackgrass
Wire-stemmed muhly
Yellow nutsedge

PERENNIAL BROADLEAF WEEDS
Absinth wormwood
Canada thistle
Curled dock
Dandelion
Field bindweed
Hemp dogbane
Hoary cress
Knotweed (Japanese)
Milkweed (common)
Perennial sow thistle
Poison ivy
Purple loosestrife
Toad flax
Volunteer alfalfa

For full details, please reference product label.

Features and Benefits

// Excellent consistency and weed control
// Trusted performance
// 60-minute rainfast guarantee*
// Product service and support you can rely on
// All weather warranty

*Rainfast guarantee, service and support and weather warranty provided through the RiskShield® Protection Package. Terms and conditions apply. Visit **roundup.ca** for more information

Application Tips

// Where possible, rotate the use of Roundup Transorb HC liquid herbicide or other Group 9 herbicides within a growing season (sequence), or among growing seasons with different herbicide groups that control the same weeds in a field
// Use tank mixtures with herbicides from a different Group when such use is permitted. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
// Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates, precision fertilizer application methods and timing that favours crops and not weeds), biological (weed-competitive crops or varieties) and other management practices

Roundup Transorb HC HERBICIDE

Application Tips *continued*

// Monitor weed populations after herbicide application for signs of resistance development (for example, determine if one weed species on the herbicide label is not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by using an alternative herbicide from a different Group.

// Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment before moving fields. Always plant clean seed.

// Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options

// Contact your local extension specialist, certified crop advisor or Bayer at 1 888-283-6847 for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes

Application Guidelines and Timing, Pre-Harvest Application

CROPS	PERCENT GRAIN MOISTURE	VISUAL SYMPTOMS
Barley Oats Wheat	Less than 30%	Hard dough stage; a thumbnail impression remains on seed
Canola	Less than 30%	Pods are green to yellow; most seeds are yellow to brown
Dry Beans	Less than 30%	Stems are green to brown in colour; pods are mature (yellow to brown in colour); 80% to 90% leaf drop (original leaves)
Flax	Less than 30%	Majority (75% to 80%) of bolls are brown
Forages	Not Applicable	3 to 7 days before last cut in final year of stand
Lentils	Less than 30%	Lowermost pods (bottom 15%) are brown and seeds rattle
Peas	Less than 30%	Majority (75% to 80%) of pods are brown
Soybeans	Less than 30%	Stems are green to brown in colour; pod tissue is dry and brown in appearance; 80% to 90% leaf drop

Apply 7 to 14 days before harvest to help ensure best weed control.

Water Volumes

For control of perennial weeds

// Apply Roundup Transorb HC in 20 to 120 L/ac. of clean water as a broadcast spray. Use no more than 275 kPa of pressure.

For control of annual weeds

// Apply Roundup Transorb HC in 20 to 40 L/ac. of clean water as a broadcast spray (except as otherwise stated on the label). Use no more than 275 kPa of pressure.

Rainfastness

// Rainfast 1 hour after application

Tank-Mix Procedures

// Fill spray tank three-quarters full of water

// Start agitation and run for the entire mixing and spraying operation

// Add required amount of the permissible tank-mix partner

// Flush herbicide loading tank and herbicide containers with water

// If using a herbicide loading system, ensure that the loading tank and lines to the pump are empty and flushed out with water before adding the tank-mix partner

// Add required amount of Roundup Transorb HC

// Flush herbicide loading tank and herbicide containers with water

// If using a herbicide loading system, ensure that the loading tank and lines to the pump are flushed with water and are empty before starting the spray operation

// Always start and end the mixing and spraying operation with a clean system

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

Roundup Advantage

// Scan this QR code to see Roundup Transorb HC in action

Roundup WeatherMAX® HERBICIDE with TRANSORB® II TECHNOLOGY

GROUP 9

HERBICIDE

CROPS FOR USE

Barley
Canola
Corn
Oats
Soybeans
Wheat

ACTIVE INGREDIENT

Glyphosate
- Group 9

Present as: Potassium salt of N-(phosphonomethyl) glycine {Potassium salt of glyphosate}

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10 L jug = 8 to 30 ac.

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Green foxtail
Persian darnel
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Wild buckwheat
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Wild tomato

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Hoary cress
Knotweed (Japanese)
Milkweed (common)
Perennial sow thistle
Poison ivy
Purple loosestrife
Toad flax
Volunteer alfalfa

For full details, please reference product label.

Features and Benefits

// Proven crop safety on Bayer glyphosate-tolerant trait systems
// Excellent and consistent weed control under ideal and tough conditions
// 30-minute rainfast guarantee*
// Enhanced efficiency with a 540 g/L formulation
// All weather warranty

*Rainfast guarantee, service and support and weather warranty provided through the RiskShield® Protection Package. Terms and conditions apply. Visit **roundup.ca** for more information.

Application Tips

// Where possible, rotate the use of Roundup WeatherMAX liquid herbicide with Transorb 2 Technology or other Group 9 herbicides within a growing season (sequence), or among growing seasons with different herbicide Groups that control the same weeds in a field
// Use tank mixtures with herbicides from a different Group when such use is permitted. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.

Roundup WeatherMAX® HERBICIDE with TRANSORB® II TECHNOLOGY

Application Tips *continued*

- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates, precision fertilizer application methods and timing that favours crops and not weeds), biological (weed-competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, determine if one weed species on the herbicide label is not being controlled). If resistance is suspected, prevent weed seed production in the affected area if possible and use an alternative herbicide from a different Group.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment before moving fields. Always plant clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options
- Contact your local extension specialist, certified crop advisor, or Bayer at 1 888-283-6847 for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes

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Soybeans	Less than 30%	Stems are green to brown in colour; pod tissue is dry and brown in appearance; 80% to 90% leaf drop

Apply 7 to 14 days before harvest to ensure best weed control.

Roundup WeatherMAX® HERBICIDE with TRANSORB® II TECHNOLOGY

Water Volumes

For control of perennial weeds

// Apply Roundup WeatherMAX with Transorb 2 Technology in 20 to 120 L/ac. of clean water as a broadcast spray, use no more than 275 kPa of pressure

For control of annual weeds

// Apply Roundup WeatherMAX in 20 to 40 L/ac. of clean water as a broadcast spray (except as otherwise stated on the label). Use no more than 275 kPa of pressure.

// Unless otherwise specified, use 0.67 L of Roundup WeatherMAX per 100 L of water. For best results on harder-to-control perennials (such as bindweed, Canada thistle, hemp dogbane, milkweed), use 1.34 L per 100 L of water.

Rainfastness

// Rainfast 30 minutes after application

Tank-Mix Procedures

// Fill spray tank three-quarters full of water

// Start agitation and run for the entire mixing and spraying operation

// Add required amount of the permissible tank-mix partner

// Flush herbicide loading tank and herbicide containers with water

// If using a herbicide loading system, ensure that the loading tank and lines to the pump are empty and flushed out with water before adding the tank-mix partner

// Add required amount of Roundup WeatherMAX

// Flush herbicide loading tank and herbicide containers with water

// If using a herbicide loading system, ensure that the loading tank and lines to the pump are flushed with water and are empty before starting the spray operation

// Always start and end the mixing and spraying operation with a clean system

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

CANOLA

Crop Staging Guide

Traits

TruFlex Canola

TruFlex® LibertyLink® Canola

Seed Treatments

BUTEO start

Prosper EverGol

Herbicides

Pardner

Roundup Transorb HC

Roundup WeatherMAX with Transorb 2 Technology

Fungicides

Proline

Proline GOLD

Insecticide

Decis

CANOLA CROP STAGING GUIDE

SEED TREATMENT

BUTEO start

PROSPER EverGol

APPLICATION TIMING

PARDNER

+

Roundup WeatherMAX HERBICIDE

OR

Roundup Transorb HC HERBICIDE

Roundup WeatherMAX HERBICIDE OR Roundup Transorb HC HERBICIDE

TruFlex CANOLA

TruFlex CANOLA LIBERTY LINK

PROLINE OR PROLINE GOLD

decis

Roundup WeatherMAX HERBICIDE OR TRANSORB II

OR

Roundup Transorb HC HERBICIDE

Application timing window

Optimal

Note: Please consult the individual product labels to ensure that your specific pest is controlled/suppressed in the appropriate crop.

*Roundup® herbicides are registered for preharvest weed control and are not to be used as a disiccant. Apply when the crop has 30% or less moisture content.

Ready When You Are

A new generation of farming is here with TruFlex Canola

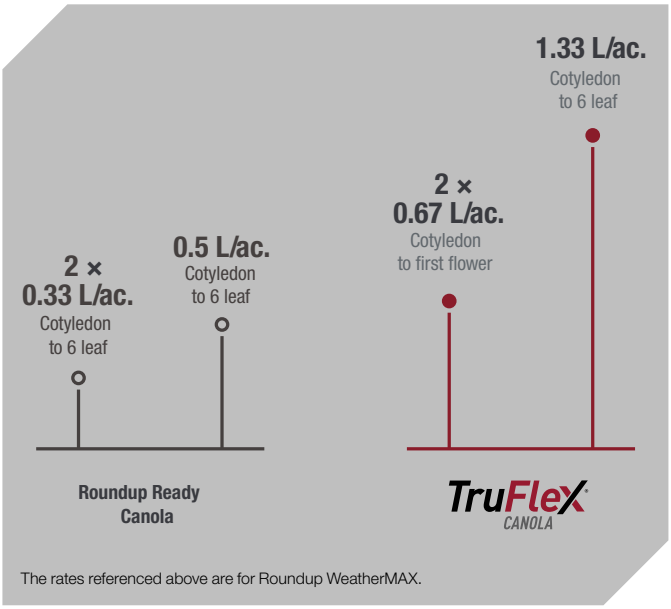
From seeding to harvest, there are only 106 days* to maximize yield potential. By growing TruFlex canola you can make the most of your season.

*The average number of days for canola to reach maturity is based on the 2010 Canola Glossy from the Manitoba Canola Growers Association. Maturity varies considerably depending on location, growing season and date of seeding.

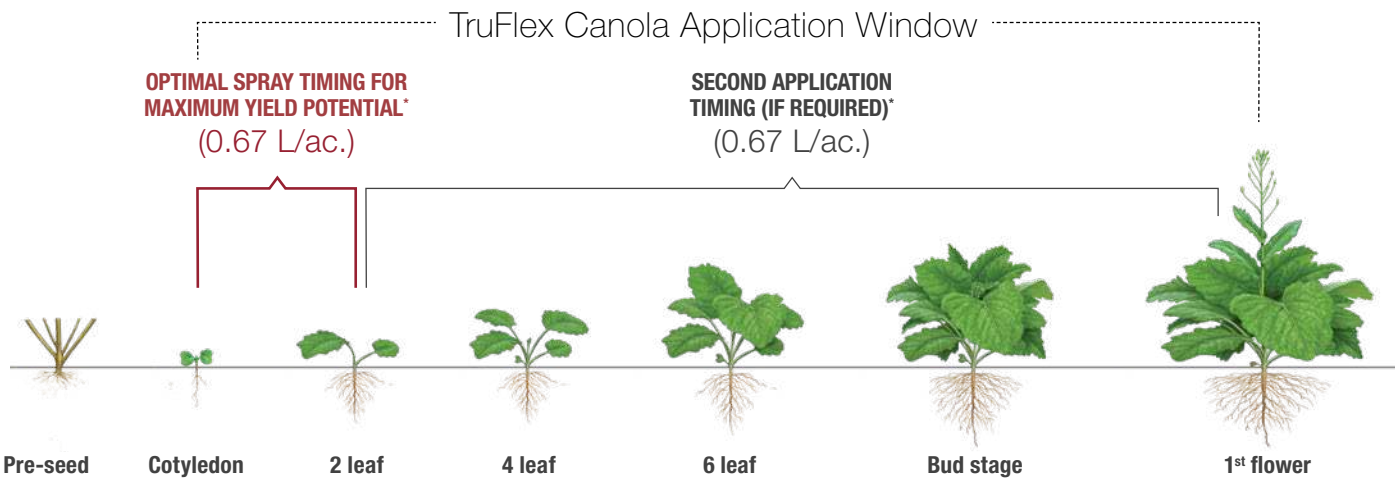
Flexibility in Spray Rates and Timing

TruFlex canola has a wider application window than Roundup Ready® canola. The TruFlex canola system also enables flexibility with Roundup WeatherMAX. To maximize your results, spray the first application of 0.67 L/ac. between the cotyledon and 2 leaf stage. This sets your crop up for the best start possible and helps it achieve its maximum yield potential. If another treatment is required, you have the flexibility to apply another application of 0.67 L/ac. up to first flower*. If spring weather doesn't cooperate, or you experience delays, use one application of 1.33 L/ac. up to the 6 leaf stage.

*First flower is when 50% of the plants in the field have no more than one flower.



The rates referenced above are for Roundup WeatherMAX.



*Bayer recommendation for ideal application timing.

TruFlex® CANOLA

Improved Control of Tough Weeds

TruFlex canola controls annual weeds, including harder-to-kill weeds such as cleavers, foxtail barley and wild buckwheat, and tough-to-control perennials such as dandelion.

System Comparison

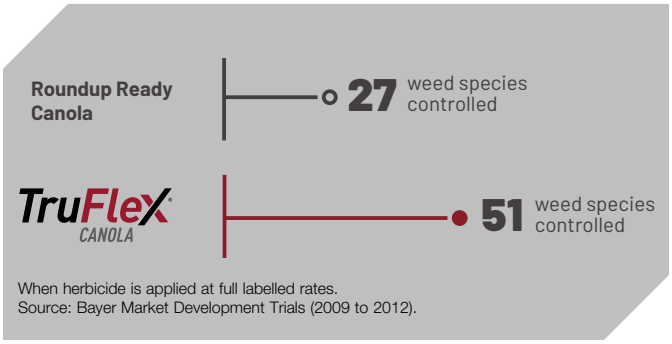
	DANDELION	FOXTAIL BARLEY	WILD BUCKWHEAT
Roundup Ready Canola	Suppression only	Season-long Control	1-3 leaf stage
TruFlex® CANOLA	Season-long control	Exceptional control*	Past 6 leaf stage

When herbicide is applied at full labelled rates.
Source: Bayer Market Development Trials (2010).
*99% Control of foxtail barley

// **Dandelion:** helps to enable season-long control
// **Foxtail barley:** allows for 99% control
// **Wild buckwheat:** allows for control of plants past the 6 leaf stage with Roundup WeatherMAX at a rate of approximately 1 L/ac. and large buckwheat (past 6 leaf) at a rate of 1.33 L/ac.

Controls 24 Additional Weed Species

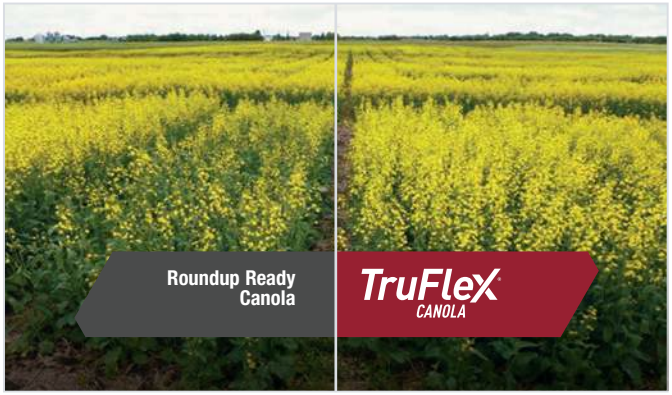
Being able to apply Roundup WeatherMAX in-crop as two applications of 0.67 L/ac. or as a single application of 1.33 L/ac. allows for the control of 24 additional weed species when compared to Roundup Ready canola. These additional weed species include biennial wormwood, common milkweed and yellow foxtail.



When herbicide is applied at full labelled rates.
Source: Bayer Market Development Trials (2009 to 2012).

Higher Yield Potential Through Genetics and Crop Safety

New genetics have packed a lot of yield potential into each TruFlex canola seed. New advances in trait technology help to enable better weed control and crop safety when compared to Roundup Ready canola. It's a winning combination that can lead to more yield potential at harvest time.



Source: Bayer crop safety trial (2012).

TruFlex® CANOLA LIBERTY LINK®

TruFlex® LibertyLink® Canola

A canola system for farmers who want to use all of the tools available to them, with the ability to adjust their canola system as needed depending on their weed spectrum.

// Provides an effective tool for managing and delaying herbicide-resistant weeds

// Allows for customized management techniques for each individual field to maximize weed control without giving up crop safety or application management

// Recommended use is to start with a Roundup branded product pre-seed burndown with a permissible pre-seed tank-mix partner, then spray 0.67 L/ac. of Roundup WeatherMAX, followed by 1.6 L/ac. of Liberty® herbicide

Controlling volunteer canola with TruFlex® LibertyLink® canola

// Practising other cultural methods will reduce the amount of volunteers (i.e., crop rotation, managing harvest losses)

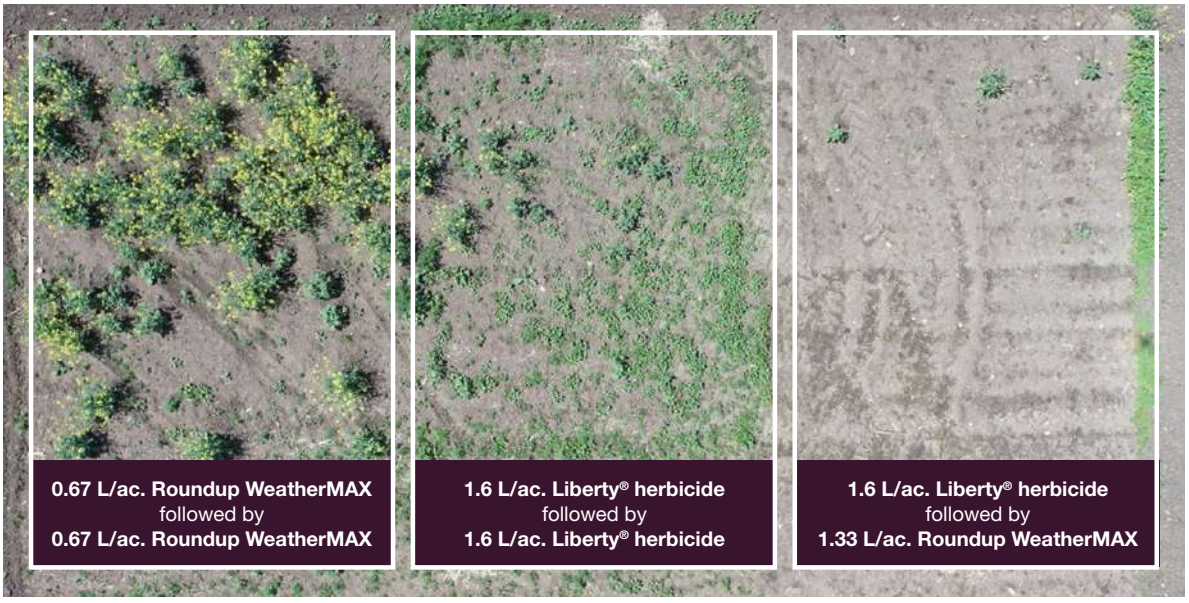
// Relying on glyphosate alone to control volunteer canola, regardless of the canola herbicide system, can lead to other issues, including an increased chance of developing resistance

// Always include an effective permissible tank-mix partner with Roundup where possible

// Numerous herbicides with different modes of actions are available to control volunteers

Each block received three different sequential applications that were spaced 17 days apart

The following photos simulate a typical window to apply in-crop herbicide, and some of the herbicide combinations that can be applied when using TruFlex® LibertyLink® canola.



Source: Bayer Research Trials, Carseland, AB (2020).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

BUTEO start

GROUP 4D

SEED TREATMENT

CROPS FOR USE	ACTIVE INGREDIENTS	FORMULATION	INSECTS CONTROLLED
Canola	**Flupyradifurone** - Group 4D	**Suspension** **PACKAGING** Commercially applied	**Crucifer flea beetle** **Striped flea beetle** For full details, please reference product label.

FIELDVIEW™

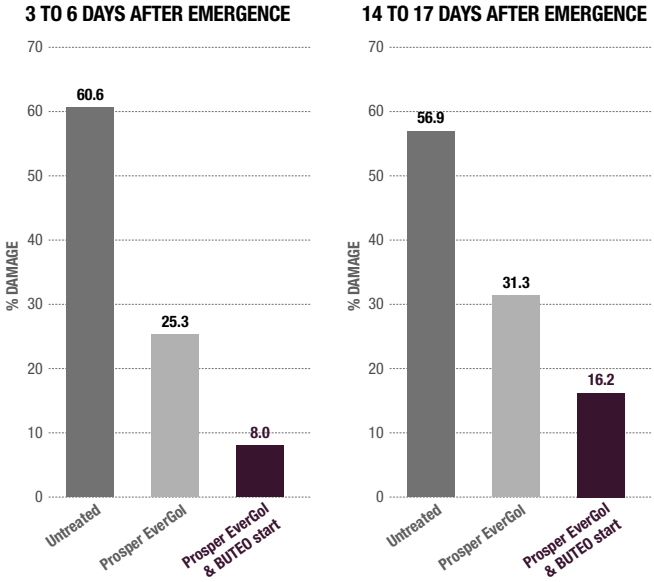
Field Health Imagery from June 22, 2020, shows more vegetation in the plots that were treated with BUTEO start.

Features and Benefits

- // Provides superior protection against crucifer and striped flea beetles, setting your crop up for the strongest start possible
- // Powerful Group 4D insecticide (flupyradifurone)
- // Rapid uptake and systemic translocation from cotyledon to leaf margins. This allows for a strong start, even in dry conditions.
- // Stronger plant development leads to quicker canopy, more uniform flowering and better maturity
- // Works great in combination with Prosper EverGol fungicide and insecticide seed treatment

Flea Beetle Damage Comparison Trials

BUTEO start seed treatment was tested in research trials in areas with heavy flea beetle pressure. It demonstrated superior performance in the trials.



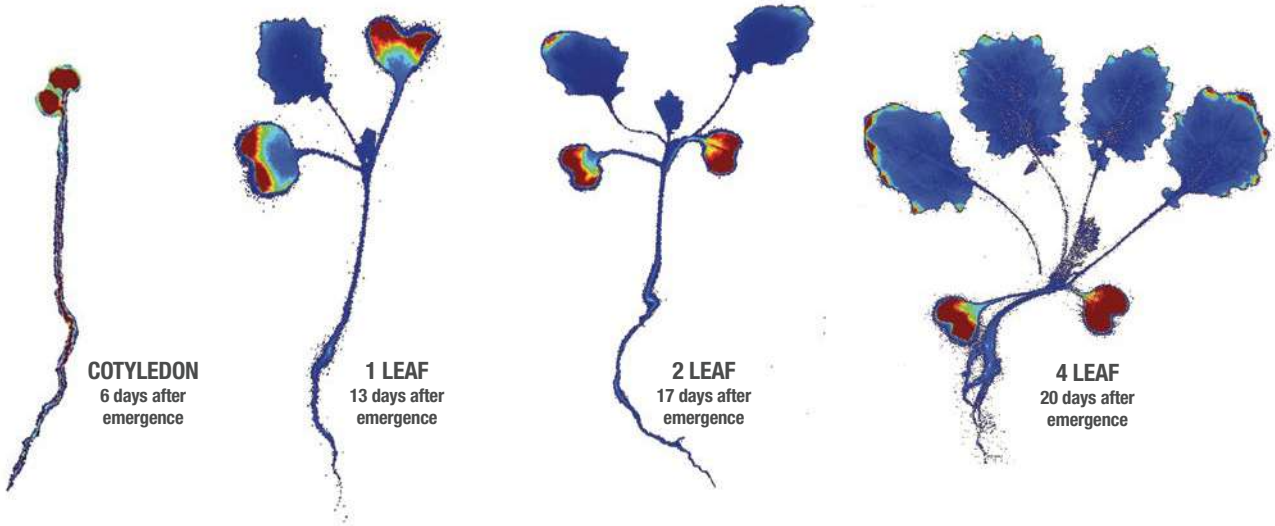
Source: 8 Bayer Field Solutions Trials (2019).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

BUTEO® start

Pest and Application Timing

CROP	PESTS CONTROLLED		APPLICATION
Canola	**CRUCIFER FLEA BEETLES** • Bluish-black • 2 to 3 mm (1/10 in.) long • Most prevalent in grassland areas of the northern prairies 	**STRIPED FLEA BEETLES** • Striped – black with two wavy yellow stripes along the back • 2 to 3 mm (1/10 in.) long • Most prevalent in all of the northern prairies 	Commercially applied

Systemic Translocation



Source: Bayer systemicity studies: Uptake and translocation of [14C]-flupyradifurone after seed treatment in oilseed rape.

BUTEO start seed treatment protects canola from the cotyledon to the 3 leaf stage – the time when seedlings are the most susceptible to feeding damage from flea beetles. The power of its Group 4D insecticide, flupyradifurone, is its rapid uptake and ability to translocate into the cotyledon immediately. From there, it moves into the new leaves with the highest level of concentration travelling to the leaf margins. This early distribution thoroughly protects the plant, thereby allowing it to grow and develop a stronger plant stand even in dry conditions and in areas of high flea beetle pressure.

BUTEO start Advantage

Trials demonstrated the superior flea beetle protection that BUTEO start provides. These plots were seeded the same day. The plot treated with BUTEO start showed a larger and fuller canopy at the flowering stage, while the other plot treatments were behind with fewer plants stands.

Source: Bayer Field Solutions Trials (photos taken July 8, 2019, Rosthern, SK). Treated seeds were seeded the same day.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

PROSPER® EverGol®

SEED TREATMENT

CROPS FOR USE

Canola
Mustard

ACTIVE INGREDIENTS

Clothianidin
- Group 4

Metalaxyl
- Group 4

Penflufen
- Group 7

Trifloxystrobin
- Group 11

FORMULATION

Suspension concentrate

DISEASES CONTROLLED

Alternaria
(seed-borne)

Blackleg
(seed-borne)

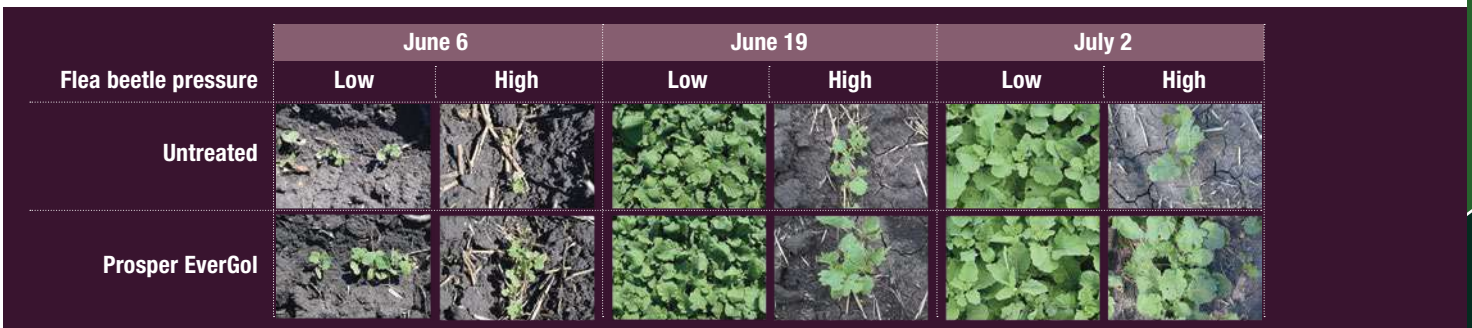
Seed rot / pre-emergent damping-off and post-emergent damping-off, seedling blight and early-season root rot
- Caused by soil-borne *Fusarium* spp., including *Fusarium graminearum* and *Rhizoctonia solani*

INSECTS CONTROLLED

Flea beetle

For full details, please reference product label.

Give Your Canola the Protection It Deserves



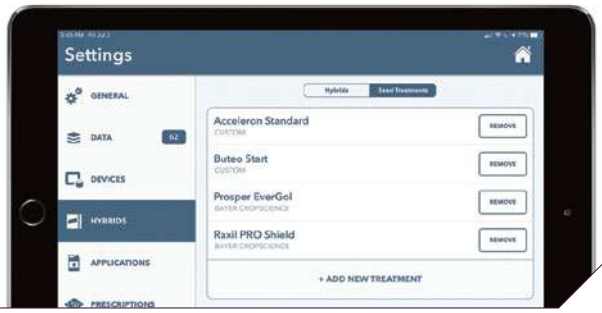
Pictures taken during 2015 cropping season. Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Prosper EverGol is a systemic seed treatment that is registered for canola and mustard. In addition to the highly effective insecticide clothianidin, which controls against flea beetles, Prosper EverGol also contains three fungicidal active ingredients that control the most damaging diseases.*

* See label for diseases controlled.

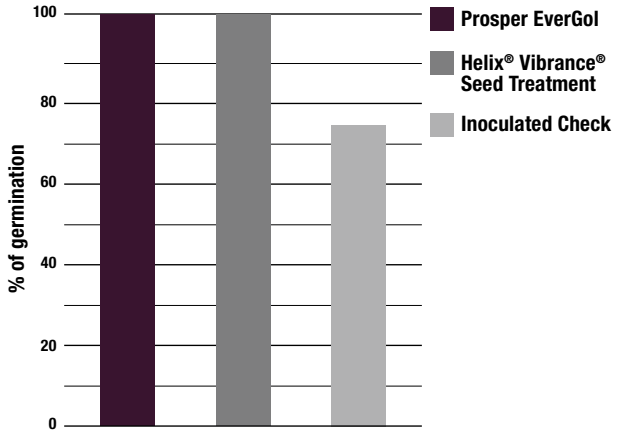
FIELDVIEW™

Tracking your seed treatment at seeding time can help you monitor seedling and plant growth throughout the season, as well as evaluate management practices and yields at harvest.



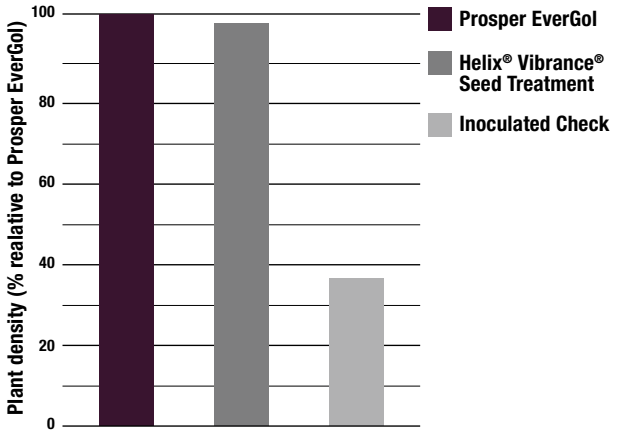
PROSPER® EverGol®

Grain Yield in Disease Inoculated* Field Trials



Source: 7 Bayer Agronomic Development Trials (2013 and 2014).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables. **Rhizoctonia, Fusarium* spp.

Plant Stand in Disease Inoculated* Field Trials



Source: 9 Bayer Agronomic Development and Licensing Trials (2013 and 2014).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables. **Rhizoctonia, Fusarium* spp.

Features and Benefits

// Disease protection with outstanding control of fusarium, pythium, rhizoctonia and other yield-robbing diseases

// Higher yield potential through healthier plant stands

// Strong seed safety

// Prosper EverGol protects your canola against the most damaging diseases and insects, including:

- Damping-off and early-season root rot caused by fusarium, pythium and rhizoctonia; seed rot and seedling blight
- Seed-borne diseases
- Flea beetles, up to the 4 leaf stage of canola

Flea beetles

Flea beetles can do a lot of harm in a short period of time. They locate and defoliate seedlings, as well as feed directly on the stems of plants shortly after crop emergence to create significant crop damage. Feeding damage from flea beetles can result in defoliation, plant injury, delayed maturity and early stress on crop and/or death – all of which lead to yield loss.

WHAT IS EVERGOL?

With its high performing Group 7 active ingredient penflufen, EverGol offers your crop outstanding defence against diseases such as *Rhizoctonia solani*. As a testament to its efficacy, penflufen represents the first fungicidal active from Bayer specifically engineered for use in seed treatments.

Seedling disease complex, seed rot, root rot, seedling blight, damping-off

Fusarium spp., *Pythium* spp. and *Rhizoctonia solani* are soil-borne pathogens that cause serious problems, both before and after crop emergence. Rhizoctonia is considered the most serious disease affecting canola stand establishment. Seed will decay in the soil and fail to emerge, or seedlings will shrivel and die shortly after emergence. Stems appear water-soaked or constricted at or below the soil line, resulting in stand thinning and bare patches in a field.

Seed-borne disease

Seed-borne diseases, such as alternaria and blackleg *(Leptoshpaeria maculans)*, can cause major yield loss. Alternaria affects all stages of growth through the entire plant (excluding the roots) and can cause serious damage in both wet and dry summers. Infected seeds may rot in the ground or produce infected seedlings with dark spots on the cotyledons. Leaf spots usually appear in early summer on lower leaves and produce spores, which later infect the pods and stems. Blackleg kills seedlings shortly after emergence, with symptoms that may be mistaken for damping-off. It also attacks leaves, stems and pods causing cankers, girdling and lodging. Infections occurring before the 6 leaf stage cause the most severe yield loss.

PARDNER®

GROUP 6

HERBICIDE

CROPS FOR USE

Alfalfa
AB, SK, MB
(Seedling and established)
Barley
Canary seed
Canola
(Pre-seed up to 24 hours before seeding)
Corn (field, sweet)
Fall rye
Flax
Grain and forage sorghum
Millet
Oats
Seedling grasses
Triticale
Wheat

ACTIVE INGREDIENT

Bromoxynil
- Group 6

FORMULATION

Liquid-emulsifiable concentrate

PACKAGING

8 L jug = 20 ac.
(one 2 × 8 L case treats 40 ac.)
128 L drum = 320 ac.
(BC, AB, SK, MB)

WEEDS CONTROLLED

American nightshade
(seedlings up to 4 leaf stage)
Bluebur
(seedlings up to 4 leaf stage)
Cocklebur
(seedlings up to 4 leaf stage)
Common buckwheat
(seedlings up to 8 leaf stage)
Common groundsel
(seedlings up to 8 leaf stage)
Common ragweed
(seedlings up to 4 leaf stage)
Cow cockle[1]
(seedlings up to 4 leaf stage)
Green smartweed
(seedlings up to 4 leaf stage)
Kochia
(including glyphosate-resistant kochia, seedlings up to 4 leaf stage or 5 cm in height)
Lady's-thumb
(seedlings up to 4 leaf stage)
Lamb's-quarters
(seedlings up to 8 leaf stage)
Pale smartweed
(seedlings up to 4 leaf stage)
Pigweed
(seedlings up to 4 leaf stage)
Russian thistle
(seedlings up to 4 leaf stage or 5 cm in height)
Stinkweed[1]
(seedlings up to 4 leaf stage)
Tartary buckwheat
(seedlings up to 8 leaf stage)
Velvetleaf
(seedlings up to 4 leaf stage)
Volunteer canola
(including herbicide-tolerant varieties, seedlings up to 4 leaf stage)
Wild buckwheat
(seedlings up to 8 leaf stage)
Wild mustard[1]
(seedlings up to 4 leaf stage)

[1] In normal conditions, will control up to the 4 leaf stage. Plants beyond this stage are unlikely to be controlled.

For full details, please reference product label.

Features and Benefits

// Pardner herbicide is registered as a pre-seed, tank-mix partner with Roundup herbicides and many other similar glyphosate formulations for control of all volunteer canola, even if they are tolerant to other herbicide groups
// No re-cropping restrictions
// Excellent crop safety
// Registered for use on various crops and forage grasses

Application Guidelines

Rate

// Registered application rate: 400 mL to 500 mL/ac.

Application Tips

// Spray coverage on weeds is very important
// Always travel at the proper speed
// Since Pardner is a contact herbicide, use nozzles designed to achieve a medium to coarse droplet size (approximately 250 to 350 microns). Avoid larger, higher-output nozzles that increase the droplet size (greater than 350 microns) because it can potentially reduce weed control from inadequate weed coverage.

Application Timing

// **Canola** Pre-seed prior to seeding canola. Allow 1 day after application before tillage or seeding.
// **Flax** 5 to 10 cm tall

Water Volumes

BC, AB, SK, MB

Ground

// Minimum of 10 gal./ac. (94 L/ha)
// For volunteer canola control in early season: 5 to 10 gal./ac. (47 to 94 L/ha) of water
// Flax: Minimum of 10 gal./ac. (94 L/ha)

ON, QC, NB, NS, NFLD, PEI

// Minimum of 15 gal./ac. (140 L/ha)

Rainfastness

// Rainfast 1 hour after application

Tank Mixes

// Tank mix with Roundup in pre-seed applications to control herbicide-tolerant volunteer canola
// Many tank-mix options available for grass weed control and enhanced broadleaf weed control
// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

Roundup Transorb® HC HERBICIDE

GROUP 9

HERBICIDE

In-Crop Application for TruFlex and TruFlex® LibertyLink® Canola

Rate and specific application instructions for weed control in TruFlex canola

RATE (L/AC.)	GROWTH STAGE OF CROP	WEEDS CONTROLLED	COMMENTS (APPLY IN 20 TO 40 L/AC. OF WATER)
0.22 to 0.33 Single application	Emergence to first flower*	**Annual Grass Weeds** Barnyard grass, green foxtail, volunteer barley, volunteer wheat, wild oats **Annual Broadleaf Weeds** Chickweed, cleavers, corn spurry, cow cockle[1], flixweed, hemp-nettle, kochia, lady's-thumb, lamb's-quarters, narrow-leaved hawk's beard, night-flowering catchfly[1], non-Roundup Ready volunteer canola (rapeseed), redroot pigweed, Russian thistle, shepherd's-purse[1], smartweed[1], stinkweed, stork's-bill, wild buckwheat, wild mustard, wild tomato **Perennials (suppression)** Canada thistle, dandelion, perennial sow thistle **Perennials (season-long control)** Quackgrass	[1]The 0.22 L/ac. rate can be used for control of cow cockle, night-flowering catchfly and shepherd's-purse at the 1 to 3 leaf stage of the crop or for control of smartweed at the 4 to 6 leaf stage. Repeat applications may be required if a second flush of weeds germinate prior to canopy closure.
0.51 Single application	Emergence to first flower*	**All the above weeds plus:** **Perennials (season-long control)** Canada thistle, perennial sow thistle	
0.33 Sequential applications	Emergence to first flower*	**All the above weeds plus:** **Annual Broadleaf Weeds** Round-leaved mallow	For sequential applications, ensure the crop has not advanced beyond the recommended growth stage.
0.67 Single application	Emergence to first flower*	**All the above weeds plus:** Biennial wormwood[2], cocklebur, common ragweed, crabgrass (smooth and large), eastern black nightshade, fall panicum, foxtail (yellow and giant), foxtail barley, Pennsylvania smartweed, smooth pigweed, velvetleaf, volunteer adzuki beans[3], wild proso millet, wire-stemmed muhly **(Suppression only)** Common milkweed, yellow nutsedge	[2]Biennial wormwood should be at 2 to 8 leaf stage and actively growing. [3]For control of volunteer adzuki beans (unifoliate to the fourth trifoliate leaf stage) apply 0.67 L/ac. A second 0.67 L/ac. application may be used for late flushes emerging after the initial treatment. Adzuki beans should be at unifoliate to fourth trifoliate leaf stage and actively growing.
0.67 Sequential applications	Emergence to first flower*	**All the above weeds plus:** **Perennials (season-long control)** Bur cucumber, common milkweed, dandelion, field bindweed, horse nettle, tall waterhemp, yellow nutsedge	A sequential application may be made at least 2 weeks after the first application. A second 0.67 L/ac. application may be used for late weed flushes emerging after the initial treatment. Common milkweed should be 15 to 60 cm in height and actively growing. Yellow nutsedge should be 5 to 15 cm in height and actively growing. Horse nettle (2 to 12 leaf stage) Tall waterhemp up to and including the 18 leaf stage. Bur cucumber from the 1 to 18 leaf stage.
1.33 Single application	Emergence to 6 leaf	All the above weeds	One application allowed in crop per season.

*When 50% of the plants in the field have more than one flower.

Ensure the crop has not advanced beyond the recommended growth stage for all applications. Repeat applications may be required if a second flush of weeds germinates prior to canopy closure. Maximum 1.33 L/ac. is allowed for post-emergence use.

Roundup Transorb® HC HERBICIDE

In-Crop Application on Roundup Ready Canola

Rate and specific application instructions for control of annual and perennial weeds in Roundup Ready canola varieties

RATE (L/AC.)	GROWTH STAGE OF CROP	WEEDS CONTROLLED	COMMENTS (APPLY IN 20 TO 40 L/AC. OF WATER)
0.22 to 0.51 Single application	0 to 6 leaf	**Annual Grass Weeds** Barnyard grass, green foxtail, volunteer barley, volunteer wheat, wild oats **Annual Broadleaf Weeds** Chickweed, cleavers[1], corn spurry, cow cockle[1], flixweed[1], hemp-nettle, kochia, lady's-thumb, lamb's-quarters, narrow-leaved hawk's beard[1], night-flowering catchfly[1], non-Roundup Ready volunteer canola (rapeseed), redroot pigweed, round-leaved mallow[3], Russian thistle, shepherd's-purse[1], smartweed[1], stinkweed, stork's-bill[1], wild buckwheat[1], wild mustard, wild tomato **Perennials (suppression)[2]** Canada thistle, dandelion, perennial sow thistle **Perennials (season-long control)** Canada thistle[4], foxtail barley[3], perennial sow thistle[4], quackgrass[2]	Repeat applications may be required if a second flush of weeds germinates prior to canopy closure. For single or sequential applications, ensure the crop has not advanced beyond the recommended growth stage. Maximum single pass application of 0.50 L/ac. or two separate applications of 0.33 L/ac. for post-emergence use. [1]Use the 0.33 L/ac. rate for control of these weeds at all crop growth stages. The lower rate can be used to control cow cockle, night-flowering catchfly and shepherd's-purse at the 1 to 3 leaf stage of the crop or for control of smartweed at the 4 to 6 leaf stage. [2]A single application of 0.33 L/ac. is required. [3]Sequential applications of 0.33 L/ac. are required. [4]Sequential applications of 0.33 L/ac. are required or a single application of 0.51 L/ac.
0.33 Sequential applications	0 to 6 leaf	**Annual Grass Weeds** Barnyard grass, green foxtail, volunteer barley, volunteer wheat, wild oats **Annual Broadleaf Weeds** Chickweed, cleavers[1], corn spurry, cow cockle[1], flixweed[1], hemp-nettle, kochia, lady's-thumb, lamb's-quarters, narrow-leaved hawk's beard[1], night-flowering catchfly[1], non-Roundup Ready volunteer canola (rapeseed), redroot pigweed, round-leaved mallow[3], Russian thistle, shepherd's-purse[1], smartweed[1], stinkweed, stork's-bill[1], wild buckwheat[1], wild mustard, wild tomato **Perennials (suppression)[2]** Canada thistle, dandelion, perennial sow thistle **Perennials (season-long control)** Canada thistle[4], foxtail barley[3], perennial sow thistle[4], quackgrass[2]	Repeat applications may be required if a second flush of weeds germinates prior to canopy closure. For single or sequential applications, ensure the crop has not advanced beyond the recommended growth stage. Maximum single pass application of 0.50 L/ac. or two separate applications of 0.33 L/ac. for post-emergence use. [1]Use the 0.33 L/ac. rate for control of these weeds at all crop growth stages. The lower rate can be used to control cow cockle, night-flowering catchfly and shepherd's-purse at the 1 to 3 leaf stage of the crop or for control of smartweed at the 4 to 6 leaf stage. [2]A single application of 0.33 L/ac. is required [3]Sequential applications of 0.33 L/ac. are required. [4]Sequential applications of 0.33 L/ac. are required or a single application of 0.51 L/ac.

Roundup WeatherMAX® HERBICIDE with TRANSORB® II TECHNOLOGY

GROUP 9

HERBICIDE

In-Crop Application for TruFlex and TruFlex® LibertyLink® Canola

Rate and specific application instructions for weed control for TruFlex canola

RATE (L/AC.)	GROWTH STAGE OF CROP	WEEDS CONTROLLED	COMMENTS (APPLY IN 20 TO 40 L/AC. OF WATER)
0.22 to 0.33 Single application	Emergence to first flower*	**Annual Grass Weeds** Barnyard grass, green foxtail, volunteer barley, volunteer wheat, wild oats **Annual Broadleaf Weeds** Chickweed, cleavers, corn spurry, cow cockle[1], flixweed, hemp-nettle, kochia, lady's-thumb, lamb's-quarters, narrow-leaved hawk's beard, night-flowering catchfly[1], non-Roundup Ready volunteer canola (rapeseed), redroot pigweed, Russian thistle, shepherd's-purse[1], smartweed[1], stinkweed, stork's-bill, wild buckwheat, wild mustard, wild tomato **Perennials (suppression)** Canada thistle, dandelion, perennial sow thistle **Perennials (season-long control)** Quackgrass	[1]The 0.22 L/ac. rate can be used to control cow cockle, night-flowering catchfly and shepherd's purse at the 1 to 3 leaf stage of the crop or to control smartweed at the 4 to 6 leaf stage. Repeat applications may be required if a second flush of weeds germinate prior to canopy closure.
0.51 Single application	Emergence to first flower*	**All the above weeds plus:** **Perennials (season-long control)** Canada thistle, perennial sow thistle	
0.33 Sequential applications	Emergence to first flower*	**All the above weeds plus:** **Annual Broadleaf Weeds** Round-leaved mallow **Perennials (season-long control)** Canada thistle, foxtail barley	For sequential applications, ensure the crop has not advanced beyond the recommended growth stage.
0.67 Single application	Emergence to first flower*	**All the above weeds plus:** Biennial wormwood[2], cocklebur, common ragweed, crabgrass (smooth and large), eastern black nightshade, fall panicum, foxtail (giant and yellow), foxtail barley, Pennsylvania smartweed, smooth pigweed, velvetleaf, volunteer adzuki beans[3], wild proso millet, wire-stem muhly **(Suppression only)** Common milkweed, yellow nutsedge	[2]Biennial wormwood should be at 2 to 8 leaf stage and actively growing. [3]For control of volunteer adzuki beans (unifoliate to the fourth trifoliate leaf stage) apply 0.67 L/ac. A second 0.67 L/ac. application may be used for late flushes emerging after the initial treatment. Adzuki beans should be at unifoliate to fourth trifoliate leaf stage and actively growing.
0.67 Sequential applications	Emergence to first flower*	**All the above weeds plus:** **Perennials (season-long control)** Bur cucumber, common milkweed, dandelion, field bindweed, horse nettle, tall waterhemp, yellow nutsedge	A sequential application may be made at least 2 weeks after the first application. A second 0.67 L/ac. application may be used for late weed flushes emerging after the initial treatment. Common milkweed should be 15 to 60 cm in height and actively growing. Yellow nutsedge should be 5 to 15 cm in height and actively growing. Horse nettle (2 to 12 leaf stage). Tall waterhemp up to and including the 18 leaf stage. Bur cucumber from the 1 to 18 leaf stage.
1.33 Single application	Emergence to 6 leaf	All the above weeds	One application allowed in crop per season.

*When 50% of the plants in the field have more than one flower.

Ensure the crop has not advanced beyond the recommended growth stage for all applications. Repeat applications may be required if a second flush of weeds germinates prior to canopy closure. Maximum 1.33 L/ac. is allowed for post-emergence use.

Roundup WeatherMAX® HERBICIDE with TRANSORB® II TECHNOLOGY

In-Crop Application on Roundup Ready Canola

Rate and specific application instructions of control of annual and perennial weeds in Roundup Ready canola varieties

RATE (L/AC.)	GROWTH STAGE OF CROP	WEEDS CONTROLLED	COMMENTS (APPLY IN 20 TO 40 L/AC. OF WATER)
0.22 to 0.51 Single application	0 to 6 leaf	**Annual Grass Weeds** Barnyard grass, green foxtail, volunteer barley, volunteer wheat, wild oats **Annual Broadleaf Weeds** Chickweed, cleavers[1], corn spurry, cow cockle[1], flixweed[1], hemp-nettle, kochia, lady's-thumb, lamb's-quarters, narrow-leaved hawk's beard[1], night-flowering catchfly[1], non-Roundup Ready volunteer canola (rapeseed), redroot pigweed, round-leaved mallow[3], Russian thistle, shepherd's-purse[1], smartweed[1], stinkweed, stork's-bill[1], wild buckwheat[1], wild mustard, wild tomato **Perennials (suppression)[2]** Canada thistle, dandelion, perennial sow thistle **Perennials (season-long control)** Canada thistle[4], foxtail barley[3], perennial sow thistle[4], quackgrass[2]	Repeat applications may be required if a second flush of weeds germinates prior to canopy closure. Ensure the crop has not advanced beyond the recommended growth stage. Maximum single pass application of 0.50 L/ac. or two separate applications 0.33 L/ac. for post emergence use. [1]Use the 0.33 L/ac. rate to control these weeds at all crop growth stages. The lower rate can be used to control cow cockle, night-flowering catchfly and shepherd's-purse at the 1 to 3 leaf stage of the crop or for control of smartweed at the 4 to 6 leaf stage. [2]A single application of 0.33 L/ac. is required. [3]Sequential applications of 0.33 L/ac. are required. [4]Sequential applications of 0.33 L/ac. are required or a single application of 0.51 L/ac.
0.33 Sequential applications	0 to 6 leaf	**Annual Grass Weeds** Barnyard grass, green foxtail, volunteer barley, volunteer wheat, wild oats **Annual Broadleaf Weeds** Chickweed, cleavers[1], corn spurry, cow cockle[1], flixweed[1], hemp-nettle, kochia, lady's-thumb, lamb's-quarters, narrow-leaved hawk's beard[1], night-flowering catchfly[1], non-Roundup Ready volunteer canola (rapeseed), redroot pigweed, round-leaved mallow[3], Russian thistle, shepherd's-purse[1], smartweed[1], stinkweed, stork's-bill[1], wild buckwheat[1], wild mustard, wild tomato **Perennials (suppression)[2]** Canada thistle, dandelion, perennial sow thistle **Perennials (season-long control)** Canada thistle[4], foxtail barley[3], perennial sow thistle[4], quackgrass[2]	Repeat applications may be required if a second flush of weeds germinates prior to canopy closure. Ensure the crop has not advanced beyond the recommended growth stage. Maximum single pass application of 0.50 L/ac. or two separate applications 0.33 L/ac. for post emergence use. [1]Use the 0.33 L/ac. rate to control these weeds at all crop growth stages. The lower rate can be used to control cow cockle, night-flowering catchfly and shepherd's-purse at the 1 to 3 leaf stage of the crop or for control of smartweed at the 4 to 6 leaf stage. [2]A single application of 0.33 L/ac. is required. [3]Sequential applications of 0.33 L/ac. are required. [4]Sequential applications of 0.33 L/ac. are required or a single application of 0.51 L/ac.

PROLINE®

GROUP 3

FUNGICIDE

CROPS FOR USE

Canola
Chickpeas
Corn
(field, pop, seed and sweet)
Flax
Lentils
Mustard
Safflower
Sunflowers

ACTIVE INGREDIENT

Prothioconazole
- Group 3

FORMULATION

Suspension concentrate

PACKAGING

5.1 L jug = 40 ac.

DISEASES CONTROLLED

CANOLA
Sclerotinia

FLAX
Sclerotinia

MUSTARD
Sclerotinia

SAFFLOWER AND SUNFLOWER
Rust

For full details, please reference product label.

Features and Benefits

// Easy to use liquid formulation
// Powerful prothioconazole reduces sclerotinia infection rates and provides growers with the satisfaction of knowing that their canola is protected from yield-robbing sclerotinia
// Consistently provides outstanding sclerotinia protection, while maximizing yield potential under all types of tested conditions
// Registered for two applications in canola if disease persists or weather conditions are favourable for development of disease
// Can be applied by ground or air

Application Guidelines

// Spray screens should be no finer than 50 micron mesh

Rate

// Refer to the timing guide on page 24 for details on the optimum time to spray Proline fungicide
// Canola, flax and mustard: 128 mL/ac. (40 ac./jug), standard rate
// Sunflowers: 170 mL/ac. (30 ac./jug)

Application Timing

Canola, flax and mustard

// Apply Proline when the crop is in the 20 to 50% bloom stage. For optimal protection, apply fungicide prior to the petals beginning to fall. This allows for the maximum number of petals to be protected.

Safflower and sunflower

// Apply Proline when the crop is in the 10 to 50% disk flower bloom stage

PROLINE®

Water Volumes

BC, AB, SK, MB
Ground
// Minimum of 10 gal./ac. (94 L/ha)

Aerial
// Minimum of 4.5 gal./ac. (42 L/ha)

ON, QC, NB, NS, NFLD, PEI
Ground
// Minimum of 19 gal./ac. (178 L/ha)

Aerial
// Minimum of 5 gal./ac. (47 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

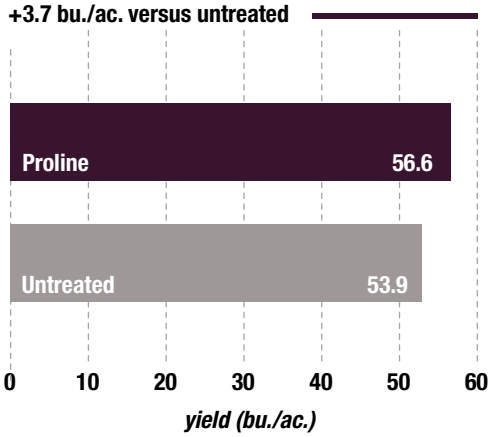
CROP	PRE-HARVEST INTERVAL (DAYS)
Canola Flax (linseed) Oriental mustard Rapeseed *(Brassica carinata)*	36
Safflower Sunflower	45

For all other crops that are registered but not listed in the table, consult the Proline label for complete details. Crops not listed include barley, buckwheat, oats, pearl millet, proso millet, rye, triticale, wheat (durum, spring and winter), as well as many types of berries, cucurbits, melons and squash.

Storage

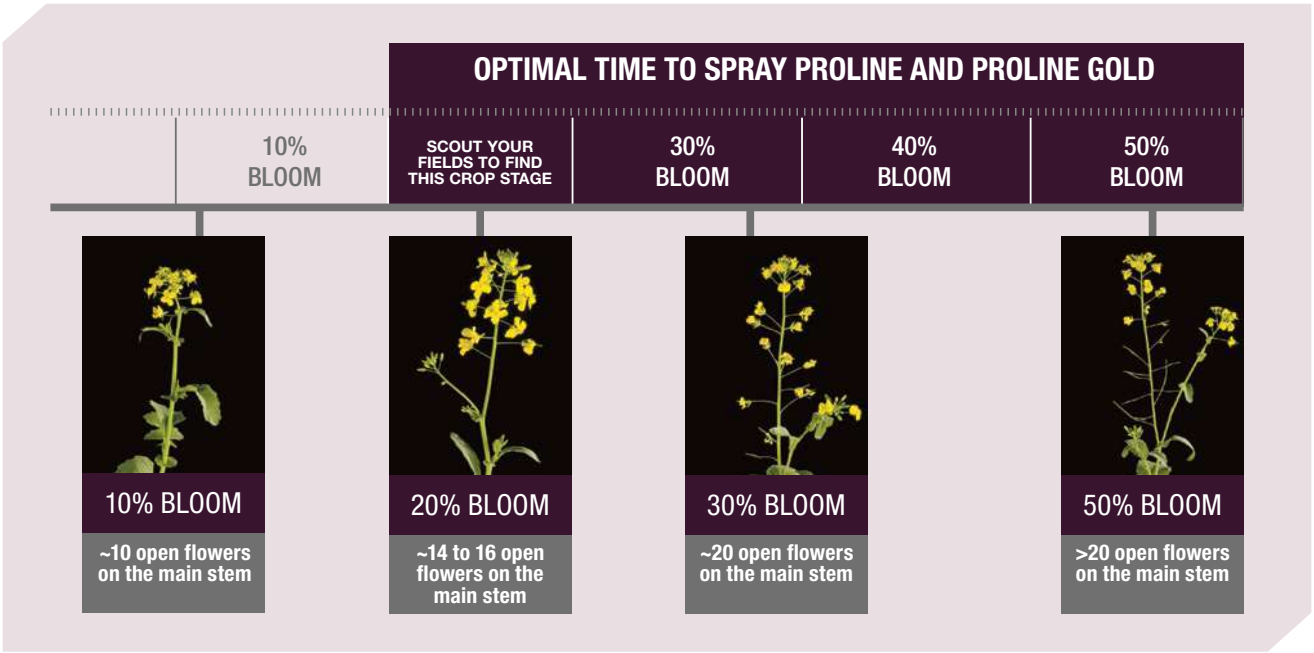
// Heated storage is required

PROLINE COMPARISON



Proline provided an average of +3.7 bu./ac. (+7.0%) over the untreated check.

Source: 69 Bayer grower-cooperated replicated canola trials (2014 to 2019).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.



PROLINE® GOLD

FUNGICIDE

CROPS FOR USE

Canola
Chickpeas
Dry beans
Edible beans
Field peas
Lentils
Oriental mustard
Rapeseed

PROVINCES
BC, AB, SK, MB

ACTIVE INGREDIENTS
Fluopyram
- Group 7

Prothioconazole
- Group 3

FORMULATION
Suspension concentrate

PACKAGING
10.12 L jug = 40 ac.

DISEASES CONTROLLED
CANOLA
Sclerotinia stem rot
ORIENTAL MUSTARD
Sclerotinia stem rot

For full details, please reference product label.

Features and Benefits

// Proline GOLD fungicide offers excellent protection in high disease pressure situations against sclerotinia in canola
// An easy-to-use liquid formulation that provides systemic and contact protection for both immediate and extended results
// Consistently provides outstanding sclerotinia protection, while maximizing yield potential under all types of tested conditions
// The combined strength of two modes of action, including the proven protection of prothioconazole combined with fluopyram, reduce sclerotinia infection rates in higher disease pressure situations and provide growers with the satisfaction of knowing that their canola is protected from yield-robbing sclerotinia

Application Guidelines

// Spray screens should be no finer than 50 micron mesh

Rate

// Canola and oriental mustard: 253 mL/ac. (625 mL/ha)
// 10.12 L jug = 40 ac.
// Do not apply more than 2 applications of Proline GOLD per season

Application Timing

Canola and mustard

// Apply Proline GOLD when the crop is in the 20 to 50% bloom stage. Best protection will be achieved when the fungicide is applied prior to the petals beginning to fall. This allows the maximum number of petals to be protected.
// Apply a second application 10 to 14 days later up to full bloom, if disease persists or weather conditions are favourable for disease development. When conditions favouring disease are severe, use the shorter interval.
// Can be applied by ground or air

Water Volumes

BC, AB, SK, MB

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 4.5 gal./ac. (42 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

CROP	PRE-HARVEST INTERVAL (DAYS)
Canola Oriental mustard *(Brassica juncea)* Rapeseed *(Brassica carinata)*	36

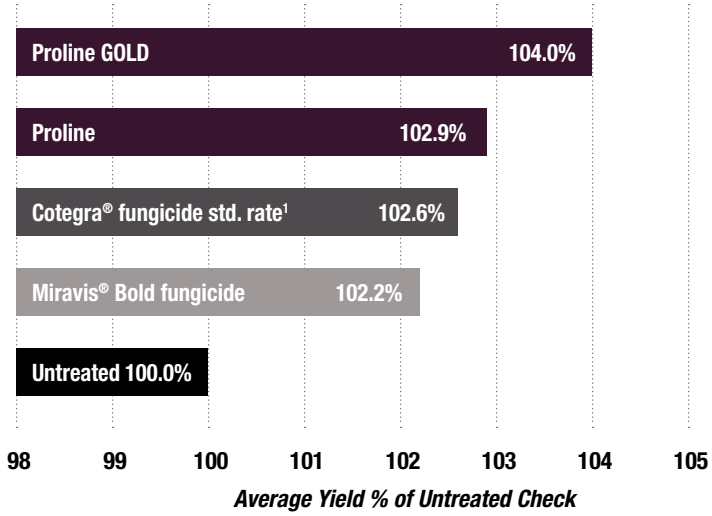
For all other crops that are registered but not listed in the table, consult the Proline GOLD label for complete details.

Storage

// Heated storage is required

PROLINE® GOLD

Proline GOLD versus the Competition – Western Canada 3-year Results



Proline GOLD outperformed the untreated check by 4.0% on average through the last 3 seasons of testing. Proline GOLD performed 1.4% better than both Cotegra® fungicide and Miravis® Bold fungicide competitors.

Source: 35 Bayer Market Development trials (2020-2022).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.
¹Cotegra® fungicide std. rate = 40 ac./jug.

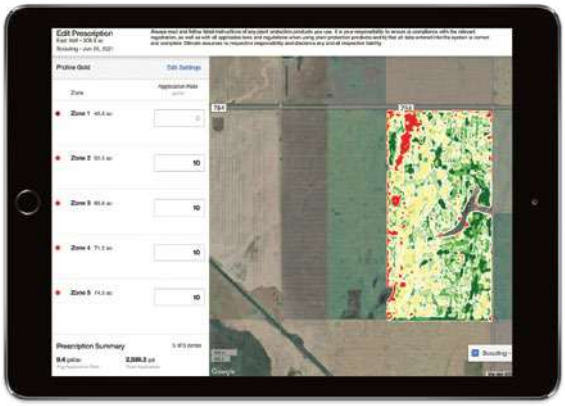
FIELDVIEW™

Get the most out of your canola fungicide

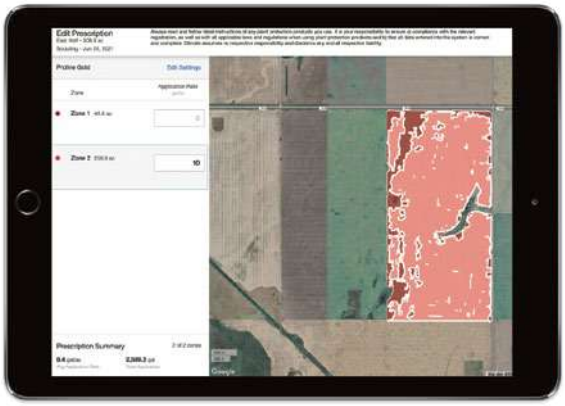
// FieldView manual crop protection scripting can easily help farmers apply Proline or Proline GOLD fungicides to the areas of the field that will likely benefit the most

// Lower biomass areas of a field may not benefit from a sclerotinia fungicide application

// Users have the ability easily to turn on and off zones in the field



FieldView field biomass auto-zone map



FieldView on/off fungicide prescription map

decis®

GROUP 3

INSECTICIDE

CROPS FOR USE

Alfalfa
(seed production only)
Barley
Canola
Corn
(field, seed, sweet)
Dry beans
Field peas
Flax
Lentils
Oats
Oriental mustard
Sugarbeets
Sunflower
Wheat

ACTIVE INGREDIENT

Deltamethrin
- Group 3

FORMULATION

Emulsifiable concentrate

PACKAGING

DECIS 100 EC
1.2 L jug = 40 ac.
4.8 L jug = 160 ac.
(see label for details on rate ranges and pests)

INSECTS CONTROLLED

CANOLA
Bertha armyworm
Cabbage seedpod weevil[1]
Corn earworm
Cutworm
Diamondback moth
European corn borer
Flea beetle
Grasshopper
Lygus bug

[1]Control of adults only.

For full details, please reference product label.

Features and Benefits

// Decis insecticide is safe to apply either by ground or air, and is not prone to gassing off, washing off or leaching
// Flexible rates can be used to address insect stages and temperature variations within insect populations
// Readily tank mixable with many leading herbicides
// When spraying under high temperature (+25°C), it is recommended that the highest registered application rate be used

Application Tips

// Scout your fields often to ensure proper application and timing
// Scouting should occur in the early morning or in the evening when insects are actively feeding. For flea beetles, scout mid-day when they actively feed.
// Use sufficient water to ensure thorough coverage; more water may be required when dense foliage is present
// Decis is a contact insecticide, so for best results spray when insects are feeding
// Avoid application when bees are foraging
// For best results, use the maximum recommended rate of application as efficacy at lower rates may be affected by temperature

Application Guidelines

RECOMMENDED RATES

CROPS	INSECT	100 EC RECOMMENDED RATE	ACRES PER JUG 100 EC
Canola	Bertha armyworm	30 mL/ac.	40 ac./1.2 L jug 160 ac./4.8 L jug
	Cabbage seedpod weevil	40 mL/ac.	30 ac./1.2 L jug 120 ac./4.8 L jug
	Diamondback moth	30 mL/ac.	40 ac./1.2 L jug 160 ac./4.8 L jug
	Flea beetle	30 mL/ac.	40 ac./1.2 L jug 160 ac./4.8 L jug
	Lygus bug	30 mL/ac.	40 ac./1.2 L jug 160 ac./4.8 L jug

Application Timing

Bertha armyworm, diamondback moth, flea beetle and lygus bug

// Ground – apply when larvae are present and actively feeding
// Aerial – apply when insects are present and actively feeding

Cabbage seedpod weevil

// Ground or aerial – apply when adults are seen on the flower buds or developing pods. Decis must be applied prior to egg laying.

decis®

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 2 gal./ac. (19 L/ha)

Rainfastness

// Rainfast 1 hour after application

Re-Cropping Intervals

// No re-cropping restrictions

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Pre-Harvest Intervals

// Re-entry is 12 hours. Decis may not be applied within the following timelines:

CROPS	PRE-HARVEST INTERVAL (DAYS)
Canola Flax Oriental mustard	7
Sunflower	40

Storage

// Heated storage is required

CEREALS

Crop Staging Guide

Seed Treatments

Raxil PRO

Raxil PRO SHIELD

Herbicides

Buctril M

Cirray

Huskie PRE

Infinity

Infinity FX

Olympus

Pardner

Puma Advance

Thumper

Tundra

Varro

Varro FX

Velocity m3

Fungicides

Delaro

Delaro Complete

Prosaro PRO

Prosaro XTR

Stratego PRO

TilMOR

Insecticide

Decis

Growth Regulator

Ethrel

WHEAT CROP STAGING GUIDE

SEED TREATMENT

Raxil PRO

Raxil PRO SHIELD

APPLICATION TIMING

Huskie PRE + Roundup OR Olympus + Roundup

BUCTRIL M

INFINITY / INFINITY FX

CIRRAY

Puma ADVANCE

Thumper

TUNDRA

STRATEGO PRO

VARRO / VARRO FX

Velocity m3

TILMOR

DELARO

T1 / T2

DELARO Complete

PROSARO XTR / PROSARO PRO

Application timing window

Optimal

Note: Please consult the individual product labels to ensure that your specific pest is controlled/suppressed in the appropriate crop.

Raxil® PRO Raxil® PRO SHIELD

SEED TREATMENT

CROPS FOR USE

// Raxil PRO

Barley
Oats
Rye
Triticale
Wheat

ACTIVE INGREDIENTS

Metalaxyl
- Group 4

Prothioconazole
- Group 3

Tebuconazole
- Group 3

PACKAGING

BC, AB, SK, MB
10 L jug
58.5 L drum
175.5 L drum
1,000 L tote

ON, QC, NB, NS, NFLD, PEI
Commercially applied

DISEASES CONTROLLED

BARLEY
Barley leaf stripe
False loose smut
True loose smut

BARLEY, OATS
Covered smut

BARLEY, OATS, RYE, TRITICALE, WHEAT

Post-emergent damping-off
- Caused by seed- and soil-borne *Fusarium* spp. including *Cochliobolus sativus* and *Fusarium graminearum*

Seed rot, pre-emergent damping-off
- Caused by seed- and soil-borne *Fusarium* spp. including *Cochliobolus sativus*, *Fusarium graminearum* and soil-borne *Pythium* spp.

Seed rot, pre-emergent damping-off, post-emergent damping-off and seedling blight
- Caused by seed-borne *Aspergillus* spp.

Seedling blight
- Caused by seed-borne *Fusarium* spp. including *Cochliobolus sativus, Fusarium graminearum,* and soil-borne *Fusarium* spp. including *Fusarium graminearum* and *Pythium* spp.

OATS, RYE, TRITICALE, WHEAT
Loose smut

WHEAT
Common bunt

DISEASES SUPPRESSED

BARLEY, OATS, RYE, TRITICALE, WHEAT

Common root rot
- Caused by seed- and soil-borne *Cochliobolus sativus*

Root and crown rot
- Caused by seed- and soil-borne *Fusarium* spp. including *Fusarium graminearum*

Seedling blight
- Caused by seed-borne *Penicillium* spp.

Seed rot, pre-emergent damping-off and root rot
- Caused by *Rhizoctonia solani*

For full details, please reference product label.

CROPS FOR USE

// Raxil PRO SHIELD

Barley
Oats
Wheat

ACTIVE INGREDIENTS

Imidacloprid
- Group 4 (Stress Shield®)

Metalaxyl
- Group 4

Prothioconazole
- Group 3

Tebuconazole
- Group 3

PACKAGING

All-in-one
10 L jug of Raxil PRO SHIELD
125 L drum of Raxil PRO SHIELD

Co-pack
10 L jug of Raxil PRO + 1.5 L of Stress Shield*
175.5 L drum of Raxil PRO + 27 L of Stress Shield* (sold separately)

*Products need to be mixed together.

DISEASES CONTROLLED

BARLEY
Barley leaf stripe
False loose smut
True loose smut

BARLEY, OATS
Covered smut

BARLEY, OATS, WHEAT

Post-emergent damping-off
- Caused by seed- and soil-borne *Fusarium* spp. including *Cochliobolus sativus* and *Fusarium graminearum*

Seed rot, pre-emergent damping-off
- Caused by seed- and soil-borne *Fusarium* spp. including *Cochliobolus sativus*, *Fusarium graminearum* and soil-borne *Pythium* spp.

Seed rot, pre-emergent damping-off, post-emergent damping-off and seedling blight
- Caused by seed-borne *Aspergillus* spp.

Seedling blight
- Caused by seed-borne *Fusarium* spp. including *Cochliobolus sativus, Fusarium graminearum,* and soil-borne *Fusarium* spp. including *Fusarium graminearum* and *Pythium* spp.

OATS, WHEAT
Loose smut

WHEAT
Common bunt

DISEASES SUPPRESSED

BARLEY, OATS, WHEAT

Common root rot
- Caused by seed- and soil-borne *Cochliobolus sativus*

Root and crown rot
- Caused by seed- and soil-borne *Fusarium* spp. including *Fusarium graminearum*

Seedling blight
- Caused by seed-borne *Penicillium* spp.

Seed rot, pre-emergent damping-off and root rot
- Caused by *Rhizoctonia solani*

INSECT PROTECTION

Wireworms

For full details, please reference product label.

Raxil® PRO Raxil® PRO SHIELD

Features and Benefits

// Easy-to-apply formulation combines the effective systemic activity of tebuconazole and metalaxyl with the powerful contact and systemic fungicide prothioconazole. This combination protects seeds from diseases on, in and around the seed.

// Quick penetration and uptake is seen with tebuconazole, while prothioconazole sustains protection over a longer period of time

// Goes beyond true loose smut and *Fusarium graminearum* by protecting against all of the most serious early-season diseases in barley, oats and wheat*

// Water-based formulation helps reduce application dust, minimize buildup on equipment and ensure easy cleanup

Mixing Instructions

// Accurate application rates and uniform distribution are fundamental to top performance – mix seed and seed treatment uniformly before application

// When mixing Raxil PRO, Stress Shield or Raxil PRO SHIELD on their own to get into solution, use a standard electric drill (not an impact drill) at half speed for 1 minute with the chuck provided. Do not apply pressure. Do not overmix.

// When mixing Raxil PRO and Stress Shield together, they only need to be mixed together for 4 minutes when using a recirculating pump. Do not overmix.

Seed-borne pressure is just one part of the equation that determines crop disease; the other half lives in the soil. Soil moisture and temperature affect which pathogens are active in the soil. The myth that warm, dry soils don't cause disease is more fiction than fact. *C. sativus, fusarium* and *pythium* are considered the most damaging pathogens causing seedling disease in cereals.

Directions for Use

// Always wear personal protective equipment when handling seed treatments or treated seed

// Refer to the Raxil PRO or Raxil PRO SHIELD label and instructions supplied with your treating system for complete information on proper application techniques

// Always calibrate seeding equipment with treated seed, as seed flow can be affected

// Always measure seed density to calculate accurate seed flow and total weight treated

// Allow adequate time for the seed treatment to dry on the seed. High humidity and cooler conditions can extend drying time.

Application Guidelines

Rate

// Raxil PRO: 325 mL/100 kg of seed

// Raxil PRO SHIELD co-pack: 325 mL (Raxil PRO) + 50 mL (Stress Shield)/100 kg of seed

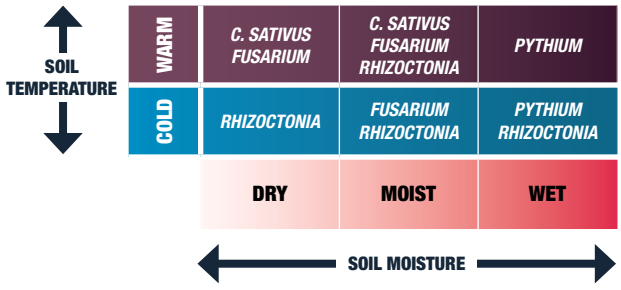
// Raxil PRO SHIELD all-in-one: 325 mL/100 kg of seed

Storage

// Raxil PRO has a freezing point of -16°C and unlike other available seed treatments, its viscosity change is minimal until it actually freezes. If the product does freeze, thaw to 5 to 10°C and mix thoroughly.

// Raxil PRO SHIELD requires heated storage

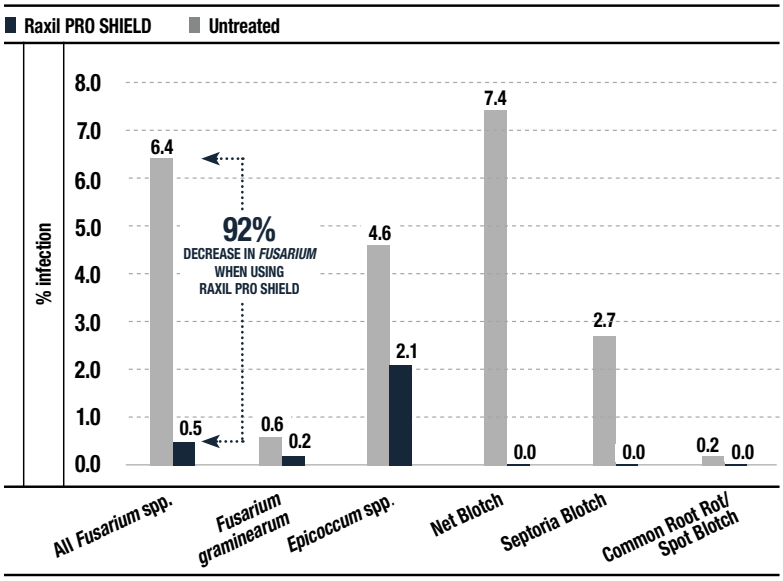
Conditions that favour soil-borne disease



*See label for diseases controlled.

Raxil® PRO Raxil® PRO SHIELD

DISEASE IN SEED SAMPLES WITH *FUSARIUM* INFECTION*



*0 to 5% *Fusarium graminearum* infection.
Source: 53 trials from BioVision and 20/20 Seed Labs Fungal Scan Data (2016).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Untreated versus Raxil PRO SHIELD

Source: BioVision Seed Labs. Reproduced with permission.

Bushels Treated Charts

BARLEY

LB./BU.	10 L RAXIL PRO / RAXIL PRO SHIELD ALL-IN-ONE	58.5 L RAXIL PRO	125 L RAXIL PRO SHIELD ALL-IN-ONE	175.5 L RAXIL PRO
48	141	827	1,766	2,480
50	136	794	1,696	2,381
52	130	763	1,631	2,289
54	126	735	1,570	2,205
56	121	709	1,514	2,126
58	117	684	1,462	2,053

OAT

LB./BU.	10 L RAXIL PRO / RAXIL PRO SHIELD ALL-IN-ONE	58.5 L RAXIL PRO	125 L RAXIL PRO SHIELD ALL-IN-ONE	175.5 L RAXIL PRO
34	200	1,167	2,494	3,501
36	188	1,102	2,355	3,307
38	179	1,044	2,231	3,133
40	170	992	2,120	2,976
42	162	945	2,019	2,835
44	154	902	1,927	2,706

WHEAT

LB./BU.	10 L RAXIL PRO / RAXIL PRO SHIELD ALL-IN-ONE	58.5 L RAXIL PRO	125 L RAXIL PRO SHIELD ALL-IN-ONE	175.5 L RAXIL PRO
60	113	661	1,413	1,984
62	109	640	1,368	1,920
64	106	620	1,325	1,860
66	103	601	1,285	1,804
68	100	584	1,247	1,751
70	97	567	1,211	1,701

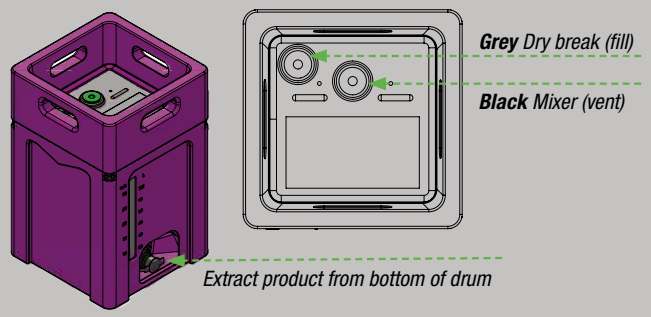
Please note that the number of bushels treated will vary depending on the density of the seed. Calculations for the amount treated are based on wheat = 60 lbs./bushel, barley = 48 lbs./bushel, oats = 34 lbs./bushel, rye = 56 lbs./bushel, triticale = 56 lbs./bushel. Always calculate seed density before treating seed and for best results, treat seed based on actual seed weight.

Raxil® PRO Raxil® PRO SHIELD

NEW RAXIL PRO SHIELD ALL-IN-ONE

- Co-formulated solution results in less mixing and handling
- Brings the trusted performance of the #1 selling cereal seed treatment brand in Western Canada[1] in an easy to use, all-in-one package
- Raxil PRO SHIELD all-in-one maintains the market leading formulation of Raxil PRO with enhanced coverage, a deeper red colour, minimal dust-off and buildup, and makes treating in cool conditions easier
- Available in a 10 L jug (113 bushels) and a NEW 125 L (1,415 bushel) bottom-drain drum

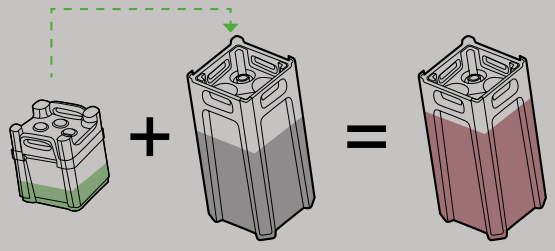
[1]Source: 2022 BPI Report – Cereal Seed Treatments



BULK MIXING OF 175.5 L RAXIL PRO + 27 L STRESS SHIELD

Raxil PRO packaging has enough room to mix 27 L of Stress Shield with the 175.5 L of Raxil PRO in the same 210 L drum to create Raxil PRO SHIELD. There is no need for a separate mixing container or additional equipment.

DIRECTIONS
Simply combine the 27 L of Stress Shield (inside the 66 L drum) with the 175.5 L formulation of Raxil PRO (inside the 210 L drum) using the filling valve. Mix thoroughly. You now have 202.5 L of Raxil PRO SHIELD seed treatment ready to use.



27 L STRESS SHIELD (Sold in 66 L drum)

175.5 L RAXIL PRO (Sold in 210 L drum)

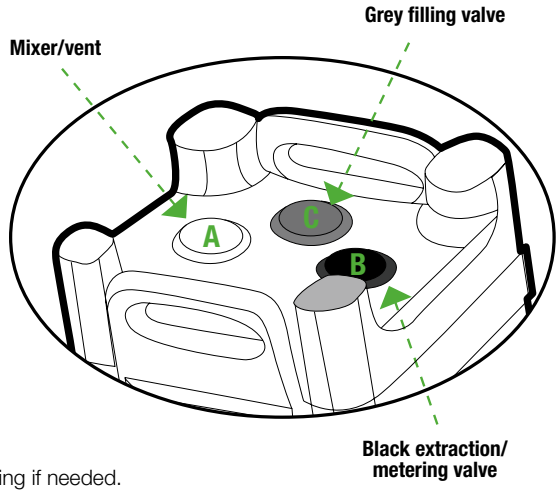
202.5 L RAXIL PRO SHIELD (Mixed in the 210 L drum)

58.5 L RAXIL PRO CONTAINER CONFIGURATION

A: Mixer/Vent
Bung A is used to agitate the product. Always mix products thoroughly before they are used. Attach the mixing drill bit found on the top of the drum to an electric drill. Engage the drill mounted bit to the square shaft of the mixer found in Bung A. Mix for 1 minute at half speed.

B: Metering Valve
Bung B is for extracting the product and contains a 0.5 in. drop tube for more accurate metering of the product. Attach a pump using a Parker™ Female Dry Break coupler to Bung B to remove the product from the container. This bung has a drop tube that extends to the bottom of the drum for complete product removal.

C: Filling Valve
Bung C is for adding product if required. Product can be pumped into the container using a Parker™ Female Dry Break coupler. Product can be poured into the opening after the Parker™ Male Dry Break coupler is removed. Use a funnel if necessary. The 210 L drum filling valve also has a 1 in. dip tube for quick decanting if needed. Note that product CANNOT be extracted from this bung.



Note: The number of bushels treated will vary depending on the density of your seed. Always calculate seed density before treating the seed.

BUCTRIL® M

HERBICIDE

CROPS FOR USE

Barley
Canary Seed
Corn
(field and sweet)
Established timothy
(grown for seed or hay)
Flax
Oats
Rye
(fall)
Seedling and established grasses
Wheat
(durum, spring, winter*)
*including underseeded to clover in ON, QC, NB, NS, NFLD, PEI

ACTIVE INGREDIENTS

Bromoxynil
- Group 6
MCPA
- Group 4

FORMULATION

Liquid-emulsifiable concentrate

PACKAGING

8 L jug = 20 ac.
(one 2 × 8 L case treats 40 ac.)
128 L drum = 320 ac.
(BC, AB, SK, MB)
400 L bulk tote = 1,000 ac.

WEEDS CONTROLLED

American nightshade (seedlings up to 4 leaf stage)
Ball mustard (seedlings up to 4 leaf stage)
Bluebur (seedlings up to 4 leaf stage)
Canada thistle (top growth suppression)
Cocklebur (seedlings up to 4 leaf stage)
Common buckwheat (seedlings up to 8 leaf stage)
Common groundsel (seedlings up to 8 leaf stage)
Common ragweed (seedlings up to 8 leaf stage)
Cow cockle[1] (seedlings up to 4 leaf stage)
Flixweed (seedlings up to 4 leaf stage)
Green smartweed (seedlings up to 4 leaf stage)
Jimsonweed (seedlings up to 4 leaf stage)
Kochia (seedlings up to 4 leaf stage or 5 cm in height)
Lady's-thumb (seedlings up to 4 leaf stage)
Lamb's-quarters (seedlings up to 8 leaf stage)
Night-flowering catchfly (seedlings up to 4 leaf stage)
Pale smartweed (seedlings up to 4 leaf stage)
Perennial sow thistle (top growth suppression)
Prickly lettuce (suppression of seedlings in winter wheat)
Redroot pigweed[2] (seedlings up to 4 leaf stage)
Russian thistle (seedlings up to 4 leaf stage or 5 cm in height)
Scentless chamomile[3] (seedlings up to 4 leaf stage)
Shepherd's-purse (seedlings up to 4 leaf stage)
Stinkweed (seedlings up to 8 leaf stage)
Tartary buckwheat (seedlings up to 8 leaf stage)
Velvetleaf[4] **(ON, QC, NB, NS, NFLD, PEI)** (seedlings up to 4 leaf stage)
Volunteer canola (including herbicide-tolerant seedlings up to 4 leaf stage)
Volunteer sunflowers (seedlings up to 4 leaf stage)
Wild buckwheat (seedlings up to 8 leaf stage)
Wild mustard (seedlings up to 8 leaf stage)
Wild tomato (seedlings up to 6 leaf stage)
Wormseed mustard (seedlings up to 8 leaf stage)

[1]In normal conditions, cow cockle will be controlled up to the 4 leaf stage. Plants beyond this stage are unlikely to be controlled.
[2]Inadequate control in flax.
[3]Spring annuals only.
[4]Spray before plants are 8 cm high.

For full details, please reference product label.

Broadleaf Weed Product Comparison

PRODUCT	CONTROL OF INDICATED WEED (%)				
	ANNUAL SOW THISTLE	REDROOT PIGWEED	RUSSIAN THISTLE	VOLUNTEER CANOLA	WILD BUCKWHEAT
Buctril M	91	91	90	94	90
Infinity	96	97	96	97	93
Thumper	96	92	93	97	91

Source: 112 internal and external trials (2004 to 2006).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

BUCTRIL® M

Features and Benefits

// Controls 29 broadleaf weeds
// Excellent crop safety
// Registered for aerial application
// Effective resistance management – contains Group 4 (MCPA) and Group 6 (bromoxynil) active ingredients
// Dual chemistries provide both systemic and contact activity
// Available in bulk
// Registered for use on winter wheat underseeded to red clover in Eastern Canada

Application Guidelines

Rate

// Registered application rate: 0.4 L/ac. or 20 ac./jug

Application Tips

Coverage

// Medium to coarse droplet size is important for optimum coverage
// As with any post-emergent herbicide, delay a spray application for at least 24 hours before or following near frost conditions (5°C or less) to avoid a negative crop response

Application Timing

// Barley, oats and wheat (durum and spring) may be treated from the 2 leaf stage until the early flag leaf stage
// Winter wheat may be treated from the 2 to 4 leaf stage in the fall or from the time growth commences to the early flag leaf stage in the spring
// Fall rye may be treated from the time growth commences in the spring to the early flag leaf stage
// Flax may be treated from the time it is 5 cm high up to the early flower bud stage (5 to 10 cm gives best results)
// Corn may be treated from the 4 to 6 leaf stage
// Canary seed may be treated from the 3 to 5 leaf stage
// Seedling grasses may be treated from the 2 to 4 leaf stage (establishment year only)
// Timothy (established and grown for seed production) should be applied prior to shot blade in the seed production year
// Timothy (established and grown for hay) may be treated from the 3 to 6 leaf stage

Water Volumes

BC, AB, SK, MB
Ground

// Minimum of 5 gal./ac. (47 L/ha) in all crops except seedling grasses
// For corn, minimum of 21 gal./ac. (196 L/ha)
// For seedling grasses, minimum of 16 gal./ac. (150 L/ha)

Aerial
Barley, oats and wheat (durum and spring)

// Minimum of 3 gal./ac. (28 L/ha)
// Recommended minimum of 4 gal./ac. (37 L/ha) when a heavy crop canopy exists

ON, QC, NB, NS, NFLD, PEI
Ground and Aerial

// Recommended minimum of 15 gal./ac. (140 L/ha)

Rainfastness

// Rainfast 1 hour after application

Residue and Grazing

// Do not graze or cut for forage hay until 30 days after spraying

Re-Cropping Intervals

// No re-cropping restrictions

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

Mix It Up. Learn how simple and effective actions not only help facilitate success against herbicide resistance, but can also help protect the future sustainability of your farm.
Find solutions at **MixItUp.ca**

GROUP 1

CIRRAY®

HERBICIDE

CROPS FOR USE

Barley
Wheat
(spring)

ACTIVE INGREDIENT

Fenoxaprop-p-ethyl
- Group 1

Pinoxaden
- Group 1

FORMULATION

Emulsifiable concentrate

PACKAGING

6.48 L jug = 20 ac.
(one 2 x 6.48 L case treats 40 ac.)

103.60 L drum = 320 ac.

WEEDS CONTROLLED

Wild oats
(1 to 6 leaf stage)

Green foxtail
(1 to 6 leaf stage)

Yellow foxtail
(1 to 6 leaf stage)

Barnyard grass
(1 to 6 leaf stage)

Persian darnel
(1 to 6 leaf stage)

For full details, please reference product label.

Features and Benefits

// Unique combination of Group 1 actives delivers high performing control of wild oats, green and yellow foxtail, barnyard grass and Persian darnel

// Excellent crop safety

// Fast-acting grass herbicide with a wide window of application from the 1 to 6 leaf stage plus 3 tillers on the main stem

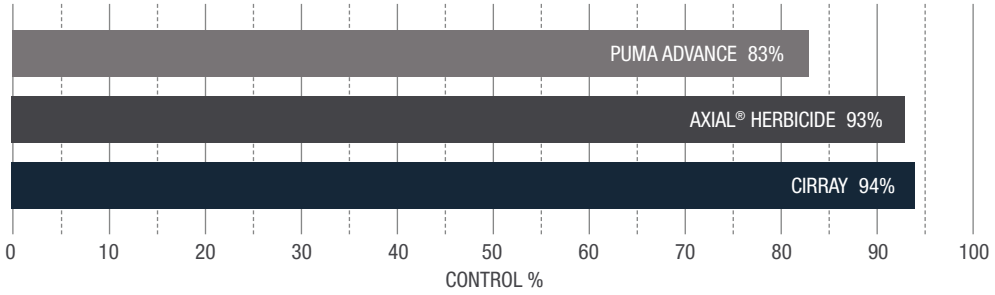
// Tank mixable with a wide range of broadleaf herbicides such as Infinity FX, Buctril M and Stellar™ herbicide

// Available in two different package sizes (20 ac. jug or 320 ac. bulk drum) to best fit your operation

// No re-cropping restrictions the following year. When tank mixing with a broadleaf herbicide, always refer to the label of the broadleaf partner prior to use.

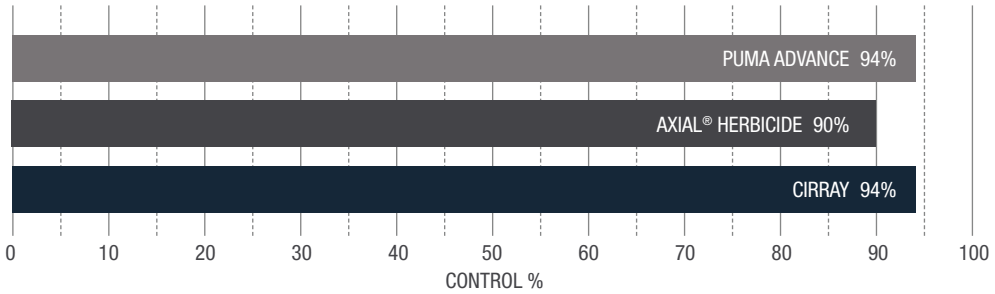
// Registered for both ground and aerial applications

Wild Oat Control



Source: 7 Bayer Crop Science Internal Trials (2012). Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Green Foxtail Control



Source: 5 Bayer Crop Science Internal Trials (2012). Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

CIRRAY®

Application Guidelines

Rate

// Cirray 324 mL/ac. (800 mL/ha)

Application Timing

// 1 to 6 leaves on the main stem plus 3 tillers

Water Volumes

Ground

// Minimum of 5 gal./ac. (47 L/ha)

Aerial

// Minimum of 3 gal./ac. (28 L/ha)

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Application Tips

// Fill sprayer tank half full with clean water and start agitation or bypass system

// If a permissible broadleaf herbicide* is to be used, add the product first to the tank and agitate for 2 to 3 minutes

// Add Cirray herbicide

// Agitate 2 to 3 minutes before adding remainder of water and then maintain constant agitation

// Apply the mixture as soon as it is prepared

// If there is a break in spraying, agitate thoroughly before spraying again

*When tank mixing with a broadleaf herbicide always refer to the label of the broadleaf partner prior to use.

Rainfastness

// Rainfast 1 hour after application

Re-Entry Interval

// Do not enter treated fields for 12 hours after application

Residue and Grazing

// Applications may not be made within 65 days of harvest for grain and straw and 30 days after application for hay

// Do not allow livestock to graze prior to 30 days after application

Storage

// Heated storage is required

Huskie™ PRE

PRE-BURN / POST-PLANT PRE-EMERGENT

GROUP 6 GROUP 27

HERBICIDE

CROPS FOR USE

Pre-burn / post-plant pre-emergent

Barley
Triticale
Wheat
(durum, spring, and winter)

ACTIVE INGREDIENT

Bromoxynil 280 g/L
- Group 6

Pyrasulfotole 25 g/L
- Group 27

FORMULATION

Emulsifiable concentrate

PACKAGING

8.1 L jug = 20 acres
129.6 L drum = 320 acres
405 L bulk tote = 1,000 acres

WEEDS CONTROLLED[1]

Annual sow thistle
Chickweed
Cleavers
Canada fleabane
Cow cockle[2]
Dandelion (suppression only – includes seedlings and overwintered rosettes)
Flixweed
Giant ragweed (suppression only)
Green smartweed
Hemp-nettle
Kochia
Lady's-thumb
Lamb's-quarters
Narrow-leaved hawk's beard
Pale smartweed
Perennial sow thistle (suppression only)
Redroot pigweed
Round-leaved mallow
Russian thistle
Shepherd's-purse
Stinkweed
Tartary buckwheat
Volunteer canola
Volunteer soybean
Wild buckwheat
Wild mustard

[1]Huskie PRE controls herbicide-resistant biotypes of the labeled weeds from the following groups: Group 2: ALS/SU; Group 4: Synthetic Auxin; Group 5: Photosystem II inhibitors; Group 9: EPSP synthase inhibitors; Group 14: PPO inhibitors.
[2]In normal conditions will be controlled up to the 4-leaf stage. Plants beyond this stage are unlikely to be controlled. The higher rate generally gives better results.

For full details, please reference product label.

Features and Benefits

// Rapid burn down activity
// Consistent early-season broadleaf weed control
// Efficient and reliable, even on the toughest, labeled herbicide resistant broadleaf weeds (including Group 2, 4, 5, 9, 14 bio-types)
// Potent addition to Roundup® brand herbicide pre-burn applications
// Flexible pack sizes to best fit the operational need on farm

Application Guidelines

// Pre-plant or post-plant pre-emergence broadleaf weed control
// Apply Huskie PRE only once per crop per growing season
// Under cool and/or dry conditions activity may be reduced or delayed. Weed control may also be reduced if application is made when weeds are dust covered or in the presence of heavy dew, fog, or mist/rain

Stewardship

// Do not use another Group 27 herbicide following an application of Huskie PRE in the same crop

Water Volumes

Ground
// Minimum of 5 gal./ac. (47 L/ha)

Rainfastness

// Rainfast 1 hour after application

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Huskie™ PRE

Re-Cropping Intervals

12 months: Alfalfa, Canary seed, Canola, Corn (field), Flax, Peas*, Potatoes, Soybeans, Sunflower, Tame oats, Tomatoes

24 months: Lentils

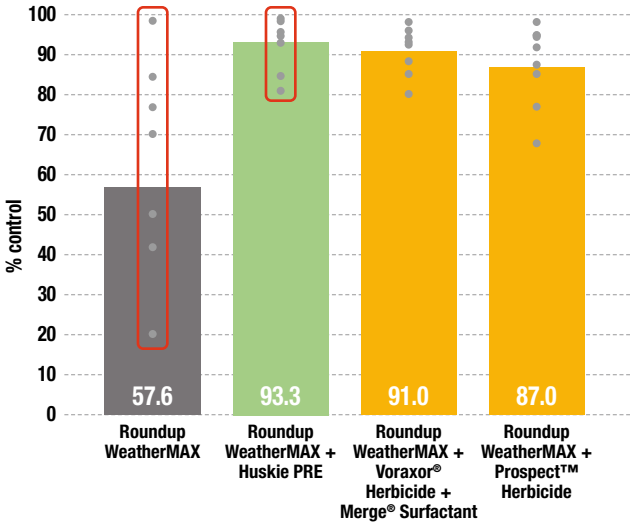
*Field peas may be grown the year following a Huskie PRE application in all Black, Grey-Wooded and Dark Brown soil zones. **Do not** plant field peas the year following a Huskie PRE application in the Brown soil zone where soil pH is above 7.5 and precipitation was less than 125 mm from June 1st until September 1st of the year of application.

Storage

// Heated storage is required

Kochia Control – 14 Days After Application

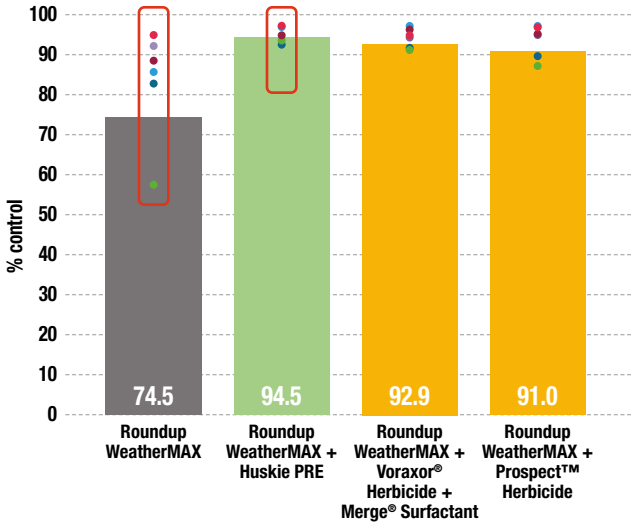
Heavy field populations



Source: 8 Internal Bayer Crop Science Market Development Trials (2020-2022). Each circle represents kochia control tested at each trial location. Circles in close proximity = more consistently controlled kochia at trial locations. Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Combined Broadleaf Control – 14 Days After Application

Heavy field populations



Source: 8 Internal Bayer Crop Science Market Development Trials (2020-2022).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

- General broadleaf
- Shepherd's-purse
- Round-leaved mallow
- Volunteer canola
- Kochia
- Bindweed

Rapid, Consistent Early Season Weed Control

Kochia and Lamb's-quarters, 11 days after application

Untreated Check

Roundup WeatherMAX @ (0.67 L/ac.)

Roundup WeatherMAX @ (0.67 L/ac.) + Huskie PRE (0.4 L/ac.)

Source: Bayer Crop Science Market Development Small Plot Trials (2023).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

INFINITY®

CROPS FOR USE

Barley

Bromegrass
(established, grown for seed or forage)

Perennial ryegrass
(seedling and established, grown for seed or forage)

Red fescue
(established, grown for seed or forage)

Timothy
(seed production only)

Triticale

Wheat
(durum, spring, winter)

ACTIVE INGREDIENTS

Bromoxynil
- Group 6

Pyrasulfotole
- Group 27

FORMULATION

Liquid-emulsifiable concentrate

PACKAGING

6.7 L jug = 20 ac.
(one 2 × 6.7 L case treats 40 ac.)

107.2 L drum = 320 ac.

(BC, AB, SK, MB)

335 L bulk tote = 1,000 ac.

WEEDS CONTROLLED[1]

Annual sow thistle
(1 to 6 leaf stage)

Canada fleabane[2,5]
(up to 10 cm in height/diameter)

Canada thistle
(suppression, up to 30 cm in height)

Chickweed
(1 to 6 leaf stage)

Cleavers[2,4]
(1 to 6 whorls)

Common ragweed
(1 to 6 leaf stage)

Dandelion[3]
(suppression, up to 10 cm in height/ 25 cm in diameter)

Flixweed
(up to 10 cm in height)

Giant ragweed[2,5]
(suppression, 1 to 6 leaf stage)

Hemp-nettle
(1 to 6 leaf stage)

Kochia
(up to 10 cm in height)

Lamb's-quarters
(1 to 6 leaf stage)

Narrow-leaved hawk's beard
(up to 10 cm in height and prior to bolting)

Pale smartweed
(1 to 6 leaf stage)

Perennial sow thistle
(suppression, 1 to 6 leaf stage)

Redroot pigweed
(1 to 6 leaf stage)

Round-leaved mallow[2]
(1 to 6 leaf stage)

Russian thistle
(up to 10 cm in height)

Shepherd's-purse
(1 to 6 leaf stage)

Spreading atriplex[2]
(suppression, 1 to 10 leaf stage)

Stinkweed
(1 to 6 leaf stage)

Stork's-bill[5]
(with the addition of 2,4-D Ester + AMS, 1 to 8 leaf stage)

Volunteer canola
(including herbicide-tolerant, 1 to 6 leaf stage)

Volunteer soybean[2]
(up to the 5th trifoliate leaf stage)

Wild buckwheat
(1 to 6 leaf stage)

Wild mustard
(1 to 6 leaf stage)

[1]Includes ALS (Group 2)-resistant biotypes.
[2]For control of cleavers at the 4 to 6 whorl stage, control of Canada fleabane, round-leaved mallow, volunteer soybean and suppression of giant ragweed and spreading atriplex, add Ammonium Sulphate (AMS) Utility Modifier (40% solution) at a rate of 0.5 L/ac. One jug of AMS Utility Modifier will treat 20 ac.
[3]Includes seedlings and overwintered rosettes.
[4]Includes indoleacetic acid (Group 4)-resistant biotypes.
[5]Remove established Canada fleabane plants prior to planting via tillage or a pre-seed burn-off.

For full details, please reference product label.

Features and Benefits

// Dual chemistries (Groups 6 and 27) use both contact and systemic activity
// Controls a wide range of the toughest broadleaf weeds including Canada fleabane, cleavers, kochia and wild buckwheat
// Powered by pyrasulfotole, activity is visible within days
// Tank-mix partner with Axial® herbicide, Horizon® herbicide, Liquid Achieve™ herbicide, Puma Advance and Varro
// Excellent crop safety
// Registered for both ground and aerial application
// Available in bulk for added convenience

Application Guidelines

Rate

// Registered application rate: 0.335 L/ac.

Application Timing

// Spring application: crops may be treated from the 1 leaf stage of growth until the flag leaf is just visible but still rolled
// Optimal application timing for Canada fleabane control in winter wheat is in the fall
// Fall application on winter wheat: apply from the 1 leaf stage until end of tillering

Mix It Up. Learn how simple and effective actions not only help facilitate success against herbicide resistance, but can also help protect the future sustainability of your farm.
Find solutions at **MixItUp.ca**

INFINITY®

Water Volumes

BC, AB, SK, MB
Ground
// Minimum of 5 gal./ac. (47 L/ha)
Aerial
// Minimum of 3 gal./ac. (28 L/ha)

ON, QC, NB, NS, NFLD, PEI
Ground and Aerial
// Minimum of 15 gal./ac. (140 L/ha)

Rainfastness

// Rainfast 1 hour after application

Residue and Grazing

// Do not graze treated bromegrass, perennial ryegrass or red fescue crops within 7 days of application, or harvest for hay within 30 days of application
// Do not graze other treated crops or cut for forage or hay within 25 days of application
// Do not harvest triticale or wheat for grain or straw within 50 days of application
// Do not harvest barley for grain or straw within 45 days of application

Re-Cropping Intervals

// Alfalfa, barley, canary seed, canola, corn (field)[1], flax, oats, peas (field)[2], potatoes, soybeans[1], sunflowers, tomatoes[1] and wheat (durum and spring) can be planted 10 months following an application of Infinity
// Lentils can be planted 22 months following an application of Infinity

[1] Manitoba and eastern Canada only.
[2] Field peas may be grown the year following Infinity herbicide application in all black, grey-wooded and dark-brown soil zones. Do not plant field peas the year following an Infinity herbicide application in brown soil zones where soil pH is above 7.5 and precipitation is less than 125 mm from June 1 until September 1 of the application year.

Mixing Order

// AMS, then Infinity, then tank-mix partner
// If adding AMS, always add it to the tank first

If you are faced with tough-to-control weeds, such as those outlined below, Bayer recommends using Infinity FX or adding the following tank-mix partners to Infinity:

Canada thistle, dandelion or perennial sow thistle
// Add 4 oz./ac. of MCPA Ester (189 mL/ac. of MCPA Ester 600). The crop needs to be at the 3 leaf stage when adding MCPA.

Advanced stages of cleavers and kochia or improved activity to Canada fleabane, Canada thistle, dandelion or giant ragweed

// Add one 10 L jug of Bayer (40% solution) AMS for every 6.7 L jug of Infinity for cleavers in the 4 to 6 whorl stage, or to improve activity on Canada thistle, dandelions and larger kochia

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

INFINITY® FX

3 IN 1 RE-FORMULATION AVAILABLE IN BULK

KNOW YOUR GROUPS

GROUP 4 | GROUP 6 | GROUP 27

HERBICIDE

CROPS FOR USE

Barley
Bromegrass
Perennial ryegrass
Red fescue
Timothy
Triticale
Wheat
(durum, spring, winter)

ACTIVE INGREDIENTS

Bromoxynil
- Group 6

Fluroxypyr
- Group 4

Pyrasulfotole
- Group 27

FORMULATION

Liquid-emulsifiable concentrate

PACKAGING

8.1 L jug = 20 ac.
129.6 L drum = 320 ac. (BC, AB, SK, MB)
405 L tote = 1,000 ac.

WEEDS CONTROLLED[1]

Annual sow thistle
(1 to 6 leaf stage)

Canada fleabane[2,5]
(up to 10 cm in height/diameter)

Canada thistle[2,6]
(suppression, up to 30 cm in height)

Chickweed
(1 to 8 leaf stage)

Cleavers[4]
(1 to 9 whorls)

Common ragweed
(1 to 6 leaf stage)

Dandelion[2,3,6]
(suppression, up to 10 cm in height/25 cm in diameter)

Flixweed
(up to 10 cm in height)

Giant ragweed[2]
(suppression, 1 to 6 leaf stage)

Hemp-nettle
(1 to 8 leaf stage)

Kochia
(up to 15 cm in height)

Lamb's-quarters
(1 to 6 leaf stage)

Narrow-leaved hawk's beard[2,7]
(up to 10 cm in height and prior to bolting)

Pale smartweed
(1 to 6 leaf stage)

Perennial sow thistle[6]
(suppression, 1 to 6 leaf stage)

Redroot pigweed
(1 to 6 leaf stage)

Round-leaved mallow
(1 to 6 leaf stage)

Russian thistle
(up to 10 cm in height)

Shepherd's-purse
(1 to 6 leaf stage)

Spreading atriplex[2]
(suppression, 1 to 10 leaf stage)

Stinkweed
(1 to 6 leaf stage)

Stork's-bill[5,7]
(with the addition of 2,4-D Ester + AMS, 1 to 8 leaf stage)

Volunteer canola
(including herbicide-tolerant hybrids, 1 to 6 leaf stage)

Volunteer flax
(up to 15 cm in height)

Volunteer soybeans
(up to 5th trifoliate leaf stage)

Wild buckwheat
(1 to 6 leaf stage)

Wild mustard
(1 to 6 leaf stage)

[1] Includes ALS (Group 2)-resistant biotypes.

[2] For enhanced control, add Ammonium Sulphate (AMS) Utility Modifier (40% solution) at a rate of 0.5 L/ac. One jug of AMS Utility Modifier will treat 20 ac.

[3] Includes seedlings and overwintered rosettes.

[4] Includes indoleacetic acid (Group 4)-resistant biotypes.

[5] Remove established Canada fleabane plants prior to planting via tillage or a pre-seed burn-off.

[6] For enhanced control, add 4 oz/ac. of MCPA Ester (189 mL/ac. of MCPA Ester 600). The crop needs to be at the 3 leaf stage when adding MCPA.

[7] For enhanced control, add 4 oz/ac. of 2,4-D Ester. The crop needs to be at the 4 leaf stage when adding 2,4-D.

For full details, please reference product label.

Source: Internal Bayer Field Solutions trials (2015 and 2016).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

INFINITY® FX

Features and Benefits

// Powered by pyrasulfotole (Group 27) and supercharged with bromoxynil (Group 6) and fluroxypyr (Group 4), Infinity FX uses both contact and systemic activity

// Fast-acting performance is visible in days

// Offers exceptional control of Canada fleabane, chickweed, cleavers and kochia, in addition to many other tough-to-control broadleaf weeds

// Exceptional resistance management – with the combination of three different herbicide Groups, there is increased herbicide activity on the same weed species

// Tank-mix friendly, Infinity FX is a preferred tank-mix partner with key major graminicides, including: Puma Advance, Varro, Axial® BIA herbicide, Horizon® NG herbicide, Liquid Achieve™ herbicide

// Wide window of application and excellent crop safety

// Convenient co-formulation

Application Guidelines

Rate

// Registered application rate: 0.405 L/ac. co-formulation

Application Timing

// Crops may be treated from the 2 leaf stage of growth until the flag leaf is just visible but still rolled

// Infinity FX can be fall applied in winter wheat

Water Volumes

BC, AB, SK, MB
Ground

// Minimum of 5 gal./ac. (47 L/ha)

ON, QC, NB, NS, NFLD, PEI
Ground

// Minimum of 15 gal./ac. (140 L/ha)

Rainfastness

// Rainfast 1 hour after application

Residue and Grazing

// Do not graze treated crops or cut for forage or hay within 25 days of application

// Do not harvest barley or wheat (durum or spring) for grain or straw within 60 days of application

Re-Cropping Intervals

// Barley, canola, corn (field)[1], flax, oats, peas (field)[2], potatoes, soybeans[1] and wheat (durum and spring) can be planted 10 months following an application of Infinity FX

// Lentils can be planted 22 months following an application of Infinity FX

[1] Manitoba and Eastern Canada only.
[2] Field peas may be grown the year following Infinity FX herbicide application in all black, grey-wooded and dark-brown soil zones. Do not plant field peas the year following an Infinity FX herbicide application in brown soil zones where soil pH is above 7.5 and precipitation is less than 125 mm from June 1 until September 1 of the application year.

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

Mix It Up. Weed out herbicide resistance. Infinity FX uses three different modes of action to help control resistant weeds. Visit **MixItUp.ca** to learn more.

Olympus®

GROUP 2

HERBICIDE

CROPS FOR USE

Wheat
(durum, spring, winter)

PROVINCES
BC, AB, SK, MB

ACTIVE INGREDIENT
Propoxycarbazone-sodium
- Group 2

FORMULATION
Wettable granule

PACKAGING
1 bottle = 80 ac.

WEEDS CONTROLLED
Downy brome
Foxtail barley
Japanese brome
Volunteer canola
(including Roundup and glufosinate tolerant)
Wild oats

For full details, please reference product label.

Untreated versus the Olympus System

Untreated

Olympus + Roundup

Olympus + Roundup followed by Varro

Source: Bayer Crop Science Internal Trial. Forrest, MB. (2017).

Features and Benefits

// When used systematically with Roundup as a pre-seed application followed by Varro or Velocity m3 in season, the Olympus System provides control of downy and Japanese bromes, flushing foxtail barley and wild oats and other problematic grass and broadleaf weeds
// Freedom to rotate back to sensitive pulse crops
// Excellent tank-mix partner with a burndown Roundup application for control of volunteer canola
// Group 2 booster – use the Olympus System for excellent wild oat control
// Allows you to keep no till and direct seeding in your crop management plan

Application Guidelines

Rate

// Registered application rate: ~6 g/ac. of Olympus + 180 to 360 g ae/ac. of Roundup
// 360 g ae/ac. of Roundup is required for foxtail barley management

Application Timing

// For best results, apply to emerged, young and actively growing weeds. Weed control may be reduced when weeds are under stress due to severe weather conditions, drought or cold temperatures.

Water Volumes

Ground

// Minimum of 5 gal./ac. (47 L/ha)

Aerial

// Minimum of 3 gal./ac. (28 L/ha)

Rainfastness

// Rainfast 4 hours after application

Residue and Grazing

// Do not harvest wheat for grain or straw within 71 days of application
// If tank mixing, always respect the maximum pre-harvest interval stated on all of the product labels for the items used in permissible tank mixes

Olympus®

Sprayer Cleanup

Before and after using Olympus herbicide, always complete a thorough cleaning of the spray tank, lines and filters. The following procedures are recommended:

// Drain the tank completely. Then wash out the tank, boom and hoses with clean water. Drain the water from the tank.

// Half fill the tank with clean water and add ammonia (i.e., 3% domestic ammonia solution) at a dilution rate of 1% (i.e., 1 L of domestic ammonia for every 100 L of rinsate). Completely fill the tank with water. Agitate/recirculate the fluid and flush it through the boom and hoses. Leave on agitation for 10 minutes. Drain the tank completely.

// Repeat the above step

// Remove the nozzles and screens and soak them in a 1% ammonia solution. Inspect the nozzles and screens and remove any visible residue.

// Flush the tank, boom and hoses with clean water

// Inspect the tank for visible residue. If present, repeat the second step.

// Dispose of the rinsing fluids in accordance with provincial regulations

Re-Cropping Intervals

// Barley, canola, lentils, peas (field) = 10 months

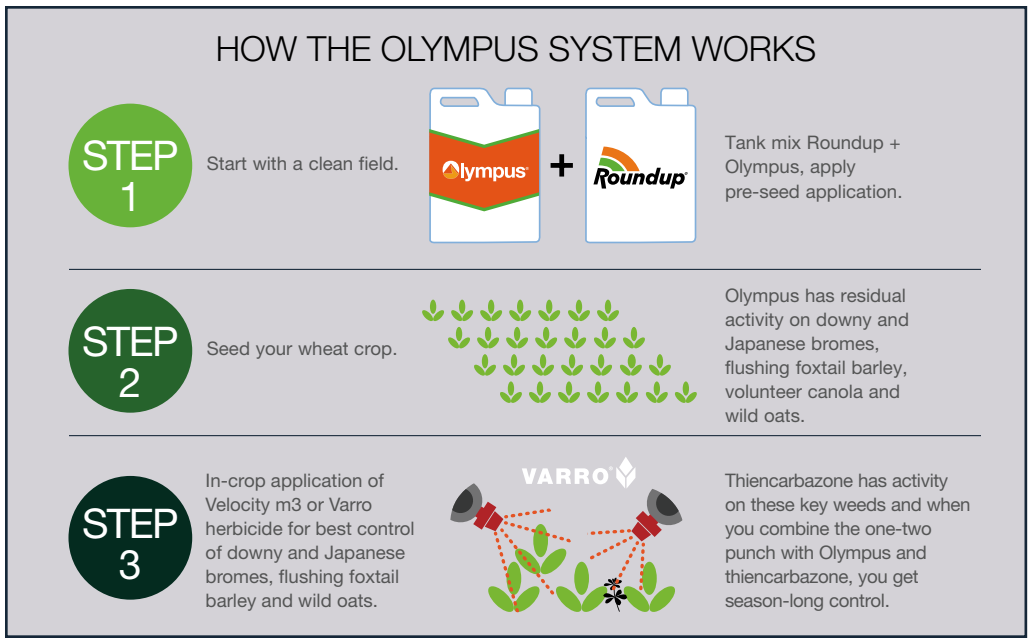
// Oats, flax = 12 months

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required



When it comes to your wheat crop, starting with a clean field is a must. The Olympus System provides outstanding control of foxtail barley, wild oats and other tough weeds, which allows your crop to flourish with enhanced access to soil nutrients, water and other available resources. For an overview of Olympus herbicide, visit **cropscience.bayer.ca/Olympus**

PARDNER®

GROUP 6

HERBICIDE

CROPS FOR USE

Alfalfa
AB, SK, MB
(Seedling and established)
Barley
Canary seed
Canola
(Pre-seed up to 24 hours before seeding)
Corn (field, sweet)
Fall rye
Flax
Grain and forage sorghum
Millet
Oats
Seedling grasses
Triticale
Wheat

ACTIVE INGREDIENT

Bromoxynil
- Group 6

FORMULATION

Liquid-emulsifiable concentrate

PACKAGING

8 L jug = 20 ac.
(one 2 × 8 L case treats 40 ac.)
128 L bulk shuttle = 320 ac.
(BC, AB, SK, MB)

WEEDS CONTROLLED

American nightshade (seedlings up to 4 leaf stage)
Bluebur (seedlings up to 4 leaf stage)
Cocklebur (seedlings up to 4 leaf stage)
Common buckwheat (seedlings up to 8 leaf stage)
Common groundsel (seedlings up to 8 leaf stage)
Common ragweed (seedlings up to 4 leaf stage)
Cow cockle[1] (seedlings up to 4 leaf stage)
Green smartweed (seedlings up to 4 leaf stage)
Kochia (including glyphosate-resistant kochia, seedlings up to 4 leaf stage or 5 cm in height)
Lady's-thumb (seedlings up to 4 leaf stage)
Lamb's-quarters (seedlings up to 8 leaf stage)
Pale smartweed (seedlings up to 4 leaf stage)
Pigweed (seedlings up to 4 leaf stage)
Russian thistle (seedlings up to 4 leaf stage or 5 cm in height)
Stinkweed[1] (seedlings up to 4 leaf stage)
Tartary buckwheat (seedlings up to 8 leaf stage)
Velvetleaf (seedlings up to 4 leaf stage)
Volunteer canola (including herbicide-tolerant varieties, seedlings up to 4 leaf stage)
Wild buckwheat (seedlings up to 8 leaf stage)
Wild mustard[1] (seedlings up to 4 leaf stage)

[1] In normal conditions, will control up to the 4 leaf stage. Plants beyond this stage are unlikely to be controlled.

For full details, please reference product label.

Features and Benefits

// Wide window of application
// No re-cropping restrictions
// Excellent crop safety
// Excellent tool to manage Group 2-resistant weeds
// Registered for use on various crops and forage grasses (consult label for application timing and rates)

Application Guidelines

Rate

// Registered application rate: 0.4 to 0.48 L/ac. or 16.5 to 20 ac./jug

Application Tips

// Spray coverage on weeds is very important
// Always travel at the proper speed
// Since Pardner is a contact herbicide, use nozzles designed to achieve a medium to coarse droplet size (approximately 250 to 350 microns). Avoid larger, higher-output nozzles that increase the droplet size (greater than 350 microns) because it can potentially reduce weed control from inadequate weed coverage.

Application Timing

// **Alfalfa (AB, SK, MB)** 2 to 6 trifoliate stage
// **Barley, fall rye, oats and triticale** Spring application: 2 leaf to early flag leaf stage
// **Canary seed** 3 to 5 leaf
// **Seedling grasses** 2 to 4 leaf
// **Sorghum** 4 leaf stage to 20 cm in height
// **Wheat** Spring application: 2 leaf to early flag leaf stage
Winter application: 2 to 4 leaf stage

Water Volumes

BC, AB, SK, MB
Ground
// Minimum of 10 gal./ac. (94 L/ha)
ON, QC, NB, NS, NFLD, PEI
// Minimum of 15 gal./ac. (140 L/ha)

Rainfastness

// Rainfast 1 hour after application

Tank Mixes

// Tank mix with Roundup in pre-seed applications to control herbicide-tolerant volunteer canola
// Many tank-mix options available for grass weed control and enhanced broadleaf weed control
// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Puma® ADVANCE

GROUP 1

HERBICIDE

CROPS FOR USE

Barley
Meadow bromegrass
(grown for forage or seed production)
Seedling perennial ryegrass
(grown for seed)
Wheat
(durum and spring)

ACTIVE INGREDIENT

Fenoxaprop-p-ethyl
- Group 1

FORMULATION

Emulsifiable concentrate

PACKAGING

8.25 L jug = 20 ac.
(one 2 × 8.25 L case = 40 ac.)

BC, AB, SK, MB
123.75 L drum = 300 ac.
412.5 L bulk tote = 1,000 ac.

WEEDS CONTROLLED

Barnyard grass
(1 to 6 leaf, up to emergence of the 3rd tiller)

Green foxtail
(1 to 6 leaf, up to emergence of the 3rd tiller)

Wild oats
(1 to 6 leaf, up to emergence of the 3rd tiller)

Yellow foxtail
(1 to 6 leaf, up to emergence of the 3rd tiller)

For full details, please reference product label.

Features and Benefits

// Control of barnyard grass, green and yellow foxtail and wild oats
// Superior crop safety in barley and wheat
// Wide window of application (1 to 6 leaves on main stem plus 3 tillers)
// Excellent tank-mix partner with Infinity, Infinity FX and other permissible broadleaf herbicides
// Affordable wild oat control offers excellent return on investment potential
// Registered for both ground and aerial application
// No re-cropping restrictions

Application Guidelines

Rate

Barley and Wheat

// Registered application rate: 0.412 L/ac.
// Crop stage is between 1 and 6 leaves on main stem plus 3 tillers; apply at the 3 to 4 leaf stage and at the full label rate to achieve maximum crop tolerance and weed control

Meadow bromegrass (grown for forage or seed production) and seedling perennial ryegrass (grown for seed)

// Registered application rate: 0.412 L/ac.
// Apply when the crop is in the 2 to 4 leaf stage

Application Tips

// Medium to coarse droplet size is important for optimum coverage
// Do not apply within 24 hours of night temperatures below 5°C as crop injury may occur

Water Volumes

BC, AB, SK, MB

Ground

// Minimum of 6 gal./ac. (56 L/ha)

Aerial

// Minimum of 4 gal./ac. (37 L/ha)

ON, QC, NB, NS, NFLD, PEI

Ground

// Minimum of 15 gal./ac. (140 L/ha)

Aerial

// Minimum of 4 gal./ac. (37 L/ha)

Rainfastness

// Rainfast 1 hour after application

Residue and Grazing

// Do not graze the treated barley or wheat or cut for hay within 25 days of application, or harvest for grain within 65 days of application
// Do not graze the treated perennial ryegrass or cut for straw within 65 days of application
// Do not graze the treated meadow bromegrass or cut for hay within 25 days of application

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage is required

Thumper®

HERBICIDE

CROPS FOR USE

Barley
Wheat
(durum, spring, winter)

PROVINCES
BC, AB, SK, MB

ACTIVE INGREDIENTS
2,4-D
- Group 4

Bromoxynil
- Group 6

FORMULATION
Liquid-emulsifiable concentrate

PACKAGING
8 L jug = 20 ac.
(one 2 × 8 L case treats 40 ac.)
128 L drum = 320 ac.
400 L bulk tote = 1,000 ac.

WEEDS CONTROLLED
American nightshade (seedlings up to 4 leaf stage)
Ball mustard (seedlings up to 4 leaf stage)
Bluebur (seedlings up to 4 leaf stage)
Cocklebur (seedlings up to 4 leaf stage)
Common buckwheat (seedlings up to 8 leaf stage)
Common groundsel (seedlings up to 8 leaf stage)
Common ragweed (seedlings up to 4 leaf stage)
Cow cockle (seedlings up to 4 leaf stage)
Flixweed (seedlings up to 4 leaf stage)
Green smartweed (seedlings up to 4 leaf stage)
Jimsonweed (seedlings up to 4 leaf stage)
Kochia (seedlings up to 12 leaf stage or 5 cm in height)
Lady's-thumb (seedlings up to 4 leaf stage)
Lamb's-quarters (seedlings up to 8 leaf stage)
Night-flowering catchfly (seedlings up to 4 leaf stage)
Pale smartweed (seedlings up to 4 leaf stage)
Redroot pigweed (seedlings up to 4 leaf stage)
Russian thistle (seedlings up to 12 leaf stage or 5 cm in height)
Shepherd's-purse (seedlings up to 4 leaf stage)
Stinkweed (seedlings up to 8 leaf stage)
Tartary buckwheat (seedlings up to 8 leaf stage)
Triazine-resistant pigweed (seedlings up to 4 leaf stage)
Velvetleaf (up to 8 cm in height)
Volunteer canola (including herbicide-tolerant varieties, seedlings up to 4 leaf stage)
Volunteer sunflowers (seedlings up to 4 leaf stage)
Wild buckwheat (seedlings up to 8 leaf stage)
Wild mustard (seedlings up to 8 leaf stage)

For full details, please reference product label.

Features and Benefits

// Controls up to 26 broadleaf weeds, including Group 2- and Group 9-resistant kochia
// Excellent crop safety
// No re-cropping restrictions
// Registered for aerial application in barley and wheat
// Numerous tank-mix options available
// Effective resistance management tool – contains Group 4 (2,4-D) and Group 6 (bromoxynil) active ingredients
// Dual chemistries provide both systemic and contact activity
// Available in bulk

Application Guidelines

Rate
// Registered application rate: 0.4 L/ac. or 20 ac./jug

Application Tips

Coverage
// Medium to coarse droplet size is important for optimum coverage

Application Timing

// Barley and wheat (durum, spring and winter) may be treated from the 4 leaf stage until the early flag leaf stage
// Application before the 4 leaf stage may result in crop injury

Water Volumes

Ground
// Minimum of 5 gal./ac. (47 L/ha)

Aerial
// Minimum of 3 gal./ac. (28 L/ha)

Rainfastness

// Rainfast 1 hour after application

Residue and Grazing

// Do not graze, cut for forage or hay until 30 days after application

Re-Cropping Intervals

// No re-cropping restrictions

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

KNOW YOUR GROUPS

GROUP 1 GROUP 6 GROUP 27

UNDRA®

HERBICIDE

CROPS FOR USE

Barley
Wheat
(durum and spring)

PROVINCES
BC, AB, SK, MB

ACTIVE INGREDIENTS
Bromoxynil
- Group 6

Fenoxaprop-p-ethyl
- Group 1

Pyrasulfotole
- Group 27

FORMULATION
Liquid-emulsifiable concentrate

PACKAGING
8.1 L jug = 10 ac.
(one 2 × 8.1 L case treats 20 ac.)
129.6 L drum = 160 ac.
405 L bulk tote = 500 ac.

WEEDS CONTROLLED

GRASS WEEDS

Barnyard grass (1 to 6 leaf, up to emergence of the 3rd tiller)
Green foxtail (1 to 6 leaf, up to emergence of the 3rd tiller)
Wild oats (1 to 6 leaf, up to emergence of the 3rd tiller)
Yellow foxtail (1 to 6 leaf, up to emergence of the 3rd tiller)

BROADLEAF WEEDS[1]

Annual sow thistle (1 to 6 leaf stage)
Canada fleabane[2] (up to 10 cm in height/diameter)
Canada thistle (suppression, up to 30 cm in height)
Chickweed (1 to 6 leaf stage)
Cleavers[2,3] (1 to 6 whorls)
Common ragweed (1 to 6 leaf stage)
Dandelion[4] (suppression, up to 10 cm in height/ 25 cm in diameter)
Flixweed (up to 10 cm in height)
Giant ragweed[2] (suppression, 1 to 6 leaf stage)
Hemp-nettle[3] (1 to 6 leaf stage)
Kochia (up to 10 cm in height)
Lamb's-quarters (1 to 6 leaf stage)
Narrow-leaved hawk's beard (up to 10 cm in height, prior to bolting)
Pale smartweed (1 to 6 leaf stage)
Perennial sow thistle (suppression, 1 to 6 leaf stage)
Redroot pigweed (1 to 6 leaf stage)
Round-leaved mallow (suppression, 1 to 6 leaf stage)
Russian thistle (up to 10 cm in height)
Shepherd's-purse (1 to 6 leaf stage)
Spreading atriplex[2] (suppression, 1 to 6 leaf stage)
Stinkweed (1 to 6 leaf stage)
Stork's-bill (with the addition of 2,4-D Ester, 1 to 8 leaf stage)
Volunteer canola (including herbicide-tolerant varieties, 1 to 6 leaf stage)
Wild buckwheat (1 to 6 leaf stage)
Wild mustard (1 to 6 leaf stage)

[1] Includes ALS (Group 2)-resistant biotypes.
[2] For control of cleavers at the 4 to 6 whorl stage, control of Canada fleabane, and suppression of giant ragweed and spreading atriplex, add Ammonium Sulphate (AMS) Utility Modifier (40%) solution at a rate of 0.5 L/ac. One jug of AMS Utility Modifier will treat 20 ac.
[3] Includes indoleacetic acid (Group 4)-resistant biotypes.
[4] Includes seedlings and overwintered rosette.

For full details, please reference product label.

Features and Benefits

// Outstanding formulation that provides enhanced control of grass and broadleaf weeds
// Contains innovative Group 27 herbicide, a key broadleaf resistance management tool
// Strong grass and broadleaf weed control for your farm, including Group 2-resistant broadleaf weeds such as chickweed, cleavers and kochia
// Allows you to move from barley to wheat without stopping
// Provides quick and reliable performance
// Registered for both ground and aerial application
// Pre-mixed for convenience

Application Guidelines

Rate

// Registered application rate: 0.81 L/ac.
// One 8.1 L jug treats 10 ac. (one 2 × 8.1 L case treats 20 ac.)
// One 129.6 L shuttle treats 160 ac.
// One 405 L tote treats 500 ac.

TUNDRA®

Application Tips

// Fill the sprayer tank one-quarter to one-half full of clean water and then add the Tundra herbicide. Fill the spray tank with the balance of the required water.

// If adding AMS, always add AMS to the tank first. One 10 L jug of AMS treats 20 ac.

Application Timing

// 1 to 6 leaves on main stem plus 3 tillers on barley, durum and spring wheat

// Do not apply on a crop that is stressed by severe weather conditions, frost, low fertility, drought, water-saturated soil, disease or insect damage, as crop injury may result

// Do not apply to crops undersown with legume species

Water Volumes

Ground

// Minimum of 5 gal./ac. (47 L/ha)

Aerial

// Minimum of 3 gal./ac. (28 L/ha)

Rainfastness

// Rainfast 1 hour after application

Residue and Grazing

// Do not harvest grain within 65 days of application

// Do not graze the treated crops or cut for forage or hay within 25 days of application

Re-Cropping Intervals

// Alfalfa, barley (spring), canary seed, canola, corn (field)[1], flax, oats, peas (field)[2], potatoes, soybeans[1], sunflowers and wheat (durum and spring) can be planted 10 months following an application of Tundra

// Lentils can be planted 22 months following an application of Tundra

[1] Manitoba only.

[2] Field peas may be grown the year following Tundra herbicide application in all black, grey-wooded and dark-brown soil zones. Do not plant field peas the year following an Tundra herbicide application in brown soil zones where soil pH is above 7.5 and precipitation is less than 125 mm from June 1 until September 1 of the application year.

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage is required

VARRO®

GROUP 2

HERBICIDE

CROPS FOR USE

Wheat
(durum, spring, winter)

ACTIVE INGREDIENT

Thiencarbazone-methyl
- Group 2

FORMULATION

Liquid OD formulation

PACKAGING

8 L jug = 40 ac.
(one 2 × 8 L case treats 80 ac.)

WEEDS CONTROLLED

GRASS WEEDS

Barnyard grass
(1 to 6 leaf, up to emergence of the 3rd tiller)

Canary seed
(1 to 6 leaf, up to emergence of the 2nd tiller)

Green foxtail
(1 to 6 leaf, up to emergence of 3rd tiller)

Japanese brome
(1 to 6 leaf, control of spring germinated and suppression of overwintered)

Persian darnel
(1 to 6 leaf, up to emergence of the 3rd tiller, suppression only)

Wild oats
(1 to 6 leaf, up to emergence of the 3rd tiller)

Yellow foxtail
(1 to 6 leaf, up to emergence of the 3rd tiller, suppression only)

BROADLEAF WEEDS

Cleavers
(1 to 6 whorls)

Hemp-nettle
(1 to 6 leaf stage)

Lamb's-quarters
(1 to 6 leaf stage, suppression only)

Pale smartweed
(1 to 6 leaf stage)

Redroot pigweed
(1 to 6 leaf stage)

Round-leaved mallow
(1 to 6 leaf stage, suppression only)

Russian thistle
(up to 10 cm in height, suppression only)

Shepherd's-purse
(1 to 6 leaf stage)

Stinkweed
(1 to 6 leaf stage)

Volunteer canola
(1 to 6 leaf stage, non-ALS tolerant varieties)

Wild buckwheat
(1 to 6 leaf stage)

Wild mustard
(1 to 6 leaf stage)

For full details, please reference product label.

Features and Benefits

// Provides strong performance on grass weeds, such as barnyard grass, canary seed, green foxtail, Japanese brome, Persian darnel, yellow foxtail and wild oats
// Varro is a "Broadleaf Booster" – delivering activity on selected broadleaf weeds. This enhances the performance of all broadleaf herbicides where Varro is a permissible tank mix.
// A Group 2 herbicide that controls Group 1-resistant foxtail and wild oats
// Allows crop rotation flexibility to sensitive crops, such as dry beans and lentils
// Registered for both ground and aerial application in wheat

Application Guidelines

Crop safety

// Varro provides excellent crop safety on durum, spring and winter wheat

Rate

// Registered application rate: 0.2 L/ac.
// One 8 L jug = 40 ac. (one 2 × 8 L case = 80 ac.)

Application Timing

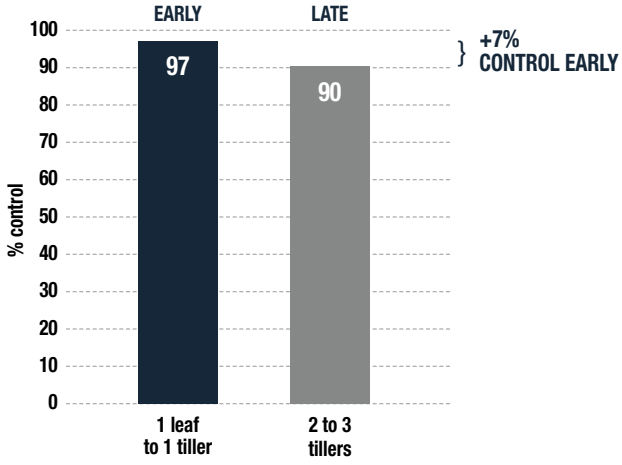
// 1 to 6 leaf stage with a maximum of 3 tillers, but prior to the presence of the first node (jointing)
// Do not apply an ALS herbicide, such as Varro, following the presence of the first node as crop injury may result
// Cold temperatures: Do not spray 3 days prior to or following cold temperatures (3°C or lower)

Under drought conditions

// Do not spray Varro herbicide if time between seeding and spraying exceeds 35 days as drought hastens crop development

Early Weed Control for Optimal Performance

// Spray early to maximize the performance of Varro
// Early weed removal optimizes yields and product performance



Source: 78 Bayer Crop Science Trials.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

VARRO®

When to Add AMS

// Bayer research has demonstrated that the addition of AMS to Varro herbicide can increase wild oat control by 5 to 10% depending upon environmental conditions and weed pressure*

// Bayer recommends the addition of AMS on spring wheat. Do not add AMS on durum wheat as it is more sensitive to crop injury (NIS can be added on durum). Always add AMS when Varro is tank mixed with Prestige™ XL herbicide or Curtail® M herbicide.

// One 10 L jug of AMS treats 20 ac.

*Source: 11 Bayer internal research trials (6 trials in 2010 and 5 trials in 2011). Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Water Volumes

Ground

// Minimum of 5 gal./ac. (47 L/ha)

Aerial

// Minimum of 3 gal./ac. (28 L/ha)

Rainfastness

// Rainfast 1 hour after application

Residue and Grazing

// Do not graze the treated crop or cut for forage hay within 7 days or cut for hay within 30 days of application

Re-Cropping Intervals

// Alfalfa, barley, canary seed, canola, chickpeas, corn (field), dry beans, flax, lentils, mustard, oats (spring), peas (field), soybeans, sunflowers, timothy and wheat (durum, spring and winter) can be planted 10 months following an application of Varro

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage is required

VARRO® FX

HERBICIDE

CROPS FOR USE

Wheat
(spring, winter)

ACTIVE INGREDIENT

Thiencarbazone-methyl
- Group 2

Fluroxypyr
- Group 4

FORMULATION

Emulsifiable Concentrate

PACKAGING

8.1 L jug = 20 ac.
(one 2 x 8.1 L case = 40 ac.)

129.6 L drum = 320 ac.

WEEDS CONTROLLED

GRASS WEEDS

Barnyard grass
(1 to 6 leaf, up to emergence of the 3rd tiller)

Green foxtail
(1 to 6 leaf, up to emergence of 3rd tiller)

Japanese brome[3]
(1 to 6 leaf stage)

Persian darnel[2]
(1 to 6 leaf, up to emergence of the 3rd tiller, suppression only)

Volunteer canary seed
(1 to 6 leaf, up to emergence of the 2nd tiller)

Wild oats
(1 to 6 leaf, up to emergence of the 3rd tiller)

Yellow foxtail[2]
(1 to 6 leaf, up to emergence of the 3rd tiller, suppression only)

BROADLEAF WEEDS

Cleavers
(1 to 9 whorls)

Common chickweed
(1 to 4 leaf stage)

Hemp-nettle
(1 to 6 leaf stage)

Kochia[1]
(2 to 8 leaf stage)

Lamb's-quarters
(1 to 6 leaf stage)

Pale smartweed
(1 to 6 leaf stage)

Redroot pigweed
(1 to 6 leaf stage)

Round-leaved mallow[2]
(1 to 6 leaf stage, suppression only)

Russian thistle[2]
(1 to 6 leaf stage, to 10 cm tall, suppression only)

Shepherd's-purse
(1 to 6 leaf stage)

Stinkweed
(1 to 6 leaf stage)

Stork's bill[2]
(1 to 8 leaf stage, suppression only)

Volunteer canola[4]
(1 to 6 leaf stage)

Volunteer flax[1]
(1 to 12 cm tall)

Wild buckwheat
(1 to 6 leaf stage)

Wild mustard
(1 to 6 leaf stage)

[1]Including biotypes resistant to Group 2 herbicides that inhibit the ALS enzyme.
[2]Suppression only
[3]Control of spring-germinated Japanese brome. Suppression of overwintered Japanese brome. Best results are obtained after a pre-seed or burndown application with glyphosate herbicide.
[4]Non-ALS tolerant

For full details, please reference product label.

Features and Benefits

// The first Group 2 graminicide with an emulsifiable concentrate (EC) formulation on the market in Western Canada
// Provides control of your toughest grass weeds like Group 1-resistant wild oats and broadleaf weed control boost for cleavers, kochia and more
// No external surfactant (NIS or AMS) is required
// Registered for both ground and aerial application in wheat

Application Guidelines

Crop safety

// Varro FX provides excellent crop safety on spring and winter wheat

Rate

// 0.4 L/ac. (1 L/ha)

Application Timing

// Spring wheat: 1 to 6 leaf stage with a maximum of 3 tillers, but prior to the presence of the first node (jointing)
// Do not apply an ALS herbicide, such as Varro FX, following the presence of the first node as crop injury may result
// Cold temperatures: Do not spray 3 days prior to or following cold temperatures (3°C or lower) and ensure weeds are actively growing

Under drought conditions

// Do not spray Varro FX herbicide if time between seeding and spraying exceeds 35 days as drought hastens crop development

Water Volumes

Ground

// Minimum of 5 gal./ac. (47 L/ha)

Aerial

// Minimum of 3 gal./ac. (28 L/ha)

VARRO® FX

Rainfastness

// Rainfast 1 hour after application

Residue and Grazing

// Do not graze the treated crop or cut for forage hay within 7 days or cut for hay within 30 days of application

Re-Cropping Intervals

// Alfalfa, barley (spring), canary seed, canola, corn (field), dry beans, flax, lentils, mustard, oats (spring), peas (field), soybeans, sunflowers, rye, timothy, triticale (spring and winter) and wheat (spring, durum and winter) can be planted 10 months following an application of Varro FX

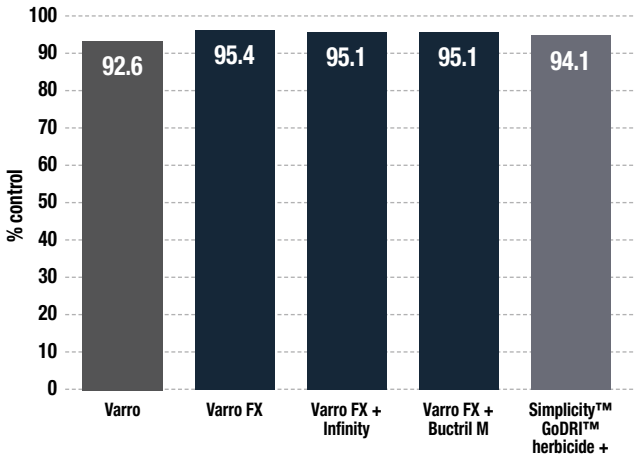
Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

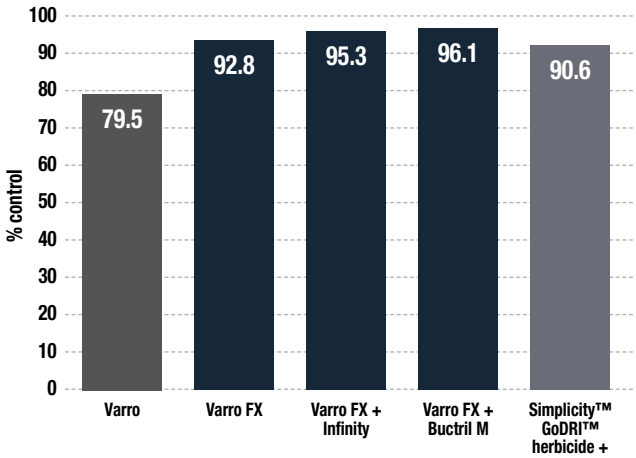
// Heated storage is required

Performance Data – Wild Oat Control



Source: 13 Bayer Crop Science Internal Trials (2021-2022).
Your results may vary according to agronomic, environmental and pest pressure variables.

Performance Data – Annual Broadleaf Control



Source: 9 Bayer Crop Science Internal Trials (2021-2022).
Your results may vary according to agronomic, environmental and pest pressure variables.

Wild Oat Control

UNTREATED	10 DAYS AFTER TREATMENT *Varro FX + Buctril M*	21 DAYS AFTER TREATMENT *Varro FX + Buctril M*

Source: Bayer Crop Science Internal Trial, Eston, SK (2023).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Kochia Control

UNTREATED	7 DAYS AFTER TREATMENT *Varro FX + Infinity*	14 DAYS AFTER TREATMENT *Varro FX + Infinity*

Source: Bayer Crop Science Internal Trial, Melita, MB (2023).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Velocity m3

HERBICIDE

CROPS FOR USE

Wheat
(durum, spring, winter)

ACTIVE INGREDIENTS

Bromoxynil
- Group 6

Pyrasulfotole
- Group 27

Thiencarbazone-methyl
- Group 2

FORMULATION

Liquid OD formulation

PACKAGING

8.1 L jug = 20 ac.
(one 2 × 8.1 L case treats 40 ac.)

129.6 L drum = 320 ac.

WEEDS CONTROLLED

GRASS WEEDS

Barnyard grass
(1 to 6 leaf, up to emergence of the 3rd tiller)

Canary seed
(1 to 6 leaf, up to emergence of the 2nd tiller)

Green foxtail
(1 to 6 leaf, up to emergence of the 3rd tiller)

Japanese brome[1,4]
(1 to 6 leaf stage, suppression only)

Persian darnel
(1 to 6 leaf stage, up to emergence of the 3rd tiller, suppression only)

Wild oats[4]
(1 to 6 leaf stage, up to emergence of the 3rd tiller)

Yellow foxtail
(1 to 6 leaf stage, up to emergence of the 3rd tiller, suppression only)

BROADLEAF WEEDS

Annual sow thistle
(1 to 6 leaf stage)

Canada fleabane[4]
(up to 10 cm in height/diameter)

Canada thistle
(suppression, up to 30 cm in height)

Chickweed
(1 to 6 leaf stage)

Cleavers[2,4]
(1 to 6 whorl stage)

Common ragweed
(1 to 6 leaf stage)

Dandelion[3]
(up to 10 cm in height/25 cm in diameter, suppression only)

Flixweed
(up to 10 cm in height)

Giant ragweed[4]
(1 to 6 leaf stage, suppression only)

Hemp-nettle
(1 to 6 leaf stage)

Kochia
(up to 10 cm in height)

Lamb's-quarters
(1 to 6 leaf stage)

Narrow-leaved hawk's beard
(up to 10 cm in height)

Pale smartweed
(1 to 6 leaf stage)

Perennial sow thistle
(1 to 6 leaf stage, suppression only)

Redroot pigweed
(1 to 6 leaf stage)

Round-leaved mallow
(1 to 6 leaf stage)

Russian thistle
(up to 10 cm in height)

Shepherd's-purse
(1 to 6 leaf stage)

Spreading atriplex[4]
(1 to 6 leaf stage, suppression only)

Stinkweed
(1 to 6 leaf stage)

Stork's-bill
(with the addition of 2,4-D Ester, 1 to 8 leaf stage)

Volunteer canola
(including herbicide-tolerant varieties, 1 to 6 leaf stage)

Wild buckwheat
(1 to 6 leaf stage)

Wild mustard
(1 to 6 leaf stage)

[1]Suppression of mixed populations of fall- and spring-germinated Japanese brome.
[2]Includes indoleacetic acid (Group 4)-resistant biotypes.
[3]Includes seedlings and overwintered rosettes.
[4]For enhanced control of Canada fleabane, cleavers in the 4 to 6 whorl stage (including ALS resistant), Japanese brome, wild oats, and suppression of giant ragweed and spreading atriplex, add Ammonium Sulfate (AMS) Utility Modifier (40% solution) at a rate of 0.5 L/ac. One jug of AMS Utility Modifier will treat 20 ac.

For full details, please reference product label.

Features and Benefits

// All-in-one, pre-mixed herbicide has your grass and broadleaf active ingredients combined in one jug
// Powerful resistance management tool with three chemistries (Groups 2, 6 and 27) that combat both Group 1-resistant wild oats and Group 2-resistant broadleaf weeds
// Excellent crop safety
// Registered for both ground and aerial application in wheat

Application Guidelines

Rate

// Registered application rate: 0.405 L/ac.
// One 8.1 L jug treats 20 ac. (one 2 × 8.1 L case treats 40 ac.)
// One 129.6 L shuttle treats 320 ac. – mixing required. Attach the supplied drill adaptor and mix for 1 minute prior to extracting the product from the shuttle.

Application Timing

// 1 to 6 leaf stage and maximum 3 tillers, but prior to presence of first node
// Do not apply an ALS herbicide, such as Velocity m3, after the first node is present as crop injury may occur
// Cold temperatures: do not spray 3 days prior to or following cold temperatures (3°C or lower)

Under drought conditions

// Do not spray Velocity m3 herbicide if time between seeding and spraying exceeds 35 days as drought hastens crop development

Velocity m3

Water Volumes

Ground

// Minimum of 5 gal./ac. (47 L/ha)

Aerial

// Minimum of 3 gal./ac. (28 L/ha)

Rainfastness

// Rainfast 1 hour after application

Residue and Grazing

// Do not harvest durum and spring wheat for grain or straw within 60 days of application, or winter wheat within 72 days of application

// Do not graze or cut for forage within 25 days of application or cut for hay within 30 days of application

Re-Cropping Intervals

// Alfalfa, barley, canary seed, canola, corn (field)[1], flax, oats, peas (field)[2], soybeans[1], sunflowers and wheat can be planted 10 months following an application of Velocity m3

// Lentils can be planted 22 months following an application of Velocity m3

[1] Manitoba and Eastern Canada only.

[2] Field peas may be grown the year following Velocity m3 herbicide application in all black, grey-wooded and dark-brown soil zones. Do not plant field peas the year following an Velocity m3 herbicide application in brown soil zones where soil pH is above 7.5 and precipitation is less than 125 mm from June 1 until September 1 of the application year.

Application Tips

// Fill the spray tank ¼ to ½ full with clean water and begin agitation or bypass

// If adding AMS, always add AMS to the tank first (one 10 L jug of AMS will treat 20 ac.)

// Next, add Velocity m3, followed by the permissible tank-mix partner

// If adding a tank mix permissible MCPA or 2,4-D, always include AMS

If you are faced with winter annuals or perennials, Bayer recommends the following options to improve the activity of Velocity m3:

Canada thistle, dandelion or perennial sow thistle

// Add 4 oz./ac. of tank mix permissible MCPA Ester (189 mL/ac. of MCPA Ester 600). The crop needs to be at the 3 leaf stage when adding MCPA or using products containing MCPA.

Stork's-bill

// Add 4 oz./ac. of 2,4-D Ester (189 mL/ac. of 2,4-D Ester 600). The crop needs to be at the 4 leaf stage when adding 2,4-D or using products containing 2,4-D.

Cleavers in the 4 to 6 whorl stage

// Add one 10 L jug of Bayer (40% solution) AMS for every 8.1 L jug of Velocity m3 for cleavers in the 4 to 6 whorl stage, or to improve activity on Canada thistle, dandelion and larger kochia

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage is required

DELARO®

GROUP 3

GROUP 11

FUNGICIDE

CROPS FOR USE

Barley
Chickpeas
Faba beans
Field peas
Lentils
Oats
Soybeans
Triticale
Wheat
(durum, spring, winter)

PROVINCES
BC, AB, SK, MB

ACTIVE INGREDIENTS
Prothioconazole
- Group 3
Trifloxystrobin
- Group 11

FORMULATION
Suspension concentrate

PACKAGING
7.1 L jug
Barley, Oats, Triticale, Wheat (durum, spring):
1 jug treats 30 ac.
Wheat (winter):
1 jug treats 30 to 40 ac.
113.6 L tote
Barley, Oats, Triticale, Wheat (durum, spring):
1 tote treats 480 ac.
Wheat (winter):
1 tote treats 480 to 640 ac.

DISEASES CONTROLLED
BARLEY
Leaf rust
Net blotch
Powdery mildew
Scald
Stem rust
Stripe rust

OATS
Crown rust
Leaf blotch
Stem rust

TRITICALE
Scald
Stem rust

WHEAT
(durum, spring, winter)
Leaf rust
Powdery mildew
Septoria leaf blotch
Stem rust
Stripe rust
Tan spot

For full details, please reference product label.

Features and Benefits

// Delaro combines two highly dynamic and complementary active ingredients – prothioconazole (Group 3) and trifloxystrobin (Group 11) – for a dual mode of action to provide quick and long-lasting protection

// Use Delaro at flag leaf timing in cereals for long-lasting, broad-spectrum foliar disease protection, followed by Prosaro PRO or Prosaro XTR fungicide at head timing for increased long-term disease protection

Application Guidelines

Rate

// Barley, oats, triticale, wheat (durum, spring): 230 mL/ac. (572 mL/ha)

// Wheat (winter): 177 to 230 mL/ac. (440 to 572 mL/ha)

Application Tips

// Good spray coverage and canopy penetration are important for best results

// Use a medium to coarse droplet size (250 to 350 microns)

Application Timing

// Apply preventively or at the very early stages of disease development, from 4 leaf to flag leaf but prior to head emergence

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 5 gal./ac. (47 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

APPLICATIONS	PRE-HARVEST INTERVAL (DAYS)
One application: Barley Oats, Triticale Wheat (durum, spring, winter)	Do not apply within 30 days of cutting for forage. Do not allow livestock to graze within 30 days of application. Do not apply within 45 days of harvest for grain, straw and hay.
Two applications: Wheat (winter)	If two applications are applied to winter wheat, do not harvest the treated crop for forage or hay and do not let livestock graze within the treated area. Do not apply within 45 days of harvest for grain.

Storage

// Heated storage is required

KNOW YOUR GROUPS

GROUP 3 | GROUP 7 | GROUP 11

DELARO® Complete

FUNGICIDE

CROPS FOR USE

Barley
Chickpeas
Corn
(field, pop, seed, sweet)
Dry beans
Field peas
Lentils
Oats
Soybeans
Wheat
(durum, spring, winter)

ACTIVE INGREDIENTS

Prothioconazole
- Group 3
Fluopyram
- Group 7
Trifloxystrobin
- Group 11

FORMULATION

Suspension concentrate

PACKAGING

7.1 L jug = 30 ac./jug
113.8 L = 480 ac./drum

DISEASES CONTROLLED

BARLEY
Net blotch
Scald
Leaf rust
Stem rust
Stripe rust
Powdery mildew

OATS
Crown rust
Septoria leaf blotch
Stem rust

WHEAT
(durum, spring, winter)
Septoria leaf blotch
Powdery mildew
Tan spot
Leaf rust
Stem rust
Stripe rust

For full details, please reference product label.

Features and Benefits

// Contains the Group 7 active, fluopyram, which offers excellent protection in high-disease pressure situations
// Three modes of action (Groups 3, 7, 11) that work in tandem for added protection
// Broad-spectrum systemic fungicide delivering excellent control of all major leaf diseases including blotch (septoria, net), rusts (leaf, stem, stripe), crown rust and tan spot

Application Guidelines

// Do not apply more than 2 applications per crop year to winter wheat
// Do not apply more than 1 application per crop year to barley, oats, durum wheat and spring wheat
// A Non-Ionic Surfactant at 0.125% v/v may be used with Delaro Complete for winter wheat

Rate

// Barley, oats, wheat (durum, spring): 237 mL/ac. (586 mL/ha)
// Wheat (winter): 189 to 237 mL/ac. (468 to 586 mL/ha)

Application Tips

// Begin fungicide applications preventively or at the first signs of disease
// Apply preventively or at the very early stages of disease development, from 4 leaf to flag leaf but prior to head emergence
// Barley, oats, wheat (durum, spring): From 4 leaf to flag leaf but prior to head emergence
// Wheat (winter):
- **Single application:** 4-leaf stage up to flag leaf
- **Two applications:** First application: 4-leaf stage to flag leaf stage. Second application: not within 14 days of the first application and prior to head emergence

// May be applied by ground or aerial spray equipment

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 5 gal./ac. (47 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

CROP	PRE-HARVEST INTERVAL (DAYS)
Soybean	20
Field corn, popcorn	14 (grain)
Sweet corn	14 (ears)
Spring and durum wheat, barley, oats, triticale	45
Winter wheat	45

Storage

// Heated storage is required

PROSARO® PRO

KNOW YOUR GROUPS

GROUP 3 GROUP 7

FUNGICIDE

CROPS FOR USE

Barley
Oats
Triticale
Wheat
(durum, spring, winter)

ACTIVE INGREDIENTS

Fluopyram
- Group 7
Prothioconazole
- Group 3
Tebuconazole
- Group 3

FORMULATION

Foliar Fungicide Suspension

PACKAGING

6.07 L jug = 20 ac.
97.17 L drum = 320 ac.

DISEASES CONTROLLED

Leaf blotch
Leaf rust
Net blotch
Powdery mildew
Scald
Septoria glume blotch
Septoria leaf blotch
Spot blotch
Stem rust
Stripe rust
Tan spot

DISEASES SUPPRESSED

Ergot
Fusarium head blight

For full details, please reference product label.

Features and Benefits

// Designed for you, the wheat and barley grower looking to maximize your return on investment
// Delivers exceptional protection from fusarium head blight (FHB) and reduces deoxynivalenol (DON)
// The first foliar fungicide registered in Canada with ergot on the label
// Provides excellent control of all major leaf diseases including blotch (glume, leaf, net, spot), rusts (leaf, stem, stripe) and tan spot
// A multi-mode of action solution containing three powerful active ingredients: fluopyram (Group 7), prothioconazole (Group 3) and tebuconazole (Group 3)
// Helps deliver a healthy green crop without impacting maturity

Application Guidelines

Rate

// 0.303 L/ac. = 20 ac./jug
// Addition of Non-Ionic Surfactant (NIS) required at 0.125% vol/vol

Application Timing

Head Disease

// Barley: For suppression of fusarium head blight, apply Prosaro PRO as a preventative application from when at least 70% to 100% of the barley stem heads are fully emerged to 3 days after full head emergence. Application at this timing will also control leaf disease.
// Wheat: For suppression of fusarium head blight, apply Prosaro PRO as a preventative application from when at least 75% of the wheat heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower. Application at this timing will also control labelled leaf disease.

Prosaro PRO may be applied sequentially after a flag leaf or head timing application of TILMOR after a minimum of 7 days.

PROSARO® PRO

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 5 gal./ac. (47 L/ha)

Tank Mixes

// Add one-half of the required amount of water to the permissible tank mix and start agitation
// Add the required quantity of Prosaro PRO to the water and complete filling with water to the required total volume
// Maintain agitation throughout mixing
// Prosaro PRO is recommended to be used with a registered Non-Ionic Surfactant, such as Agral® 90 fungicide, Ag Surf® insecticide at 0.125% vol/vol. **Prosaro PRO should be thoroughly mixed prior to the addition of a NIS**. Add the NIS into the tank last after Prosaro PRO and water have been mixed into solution.

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest and Re-Entry Interval

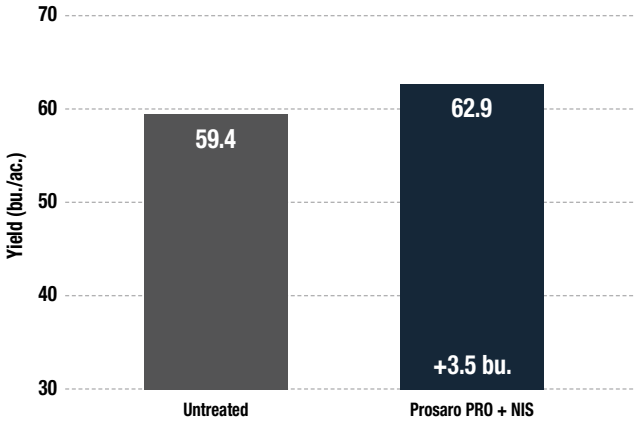
// Applications may not be made within 36 days of harvest
// Do not allow livestock to graze, or feed green forage to livestock prior to 14 days after application
// Straw cut after harvest may be fed or used for bedding
// Do not enter treated fields for 24 hours after application

Storage Guidelines

// Heated storage is required

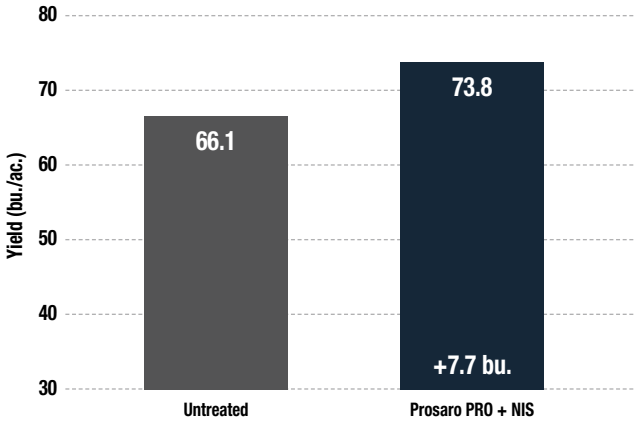
Disease Pressure – T3 Wheat Fungicide Summary – 3 Year Results

LOW DISEASE @ APPLICATION



Source: 51 Bayer Crop Science Market Development Trials (2020-2022). Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

MED-HIGH DISEASE @ APPLICATION

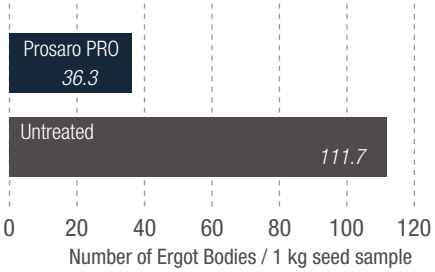


Source: 18 Bayer Crop Science Market Development Trials (2020-2022). Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

PROSARO® PRO

UTC (left), suppression of ergot by Prosaro PRO (right).
Source: 7 Bayer Crop Science Internal Trials (2019).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Suppression of Ergot in Cereals



Source: 7 Bayer Crop Science Internal Trials (2019).
Prosaro PRO includes the addition of a Non-Ionic Surfactant.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

The Effects of Ergot in Wheat at the Elevator

Untreated check with ergot vs. wheat with Prosaro PRO applied	Market value of 160 ac.	Product and Application Cost	Net ROI on Application
UTC (feed wheat)	$113,400	–	$113,400
Prosaro PRO (No.1 wheat)	$162,352	$4,693	$157,659
			$44,259

Return on wheat with Prosaro PRO applied and graded No. 1 at the elevator

Source: 32 BCS Trials (2020) where Prosaro PRO yielded 73 bu./ac. and UTC yielded 67.5 bu./ac.
ROI calculation based on No. 1 wheat downgraded to feed based on ergot infection vs. untreated check

- No. 1 wheat, 13.5 protein, April 2022: $13.90 per bu. with 0.04% allowable limit of ergot in a 1 kg sample
- Feed wheat, April 2022: $10.50 per bu. with 0.10% per bu. allowable limit of ergot in a 1 kg sample
- Average prices of No. 1 wheat and feed wheat are based on three Western Canadian Grain Elevators (April 2022)
- Product cost = 2022 Prosaro PRO SRP + $1/ac. for Non-Ionic Surfactant (NIS)

PROSARO XTR

GROUP 3

FUNGICIDE

CROPS FOR USE

Barley
Oats
Wheat
(durum, spring, winter)

PROVINCES
BC, AB, SK, MB

ACTIVE INGREDIENTS
Prothioconazole
- Group 3

Tebuconazole
- Group 3

FORMULATION
Emulsifiable concentrate

PACKAGING
6.5 L jug = 20 ac.
(one 2 × 6.5 L case = 40 ac.)

104 L drum = 320 ac.

DISEASES CONTROLLED
BARLEY

Blotch
(net and spot)

Fusarium head blight
(suppression)
Powdery mildew
Rusts
(leaf, stem and stripe)
Scald
Septoria leaf blotch

OATS

Crown rust
Septoria leaf blotch and black stem
Stem rust

WHEAT

Fusarium head blight
(suppression only)
Powdery mildew
Rusts
(leaf, stem and stripe)
Septoria glume blotch
Septoria leaf blotch
Tan spot

For full details, please reference product label.

Features and Benefits

// The enhancement of mefenpyr-diethyl helps plants to more efficiently mitigate stress. This allows them to expend their energy on producing yield and use fewer resources to defend themselves.

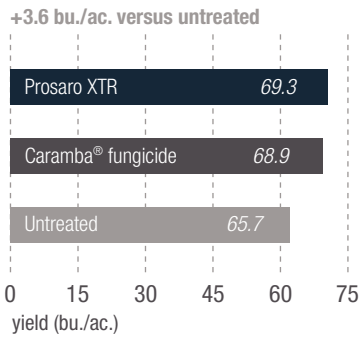
// Effective fusarium head blight (FHB) protection resulting in a reduction of deoxynivalenol (DON) and fusarium damaged kernels (FDK) for better grain quality and a higher grade

// When applied at early flowering in wheat and just after head emergence in barley, Prosaro XTR protects against FHB infection through the grain-fill period

// An application of Prosaro XTR at head timing also provides substantial flag leaf disease protection, which helps contribute to higher yield potential

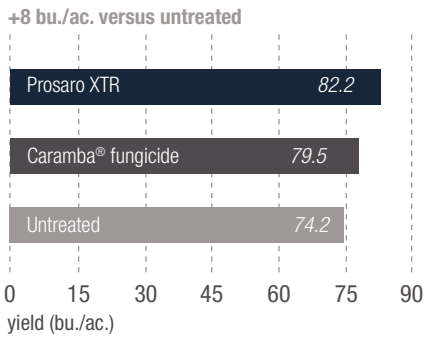
3-Year Wheat Fungicide Moisture Summary

BELOW NORMAL MOISTURE
<85% AVERAGE MOISTURE



Source: 24 grower-cooperated replicated wheat trials (2017 to 2019). Prosaro XTR fungicide yield exceeded Caramba® fungicide 67% of the time (16/24 trials).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.
Note: Average moisture is determined by Agriculture and Agri-Food Canada's Drought Watch Data.

NORMAL TO ABOVE NORMAL MOISTURE
>85% AVERAGE MOISTURE



Source: 19 Bayer grower-cooperated replicated wheat trials. (2017 to 2019). Prosaro XTR yield exceeded Caramba® fungicide 84% of the time (16/19 trials).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.
Note: Average moisture is determined by Agriculture and Agri-Food Canada's Drought Watch Data.

PROSARO® XTR

Application Guidelines

Rate

// Registered application rate: 0.325 L/ac. (20 ac./jug)

Application Tips

// For FHB suppression, good coverage of the head is essential. The best results are achieved when nozzles are configured to cover a vertical target. The best nozzle configurations are those that apply both forward and backward relative to the sprayer's direction of travel. Use medium to coarse droplet size.

Application Timing

Barley

// To manage both head and leaf diseases, preventively apply when 70 to 100% of the barley main stem heads are fully emerged to 3 days after full head emergence

// Refer to the timing guide on page 126 for details

Wheat

// To manage both head and leaf diseases, preventively apply when at least 75% of the wheat heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower

// Refer to the timing guide on page 127 for details

Water Volumes

Ground

// Minimum 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 5 gal./ac. (47 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

// Prosaro XTR may not be applied within 36 days of harvest

Storage

// Heated storage is required

Wheat – Prosaro Head Timing Trials

Optimal fusarium head blight timing is narrow. If you apply a fungicide before or after optimal head timing, test results showed that the yield component remained very positive.

EARLY HEAD
Head is completely exposed but just emerged from the flag leaf.
+6.7 bu./ac.

OPTIMAL
Head extended up from the flag leaf, first flowers visible.
+8.7 bu./ac.

LATE HEAD
Head fully flowered/ flowers falling off.
+7.2 bu./ac.

OPTIMAL
Optimal timing provides best results.

Source: 11 Bayer grower-cooperated replicated Cereal DSTs (2012, 2013 and 2016).
Numbers are expressed as gain in yield versus the untreated check.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

STRATEGO® PRO

KNOW YOUR GROUPS

GROUP 3 GROUP 11

FUNGICIDE

CROPS FOR USE

Barley
Chickpeas
Dry peas
Corn
(field, pop, seed, sweet)
Lentils
Millet
Oats
Rye
Soybeans
Triticale
Wheat
(durum, spring, winter)

PROVINCES

ON, QC, NB, NS, NFLD, PEI

ACTIVE INGREDIENTS

Prothioconazole
- Group 3

Trifloxystrobin
- Group 11

FORMULATION

Suspension concentrate

PACKAGING

7.1 L jug

Barley, oats, triticale, wheat (durum, spring): 1 jug treats 30 ac.

Wheat (winter): 1 jug treats 30 to 40 ac.

113.6 L tote

Barley, oats, triticale, wheat (durum, spring): 1 tote treats 480 ac.

Wheat (winter): 1 tote treats 480 to 640 ac.

DISEASES CONTROLLED

BARLEY
Leaf rust
Net blotch
Powdery mildew
Scald
Stem rust
Stripe rust

OATS
Crown rust
Leaf blotch
Stem rust

TRITICALE
Scald
Stem rust

WHEAT
(durum, spring, winter)
Leaf rust
Powdery mildew
Septoria leaf blotch
Stem rust
Stripe rust
Tan spot

For full details, please reference product label.

Features and Benefits

// Stratego PRO combines two highly dynamic and complementary active ingredients – prothioconazole (Group 3) and trifloxystrobin (Group 11) – to provide quick and long-lasting protection

// Stratego PRO delivers comprehensive leaf disease protection, while maximizing the yield potential of your winter wheat. It delivered an average +11% additional yield over the untreated check*.

// Use Stratego PRO at herbicide timing for long-lasting, broad-spectrum foliar disease protection, followed by Prosaro PRO fungicide at head timing for increased long-term disease protection

*Source: 17 Bayer internal trials (2012 and 2013). Your results may vary depending on agronomic, environmental and disease pressure variables.

Application Guidelines

Rate

// Barley, oats, triticale, wheat (durum, spring): 230 mL/ac. (572 mL/ha)

// Wheat (winter): 177 to 230 mL/ac. (440 to 572 mL/ha)

Application Tips

// Tank mix with Buctril M, Infinity or Infinity FX herbicides for complete early-season pest management

// When tank mixing with Buctril M, Infinity or Infinity FX, do not apply within 24 hours of night temperatures below 5°C as crop injury (leaf tip burn) may occur

// Follow up with an application of Prosaro PRO at head timing for complete disease management

Application Timing

// Optimal timing is T1 (Z 21 to Z 37). This application can be made in conjunction with herbicide timing for early-season pest control.

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha), recommend 20 gal./ac. (187 L/ha)

Aerial

// Minimum of 5 gal./ac. (47 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

APPLICATIONS	PRE-HARVEST INTERVAL (DAYS)
One application: Barley Oats Triticale Wheat (durum, spring, winter)	Do not apply within 30 days of cutting for forage. Do not allow livestock to graze within 30 days of application. Do not apply within 45 days of harvest for grain, hay and straw.
Two applications: Wheat (winter)	If two applications are applied to winter wheat, do not harvest the treated crop for forage or hay and do not let livestock graze within the treated area. Do not apply within 45 days of harvest for grain.

Storage

// Heated storage is required

TilMOR®

GROUP 3

FUNGICIDE

CROPS FOR USE

Barley
Oats
Wheat
(durum, spring, winter)

ACTIVE INGREDIENTS

Prothioconazole
- Group 3

Tebuconazole
- Group 3

FORMULATION

Emulsifiable concentrate

PACKAGING

10.12 L jug = 40 ac.

DISEASES CONTROLLED

BARLEY

Net blotch
Powdery mildew
Rusts
(leaf, stem and stripe)
Scald
Septoria leaf blotch
Spot blotch

OATS

Crown rust
Septoria leaf blotch
Stem rust

WHEAT

Fusarium head blight
(suppression)
Powdery mildew
Rusts
(leaf, stem and stripe)
Septoria glume blotch
Septoria leaf blotch
Tan spot

For full details, please reference product label.

Features and Benefits

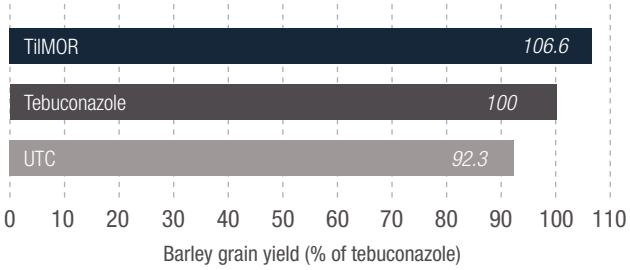
// TilMOR is the flex timing specialist, enabling growers to spray a fungicide when they need it most
// The combination of prothioconazole and tebuconazole provides both protective and curative activity
// Wide window of application, from flag leaf up to head emergence and flowering
// Comprehensive leaf disease protection, including outstanding rust control
// In conditions where TilMOR is applied for leaf diseases, a follow up application of Prosaro XTR or Prosaro PRO can be applied at head timing for FHB protection, comprehensive foliar disease management and optimized yield potential

Application Guidelines

Rate

// 253 mL/ac. rate (625 mL/ha) for FHB and leaf diseases = 40 ac./jug
// Does not require a surfactant

TilMOR Provided a 14% increase in yield over untreated and 7% increase when compared to using tebuconazole only



Source: 9 medium-to-high disease internal Bayer trials in barley (2017 to 2019).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Application Timing

Leaf disease

// For optimum control of leaf and stem diseases, apply from the late vegetative stage (flag leaf fully emerged to awn emergence) to the end of the flowering stage
// Best applied preventively at the very early stages of disease development Head disease

Head disease

// For best results treat the crop prior to infection. High humidity, heavy dew and rain during the days preceding head emergence and during flowering put cereal crops at a high risk of infection of FHB and septoria glume blotch.
// For optimum suppression of FHB in wheat and for the control of glume blotch, apply TilMOR when at least 75% of the wheat heads on the main stem are fully emerged to when 50% of the heads on the main stem are in flower

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 5 gal./ac. (47 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

// TilMOR may not be applied within 36 days of harvest

Storage

// Heated storage is required

decis®

GROUP 3

INSECTICIDE

CROPS FOR USE	
Alfalfa (seed production only)	Flax
Barley	Lentils
Canola	Oats
Corn (field, seed, sweet)	Oriental Mustard
Dry beans	Sugarbeets
Field peas	Sunflower
	Wheat

ACTIVE INGREDIENT
Deltamethrin
- Group 3

FORMULATION
Emulsifiable concentrate

PACKAGING
DECIS 100 EC
1.2 L jug
4.8 L jug
(see label for details on rate ranges and pests.)

INSECTS CONTROLLED
CEREALS
Cutworm
Grasshopper
For full details, please reference product label.

Features and Benefits

// Decis is registered for application either by ground or air, and is not prone to gassing off, washing off or leaching
// Flexible application rates to address insect stages and temperature variations within insect populations
// Readily tank mixable with many leading herbicides
// When spraying under high temperature (+25°C), it is recommended that the highest registered application rate be used

Application Guidelines

RECOMMENDED RATES

CROPS	INSECT	100 EC RECOMMENDED RATE	ACRES PER JUG 100 EC
Barley Oats Wheat	Cutworm	40 mL/ac.	30 ac./1.2 L jug 120 ac./4.8 L jug
Barley Oats Wheat	Grasshopper	30 mL/ac.	40 ac./1.2 L jug 160 ac./4.8 L jug

Application Timing

Cutworm

// Ground or aerial – apply once per season when larvae are present and feeding
// Do not disturb the soil after application
// Under severe insect pressure, application should also be made to a 15 m strip along the fencerows around the field
// Do not apply to adjacent crops
// Best results will be achieved if product is applied in the late evening, night or early morning

Grasshopper

// Ground – apply when grasshoppers are in the 2 to 4 nymphal stage
// Best control will be achieved when application is made prior to wing development
// Under severe insect pressure, application should also be made to a 15 m strip along the fencerows around the field
// Aerial – use as directed
// Rate – 30 mL/ac. recommended for optimal control

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 1 gal./ac. (9.4 L/ha)

Rainfastness

// Rainfast 1 hour after application

Re-Cropping Intervals

// No re-cropping restrictions

Pre-Harvest Intervals

// Re-entry is 12 hours
// Decis may not be applied within the following timelines:

CROPS	PRE-HARVEST INTERVAL (DAYS)
Barley, Wheat	40
Oats	31

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage is required

Ethrel®

GROWTH REGULATOR

CROPS FOR USE	ACTIVE INGREDIENT	PACKAGING
Wheat (spring) **ON, QC, NB, NS, NFLD, PEI** Wheat (winter)	**Ethephon** - Growth regulator **FORMULATION** **Liquid flowable**	**10 L jug** **= 6.7 to 10 ha in spring wheat** **= 4.0 to 8.0 ha in winter wheat (Eastern Canada only)**

For full details, please reference product label.

Application Guidelines

Rate

// 0.5 L/ac. (1.25 L/ha)

Application Timing

// Proper timing of an Ethrel application is essential. Early or late applications will result in adverse effects to the crop. Determining the growth stage of the crop is best accomplished by sampling several plants from around the field.

// Apply when main stem and most of the tillers are between early flag leaf emergence to swollen-boot stage (Z 37 to Z 45)

// Do not apply if more than 10% of the awns have emerged (Z 49)

// Do not apply within 35 days of harvest

Application Tips

// Recommended nozzle type is flat fan

// Thorough and uniform coverage of the upper plant leaves is essential for optimal results

// The spray boom must be a minimum of 50 cm (20 in.) above the crop canopy

// Avoid overlaps while spraying

// Do not apply Ethrel if the crop is under any type of stress

// Do not allow mixed solution to stand overnight

// Do not add surfactants or wetting agents to the spray solution

// Adjust Ethrel application rates according to environmental and growth stages. Use higher rates on crops that are highly fertilized (>90 lb./ac. [100 kg/ha] of nitrogen), have ample moisture during the growing season (>25 cm [10 in.] of precipitation or 35 cm [14 in.] of irrigation) or when lodging conditions are expected to be severe.

// Ethrel on spring and winter wheat is not recommended for Western Canada. For more information contact your local sales representative at **1 888-283-6847**.

Water Volumes

// Minimum of 21 gal./ac. (196 L/ha)

Rainfastness

// Rainfast 5 hours after application

Storage

// Heated storage is required

CORN

Crop Staging Guide

Traits

SmartStax PRO with RNAi Technology

SmartStax RIB Complete

Trecepta RIB Complete

VT4PRO with RNAi Technology

VT Double PRO RIB Complete

Seed Treatment

Acceleron Solutions

Herbicides

Converge XT

Corvus

Laudis

Laudis + Pardner

Roundup Xtend 2 with VaporGrip Technology

XtendiMax 2 with VaporGrip Technology

Fungicides

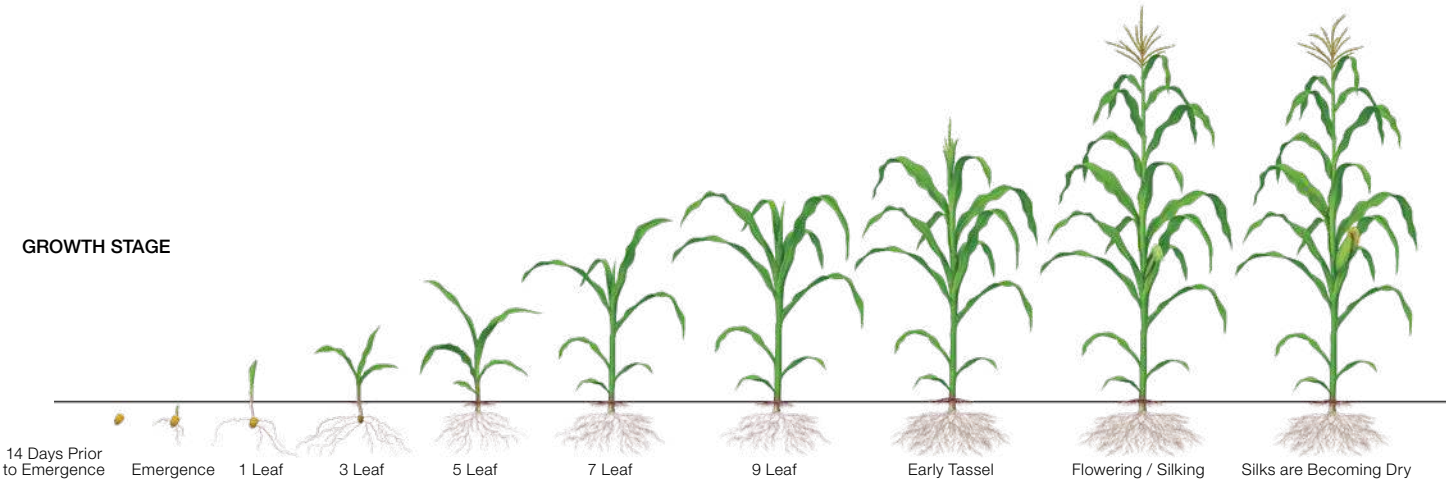
Delaro Complete

Proline

Insecticide

Decis

CORN CROP STAGING GUIDE



SEED TREATMENT

acceleron® solutions

APPLICATION TIMING

One-pass option

- CONVERGE XT
- CORVUS® + atrazine

Two-pass option

- CORVUS® → Roundup WeatherMAX® HERBICIDE
- LAUDIS® + Roundup WeatherMAX® HERBICIDE + atrazine
- LAUDIS® + Roundup XTEND2 VaporGrip®

In-crop one-pass option

In-crop Tank-Mix Partners

- Roundup WeatherMAX® HERBICIDE
- LAUDIS®
- PARDNER®
- Roundup XTEND2 VaporGrip® OR XTENDIMAX® 2 VaporGrip®
- DELARO® Complete
- DELARO® Complete + 1/2 PROLINE®

Application timing window

Optimal

Note: Please consult the individual product labels to ensure that your specific pest is controlled/ suppressed in the appropriate crop.

SmartStax® PRO With RNAi TECHNOLOGY

Next Generation of Corn Rootworm Protection

SmartStax PRO with RNAi Technology is the next generation of corn rootworm control. The trusted benefits of SmartStax Technology intertwined with new RNAi-based mode of action, offers the strongest biotech defense against corn rootworm.*

Features and Benefits

- // First product with three modes of action for corn rootworm control, incorporating an industry-first RNAi mode of action
- // Multiple modes of action helps protect plants above and below the ground
- // Multiple modes of action against corn earworm[1], corn rootworm and European corn borer
- // Protects roots to enable the best uptake of nutrients and water
- // Protects shoots to enhance photosynthesis and grain corn production
- // Tolerant to glufosinate

[1] Cry1A.105 and Cry2Ab2 from B.t. controls or suppresses corn earworm.
Your results may vary depending on agronomic, environmental and pest pressure variables.

*Source: 2021 and 2022 Eastern Canada Market Development, 9 locations: Tavistock, ON (21, 22), St. Barbe, QC (21, 22), St. Hagues, QC (21, 22), Rodney, ON (21, 22) Brussels, ON (21). Treatment means are significantly different at $P < 0.05$. Your results may vary according to agronomic, environmental and pest variables.

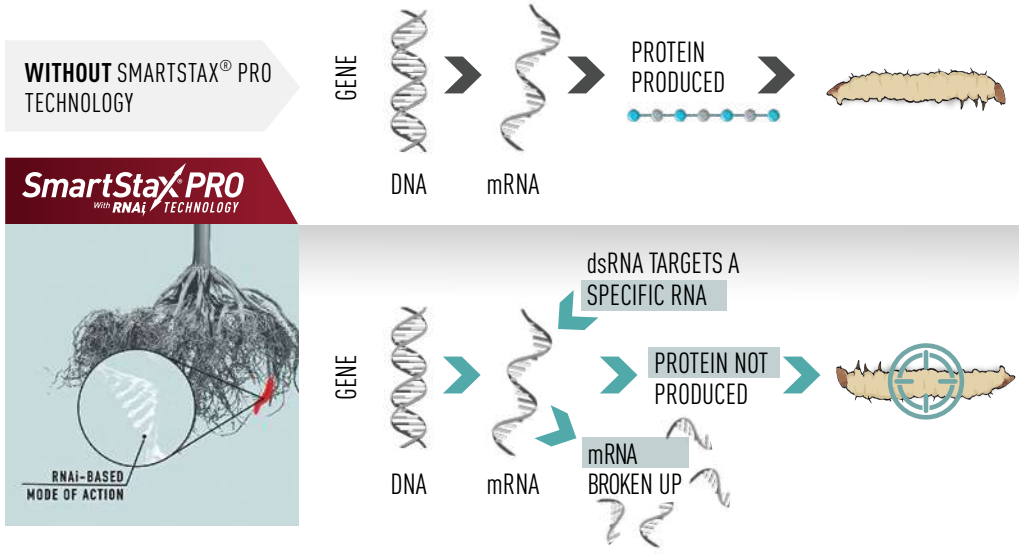
Exceptional Above- and Below-Ground Protection

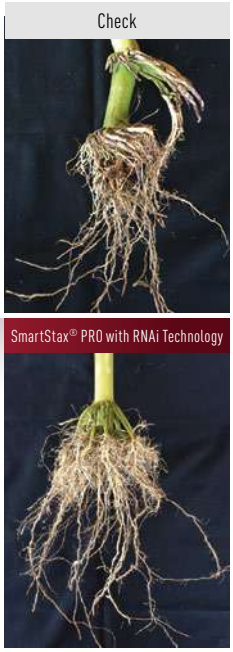
Unique modes of action give corn plants the protection they need against major pests that can inflict serious crop damage.

PRIMARY PESTS		SmartStax PRO RIB Complete Corn Blend	SmartStax RIB Complete Corn Blend
ABOVE-GROUND	Black Cutworm *(Agrotis ipsilion)*	*	*
	Corn earworm[1] *(Helicoverpa zea)*	**	**
	European Corn Borer *(Ostinia nubilalis)*	***	***
	Fall Armyworm *(Spodoptera frugiperda)*	***	***
BELOW-GROUND	Northern Corn Rootworm *(Diabrotica barberi)*	***	**
	Western Corn Root-worm *(Diabrotica virgifera)*	***	**
HERBICIDE TOLERANCE		Roundup Ready 2 Technology and Glufosinate Tolerance	Roundup Ready 2 Technology and Glufosinate Tolerance
REFUGE		5% RIB COMPLETE	5% IN THE BAG

Modes of action equal control of pest.
*Single-mode activity **Dual-mode activity ***Triple-mode activity

HOW DOES RNAi TECHNOLOGY CONTROL CORN ROOTWORM?





Photos taken from a Bayer Research Trial in Waterloo, IA on August 9, 2019. Your results may vary depending on agronomic, environmental and pest pressure variables.

SmartStax RIB COMPLETE

Above- and Below-Ground Insect Protection, Plus the Convenience You Want

SmartStax RIB Complete corn is one of the most advanced insect and weed control systems available. SmartStax Technology provides broad spectrum above- and below-ground insect protection, including two proven and highly effective modes of action against corn rootworm. This broad spectrum insect protection and weed control blend contributes to higher yield potential for farmers.

Features and Benefits

// Multiple modes of action help protect plants above and below the ground

// Multiple modes of action against corn earworm[1], corn rootworm and European corn borer

// Protects roots to enable the best uptake of nutrients and water

// Protects shoots to enhance photosynthesis and grain corn production

// Tolerant to glufosinate

PRIMARY PESTS		SmartStax RIB COMPLETE	Qrome®
ABOVE-GROUND	Black Cutworm *(Agrotis ipsilion)*	*	*
	Corn Earworm[1] *(Helicoverpa zea)*	**	
	European Corn Borer *(Ostinia nubilalis)*	***	**
	Fall Armyworm *(Spodoptera frugiperda)*	***	*
BELOW-GROUND	Northern Corn Rootworm *(Diabrotica barberi)*	**	**
	Western Corn Rootworm *(Diabrotica virgifera)*	**	**
HERBICIDE TOLERANCE		Roundup Ready 2 Technology + Glufosinate Tolerance	Roundup Ready 2 Technology + LibertyLink®
REFUGE		5% RIB COMPLETE	5% IN THE BAG

*Single-mode activity **Dual-mode activity ***Triple-mode activity

Roundup Ready 2 Technology for broad-spectrum weed control

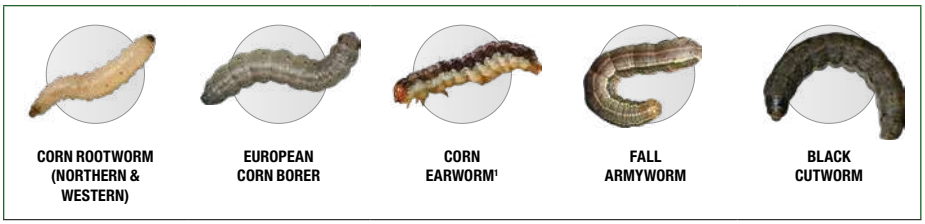
// This product provides in-seed tolerance to Roundup agricultural herbicides

Automatic refuge compliance – blend of 95% insect protected and 5% refuge seed in every bag

// With a 95/5% blend of insect-protected seed and refuge seed, you can plant the most traited acres across your entire farm

Exceptional Above- and Below-Ground Protection

Unique modes of action give corn plants the protection they need against major pests that can inflict serious crop damage.



CORN ROOTWORM (NORTHERN & WESTERN) | EUROPEAN CORN BORER | CORN EARWORM[1] | FALL ARMYWORM | BLACK CUTWORM

[1] Cry1A.105 and Cry2Ab2 from B.t. controls or suppresses corn earworm.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Trecepta RIB COMPLETE

Get Cleaner Ears with Broad-Spectrum Protection Against Above-Ground Pests

Trecepta technology combines the power of three different modes of action for broad-spectrum control of above-ground feeding pests, including Western bean cutworm.[1] This technology helps to put more grain in the bin and more money in the bank.

[1] When Western bean cutworms were present, tested corn hybrids containing the Trecepta trait had higher yields and quality than the tested corn hybrids not containing the trait.
Source: 11 Market Development Trials (2017 and 2018).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Features and Benefits

// Three unique modes of action for maximum protection from damage caused by above-ground feeding pests, including black cutworm, corn borer, corn earworm, fall armyworm and Western bean cutworm

// Built on the proven performance of VT Double PRO Technology

// Promotes healthy stalks and cleaner ears to help improve grain quality

Roundup Ready 2 Technology for broad-spectrum weed control

// This product provides in-seed tolerance to Roundup agricultural herbicides

Automatic refuge compliance – blend of 95% insect protected and 5% refuge seed in every bag

// With a 95/5% blend of insect-protected seed and refuge seed, you can plant the most traited acres across your entire farm

Trecepta RIB Complete promotes healthy stalks and cleaner ears that can help improve grain quality and yield performance.

	VT DoublePRO RIB COMPLETE	+	Agrisure Viptera® Trait	=	Trecepta RIB COMPLETE CORN
	Modes of Action				
Black Cutworm	-		1		**1**
Corn Earworm[2]	2		1		**3**
European Corn Borer	2		-		**2**
Fall Armyworm	2		1		**3**
Western Bean Cutworm	-		1		**1**

[2]Cry1A.105 and Cry2Ab2 from *B.t.* controls or suppresses corn earworm.

VT4PRO® With RNAi TECHNOLOGY

Strong Above-Ground Control with the Latest Corn Rootworm Defence

For farmers prioritizing performance, VT4PRO with RNAi Technology will provide a top-to-bottom defence backed by a **broad spectrum of protection** against corn insects. It will offer another choice for farmers looking for products that will provide root protection in low to moderate corn rootworm pressure conditions.

Features and Benefits

- First product from Bayer to combine the three built-in modes of action in Trecepta® Technology, an elite above-ground pest package for corn, with two below-ground modes of action including RNAi Technology
- Multiple modes of action against corn earworm[1], corn rootworm, European corn borer and Western bean cutworm
- Protects roots to enable the best uptake of nutrients and water
- Protects shoot to enhance photosynthesis and grain corn production
- Contains Roundup Ready 2 Technology®

[1]Cry1A.105 and Cry2Ab2 from B.t. controls or suppresses corn earworm. Your results may vary depending on agronomic, environmental and pest pressure variables.

3 ABOVE-GROUND MODES OF ACTION
FOR BROAD-SPECTRUM PEST PROTECTION

Built on proven Trecepta Technology, VT4PRO Technology will help reduce yield loss by defending against a wide range of above-ground pests.


FALL ARMYWORM


CORN EARWORM


SOUTHWESTERN CORN BORER


WESTERN BEAN CUTWORM


BLACK CUTWORM


EUROPEAN CORN BORER

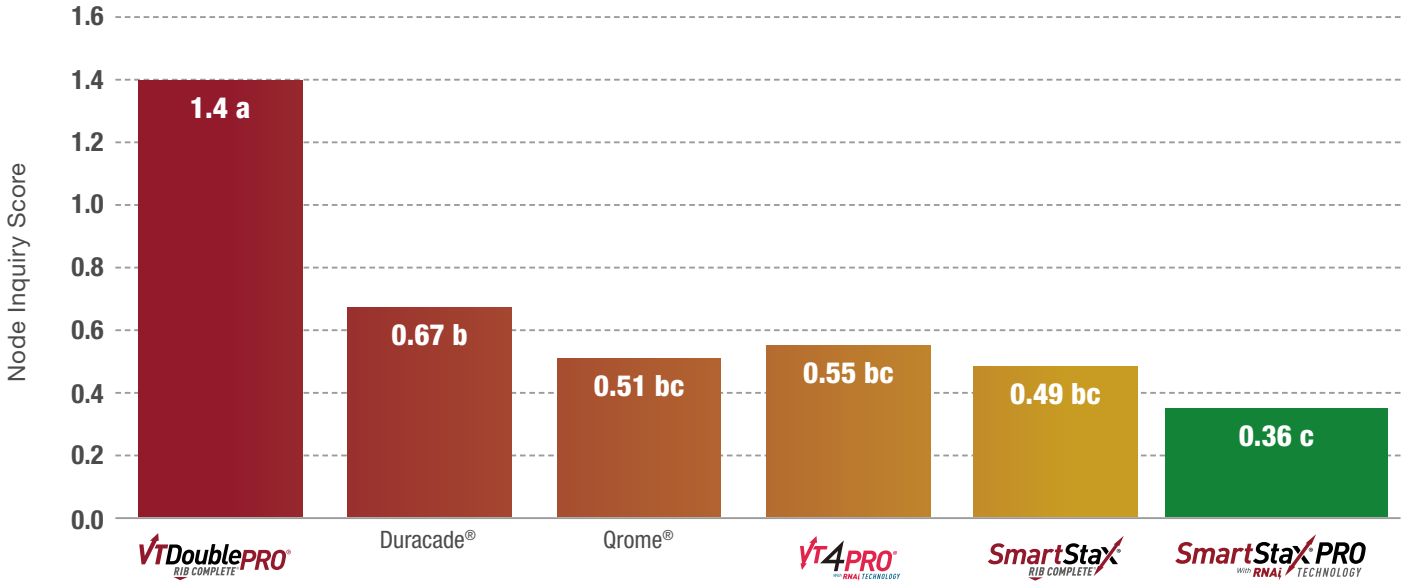
2 BELOW-GROUND MODES OF ACTION
INCLUDING RNAi TECHNOLOGY

RNAi Technology is the latest defense from Bayer designed to help manage corn rootworm in a new and specific way.


CORN ROOTWORM - 2

VT4PRO® With RNAi TECHNOLOGY

CORN TRAIT EFFICACY



Data collected from 16 trials in Eastern Canada. Performance may vary from location to location from year to year, as local growing, soil and weather conditions may vary. Growers should evaluate data from multiple locations and years whenever possible and should consider the impacts of these conditions on the growers fields.

CORN ROOTWORM PRESSURE

HOW TO QUANTIFY CORN ROOTWORM RISK?

LOW
- > 1 year corn
- Sandy ground
- Little to not CRW concerns in the area
- Less than 2 beetles per trap per day in the previous year

MEDIUM
- Sandy-loam or heavier ground
- Some CRW concerns in the area
- 2-5 beetles per trap per day in the previous year

HIGH
- > 1 year corn
- Loam ground or heavier
- Visible corn rootworm injury the previous year
- 5+ beetles per trap per day in the previous year

NONE

Trecepta RIB COMPLETE

VTDoublePRO RIB COMPLETE

VT4PRO With RNAi TECHNOLOGY

SmartStax RIB COMPLETE

SmartStax PRO With RNAi TECHNOLOGY

CROP ROTATION

For information on proper rotation guidelines, please refer to the Canadian Corn Pest Coalition.

VTDoublePRO® RIB COMPLETE®

Dual Modes of Action to Control Above-Ground Pests with the Convenience of Refuge in the Bag

VT Double PRO RIB Complete provides dual modes of action for above-ground insects with the convenience and simplicity of refuge in the bag. Plus, the refuge of just 5% of planted acres allows for higher whole-farm yield potential.

Features and Benefits

// Advanced above-ground protection with dual modes of action to control corn earworm,* European corn borer and fall armyworm

*Cry1A.105 and Cry2Ab2 from B.t. controls or suppresses corn earworm.

Roundup Ready 2 Technology for broad-spectrum weed control

// This product provides in-seed tolerance to Roundup agricultural herbicides

Automatic refuge compliance – blend of 95% insect protected and 5% refuge seed in every bag

// With a 95/5% blend of insect-protected seed and refuge seed, you can plant the most traited acres across your entire farm

Powerful Protection from Problem Pests

EUROPEAN CORN BORER

CORN EARWORM

FALL ARMYWORM

PRIMARY PESTS	Optimum® AcreMax®[2]	VT Double PRO RIB Complete Corn Blend[1]
Black Cutworm *(Agrotis ipsilion)*	*	
Corn Earworm[3,4] *(Helicoverpa zea)*		**
European Corn Borer *(Ostrinia nubilalis)*	**	**
Fall Armyworm *(Spodoptera frugiperda)*	*	**
HERBICIDE TECHNOLOGY	Roundup Ready 2 Technology / LibertyLink®	Roundup Ready 2 Technology
REFUGE	5% Single-Bag Refuge	5% Refuge-in-a-Bag
REFUGE EXAMPLES		

Modes of action equal control of pest.

** Dual-mode activity * Single-mode activity

[1] VT Double PRO RIB Complete is a corn seed blend of 95% *B.t.* seed and 5% non-*B.t.* seed.
[2] Optimum® AcreMax® is a Single-Bag Refuge Corn Solutions product.
[3] Cry1A.105 and Cry2Ab2 from *B.t.* controls or suppresses corn earworm.
[4] Pioneer claims suppression of corn earworm on the Optimum® AcreMax® label.

acceleron® solutions

SEED TREATMENT

CROPS FOR USE

Corn

ACTIVE INGREDIENT

BASIC (ALL PROVINCES)

Fluoxastrobin
- Group 11

Metalaxyl
- Group 4

Prothioconazole
- Group 3

STANDARD (ALL PROVINCES)

Fluoxastrobin
- Group 11

Metalaxyl
- Group 4

Prothioconazole
- Group 3

AND

Clothianidin (Neonic Option)
- Group 4

OR

Tetranillprole (Diamide Option)
- Group 28

COMPLETE (ON, QC, NB, NS, NFLD, PEI)

Fluoxastrobin*
- Group 11

Metalaxyl
- Group 4

Prothioconazole*
- Group 3

AND

Clothianidin (Neonic Option)
- Group 4

OR

Tetraniliprole (Diamide Option)
- Group 28

FORMULATION

Suspension concentrate

PACKAGING

- Commercially applied

DISEASES CONTROLLED

BASIC, STANDARD, COMPLETE

Seed rot and pre-emergence damping-off
- Caused by seed-borne *Aspergillus* spp. and *Penicillium* spp.

Seed rot and pre-emergence damping-off
- Caused by seed-borne and soil-borne *Fusarium* spp.

Post-emergence damping-off
- Caused by soil-borne *Fusarium* spp.

Seed rot and pre-emergence damping-off
- Caused by seed-borne *Cladosporium* spp. and *Aspergillus* spp.

Seed rots and seedling blights
- Caused by *Pythium* spp.

COMPLETE

*High rate of prothioconazole and fluoxastrobin for enhanced early- to mid-season disease control.

DISEASES SUPPRESSED

STANDARD, COMPLETE

Seed rot and pre-emergence damping-off
- Caused by *Penicillium* spp.

INSECT PROTECTION

STANDARD, COMPLETE

Wireworms

White grubs

Seed corn maggots

For full details, please reference product label.

Features and Benefits

// Choose the Acceleron package that's right for your field

// BioRise® Corn Offering is included seamlessly on select offerings in STANDARD and COMPLETE packages

// BioRise Corn Offering enhances mycorrhizal colonization, which increases functional root volume and supports increased water and nutrient uptake through the roots

PROTECTION	acceleron BASIC		acceleron STANDARD	
FUNGICIDE	✔	✔	✔	✔
INSECTICIDE			✔	✔
BIO-ENHANCER		✔		✔

Application Tips

// Commercially applied by a seed supplier for convenience, and to ensure uniform and consistent coverage on every seed

CONVERGE XT

GROUP 5

GROUP 27

HERBICIDE

CROPS FOR USE

Corn
(field and seed)

PROVINCES

ON, QC, NB, NS, NFLD, PEI

ACTIVE INGREDIENTS

Atrazine[1]
- Group 5

Isoxaflutole
- Group 27

[1] Atrazine is a required tank-mix partner. It is packaged within the Converge XT case and is labelled Converge 480.

FORMULATION

Suspension concentrate

PACKAGING

Each case contains 2.64 L Converge Flexx and 13.3 L Converge 480

Set-up rate
- Each case treats 30 ac.

Standard rate
- Each case treats 20 ac.

High rate
- Each case treats 15 ac.

WEEDS CONTROLLED

GRASS WEEDS

Barnyard grass[2]
Fall panicum[2]
Green foxtail[2]
Large crabgrass
Proso millet[2]
Smooth crabgrass
Witchgrass
Yellow foxtail

BROADLEAF WEEDS

Annual sow thistle
Canada fleabane[2,4]
Common ragweed[3,4]
Dandelion (seedling)
Eastern black nightshade
Giant ragweed[2,4]
Lady's-thumb
Lamb's-quarters[3]
Plantain (seedling)
Redroot pigweed[3]
Spiny annual sow thistle
Tall waterhemp[4]
Velvetleaf
Wild buckwheat
Wild mustard
Wormseed mustard

[2] Control with 178 mL/ac. (440 mL/ha), high rate only.
[3] Includes triazine and ALS-resistant biotypes.
[4] Includes glyphosate-resistant biotypes.

For full details, please reference product label.

Features and Benefits

// Long-lasting residual activity
// Allows for aggressive weed control and a wide window of application while maintaining crop safety
// Re-activated by rain to control those weeds waiting for moisture to germinate

Application Guidelines

Set-up rate (30 ac. per case)

// 89 mL/ac. (220 mL/ha)
// Apply pre-plant (up to 14 days prior to planting), pre-emerge or up to the 3 leaf stage, followed by an in-crop application of Roundup for the most consistent two-pass weed control system available

Standard rate (20 ac. per case)

// 134 mL/ac. (330 mL/ha)
// Apply pre-plant (up to 14 days prior to planting), pre-emerge or up to the 3 leaf stage for season-long weed control

High rate (15 ac. per case)

// 178 mL/ac. (440 mL/ha)
// Apply pre-plant (up to 14 days prior to planting), pre-emerge or up to the 3 leaf stage for season-long weed control. Also includes glyphosate-resistant Canada fleabane, proso millet control and glyphosate-resistant giant ragweed control.

CONVERGE XT

Application Tips

// Recommended nozzle type is flat fan nozzles or comparable nozzles that achieve a uniform spray pattern – hollow cone nozzles should not be used

// Converge XT tank mixed with Roundup can be applied up to the 3 leaf stage of corn only at the low rate (30 ac./case). If tank mixing Converge XT with Roundup at the high or mid rate, it must be applied as a pre-emerge application.

// Do not incorporate or work the ground after application

// Should not be applied on soil with less than 2% organic matter

// For pre-plant surfaces (up to 14 days prior to planting) and pre-emergence applications, a nitrogen solution (28-0-0) may replace all or part of the water as a carrier

Application Timing

// Pre-plant, pre-emerge or early post. Do not incorporate or work the ground after application.

Water Volumes

// 16 gal./ac. (150 L/ha)

Rainfastness

// Rainfast 2 hours after application

Re-Cropping Intervals

TIME AFTER APPLICATION	CROPS
4 months	Wheat (winter)
1 year	Alfalfa, barley, canola, corn (field), field peas, oats, potato, soybeans, timothy, tomato*, wheat (spring)
2 years	Dry common beans (all types)

*Caution should be used when planting tomato the year following an application of Converge XT if the conditions were exceptionally dry during the season of application.

Tank Mixes

// Tank mix with Roundup products for better dandelion control than Roundup alone (refer to label for rates and timing)

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage is required

WHAT TO EXPECT WHEN USED WITHOUT ATRAZINE

// The weed control performance of Converge XT (including atrazine) and Converge Flexx (no atrazine) are different and because of this, Bayer recommends always using Converge XT as opposed to Converge Flexx

// Converge Flexx can be used in pre-emerge and early post-emerge applications without atrazine; however, Bayer recommends that Converge XT be used for the best weed control performance

// When Converge Flexx is used instead of Converge XT, weed control will not exist for Canada fleabane, fall panicum, giant ragweed, lady's-thumb, proso millet, wild buckwheat and yellow foxtail

// In addition, overall weed control performance will weaken. This will be most apparent on *Panicum* spp. weeds (for example, barnyard grass, crabgrass, foxtails, millets and witchgrass) and *Polygonum* spp. weeds (for example, wild buckwheat).

CORVUS®

KNOW YOUR GROUPS

GROUP 2 GROUP 27

HERBICIDE

CROPS FOR USE

Corn
(field, seed)

PROVINCES
ON, QC, NB, NS, NFLD, PEI

ACTIVE INGREDIENTS
Thiencarbazone-methyl
- Group 2

Isoxaflutole
- Group 27

FORMULATION
Suspension concentrate

PACKAGING
4 x 4.0 L jugs

Low rate = 230 mL/ha (93 mL/ac.)
- 1 jug treats 43 ac.

Mid rate = 330 mL/ha (133 mL/ac.)
- 1 jug treats 30 ac.

High rate = 410 mL/ha (166 mL/ac.)
- 1 jug treats 24 ac.

WEEDS CONTROLLED[1,2]

GRASS WEEDS
- **Barnyard grass[3]**
- **Crabgrass (smooth and hairy)**
- **Green foxtail[3]**
- **Giant foxtail[3]**
- **Yellow foxtail[3]**
- **Witchgrass**

BROADLEAF WEEDS
- **Common ragweed**
- **Dandelion (seedling)**
- **Eastern black nightshade**
- **Hairy galinsoga**
- **Lamb's-quarters**
- **Mustard (wild and wormseed)**
- **Plantain (seedling)**
- **Redroot pigweed**
- **Sowthistle (annual and spiny annual)**
- **Velvetleaf**
- **Waterhemp (common, tall)**

[1]Including emerged weeds up to 5 cm in height.
[2]Includes ALS/SU (Group 2), auxin (Group 4), triazine (Group 5), glyphosate (Group 9) and PPO (Group 14)-resistant biotypes.
[3]Non- ALS/SU (Group 2)-resistant biotypes only.

For full details, please reference product label.

Features and Benefits

// Delivers three levels of control to fight weeds – rapid burndown for early weeds, residual control to prevent newly emerging weeds and reactivation with rain for prolonged weed control
// Combines two trusted modes of action – Group 2 and Group 27 – to provide outstanding control of a broad spectrum of broadleaf and grass weeds
// Contains a safener to help control weeds without compromising crop safety
// Flexibility in application timing and permissible tank mixing options to tailor your weed control to your needs
// Can be applied pre-emerge, pre-plant incorporated or early post-emerge (up to 2 leaf)
// Excellent resistance management tool and tank-mix partner with Roundup brands including Roundup Xtend 2 and XtendiMax 2 herbicides with VaporGrip Technology, or, where permitted, atrazine for multiple modes of effective action against glyphosate-resistant weeds
// An excellent choice for non-atrazine acres offering a non-prescription, atrazine-free solution to control a broad spectrum of weeds including herbicide-resistant weeds

Application Guidelines

Pre-plant/pre-emergence burndown-spray additives:

// For control of emerged weeds prior to corn emergence, Corvus may be used in conjunction with an adjuvant: COC or MSO applied at 1% vol/vol or a Non-Ionic Surfactant (NIS), such as Agral® 90 or Agsurf®, applied at 0.25% vol/vol

Early post-emergence to corn:

// Do not use any adjuvants or fertilizer with Corvus when applied to emerged field corn

Low rate (43 ac. per jug)

// 230 mL/ha (93 mL/ac.)
// Early-season control
// Use in situations of low weed pressure and in a planned two-pass system
// Apply a minimum of 230 mL/ha for early-season control of labelled weeds. The lower rates are only recommended for low weed pressure and when there is a two-pass weed control system planned with a registered in-crop herbicide treatment.

Mid rate (30 ac. per jug)

// 330 mL/ha (133 mL/ac.)
// Recommended rate for PPI, PRE and POST programs
// Season-long control
// Apply a minimum of 330 mL /ha for season-long control of labelled weeds

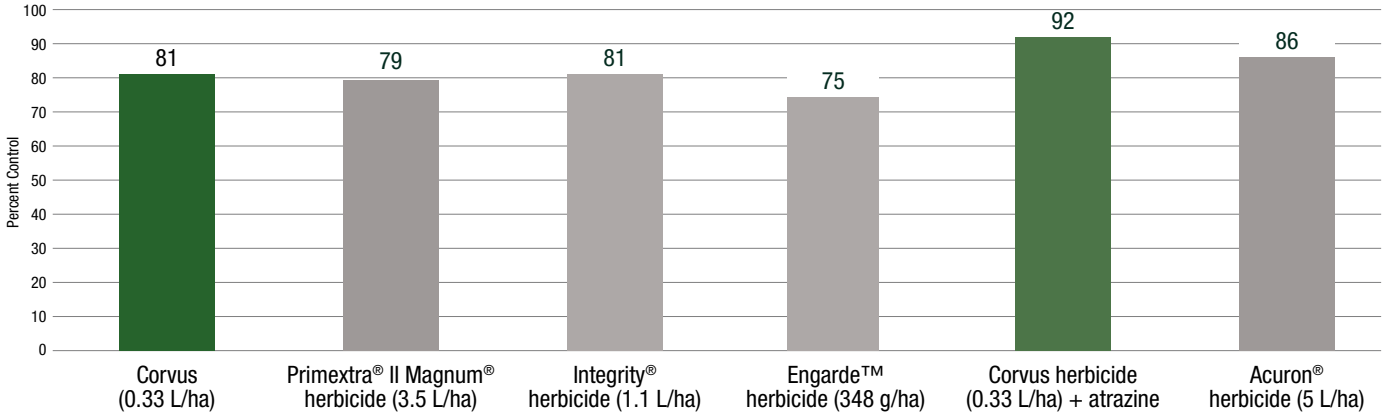
High rate (24 ac. per jug)

// 410 mL/ha (166 mL/ac.)
// Use higher rates within the labelled rate range for heavy weed pressure
// 410 mL/ha will provide improved (over lower rates) control of tall waterhemp, large crabgrass and green foxtail

CORVUS®

Weed Control – Corvus Performance

28 Days After PRE-emerge Application



Source: 2021-2023 Eastern Canada Market Development trials (27 locations). A total of 101 weed hits, 68 broadleaves and 22 grasses. Predominate species being lamb's-quarters (23), redroot pigweed (13) and yellow foxtail (6). Treatment means are significantly different at P≤0.05. Your results may vary according to agronomic, environmental and pest variables.

Application Tips

// Plant corn at least 4 cm deep. Failure to close the seed furrow may allow herbicide spray to directly contact the seed, which can cause injury.
// Corvus treatments are most effective in controlling weeds when adequate rainfall is received within 14 days after application
// May be used for all tillage systems (no-tillage, reduced tillage and conventional)
// Do not use any adjuvants or fertilizer with Corvus when applied to emerged field corn
// Do not apply Corvus to field corn grown on loamy sands or sands and/or soils with less than 2% organic matter
// Do not make more than one application in corn per season

Application Timing

// May be applied pre-plant (surface or incorporated), pre-emergence, or early post-emergence
- Pre-plant incorporated (PPI) – up to 7 days before planting
- Pre-emerge – up to 14 days before planting
- Early post-emerge – up to 2 leaf growth stage of corn

Water Volumes

Ground application only

// Can be applied broadcast in a minimum of 150 L/ha of total spray volume
// For surface pre-plant (up to 14 days prior to planting), pre-plant incorporated and pre-emergence applications, sprayable grade fluid fertilizer (nitrogen solution) may replace all or part of the water as a carrier

Rainfastness

// Rainfast 2 hours after application
// Avoid application of Corvus when heavy rain is forecast

Residue and Grazing

// Do not apply within 45 days of harvesting corn forage
// Do not graze livestock within 45 days of application
// Always respect the maximum pre-harvest/grazing interval on the labels of all the permissible tank-mix products
// Restricted Entry Interval (REI) is 12 hours

Re-Cropping Intervals

TIME AFTER APPLICATION	CROPS
Immediate plant back*	Corn (field, seed)
4 months	Wheat (winter)
10 months	Barley (spring), corn (field, seed), soybeans, wheat (spring)

*In the event that corn crop treated with Corvus is lost due to environmental conditions and reseeding is required, field corn may be reseeding immediately. Do not make a second application of Corvus.

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Store in cool, dry, well-ventilated place and in such a manner as to prevent cross contamination with other pesticides, seed, fertilizers, food and feed. Store in original container and out of reach of children, preferably in a locked storage area. Do not use or store in or around the home.

LAUDIS®

GROUP 27

HERBICIDE

CROPS FOR USE

Corn
(field, sweet)

PROVINCES

AB, MB, NB, NFLD, NS, ON, PEI, SK, QC

ACTIVE INGREDIENTS

Tembotrione
- Group 27

FORMULATION

Suspension concentrate

PACKAGING

Each 3.6 L jug treats

Low rate = 145 mL/ha (59 mL/ac.)
- Each jug treats 60 ac.

High rate = 220 mL/ha (89 mL/ac.)
- Each jug treats 40 ac.

WEEDS CONTROLLED

BROADLEAF WEEDS[1]

Canada fleabane[5]
Common lamb's-quarters
Common ragweed[2]
Giant ragweed
Kochia[4]
Hairy galinsoga
Redroot pigweed
Velvetleaf
Volunteer canola[6,7]
Waterhemp (common and tall)

WEEDS SUPPRESSED

GRASS WEEDS

Giant foxtail[3]
Green foxtail[3]

BROADLEAF WEEDS

Wild buckwheat[3,7]

[1] Includes ALS Inhibitors (Group 2), Synthetic Auxin (Group 4); Photosystem II inhibitors (Group 5); EPSP synthase inhibitors (Group 9); PPO Inhibitors (Group 14) resistant biotypes.

[2] For glyphosate-resistant biotypes use 220 mL/ha.

[3] Suppression only.

[4] Use higher rate within the labelled rate range of Laudis Herbicide for weed control in dense weed populations or under adverse growing conditions.

[5] For improved control of Canada Fleabane – field corn only: apply Laudis Herbicide in tank mix with one of the dicamba-containing tank-mix partners recommended on the product label.

[6] For control of common groundsel (up to the 4 leaf stage) and improved control of volunteer canola, apply Laudis herbicide at 220 mL/ha in tank mix with 500 mL/ha of Pardner herbicide.

[7] For improved control of volunteer canola and control of wild buckwheat: Laudis Herbicide may be tank mixed with 1.2 L/ha of AAtrex® Liquid 480 Herbicide. Maximum of one (1) application per season. Apply at the 2-5 leaf stage of field and sweet corn.

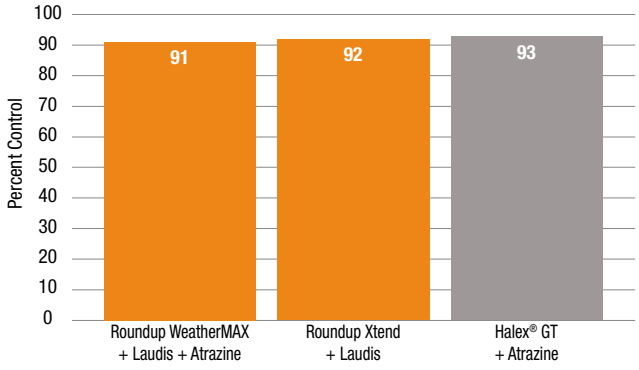
For full details, please reference product label.

Features and Benefits

// Fast-acting post-emergence broadleaf weed control under a variety of conditions
// Exceptional control of tough glyphosate-resistant weeds, such as Canada fleabane, giant ragweed, kochia, volunteer canola and waterhemp
// Built-in safener for outstanding crop safety on field and sweet corn
// Favourable rotation intervals for canola, cereals, potatoes and soybeans
// Excellent resistance management tool and tank-mix partner with Roundup brands

Laudis Efficacy: All Weeds

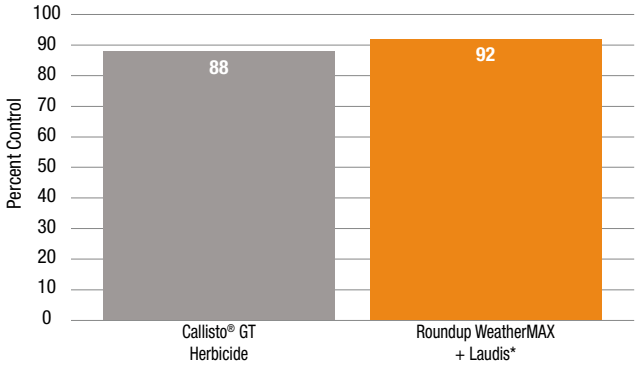
Three Year Summary: 28-35 Days after Application



Source: 2020-2022 Eastern Canada Market Development (24 locations). A total of 97 weed hits. Predominate species being lamb's-quarters (22), redroot pigweed (14) and yellow foxtail (9). Treatment means are significantly different at P≤0.05.
Your results may vary according to agronomic, environmental and pest variables.

Laudis Efficacy: All Weeds

Two Year Summary: 28-35 Days after Application



Source: 2021-2022 Eastern Canada Market Development (17 locations). A total of 66 weed hits. Predominate species being lamb's-quarters (162), redroot pigweed (10) and yellow foxtail (7). Treatment means are significantly different at P≤0.05.
Your results may vary according to agronomic, environmental and pest variables.
*Recommended adjuvants also included.

LAUDIS®

Application Guidelines

// Laudis is a suspension concentrate that requires the use of an external adjuvant. Laudis is to be used in conjunction with a Methylated Seed Oil (MSO) or Crop Oil Concentrate (COC) applied at 1% volume/volume or a High Surfactant Oil Concentrate (HSOC) at 0.5-1% volume/volume or Hasten™ Spray Adjuvant applied at 1.75 L/ha
// Laudis does not require an external adjuvant when tank mixed with Pardner herbicide

Low rate (60 ac. per jug)

// 145 mL/ha (59 mL/ac.)
// Control of common lamb's-quarters, common ragweed, redroot pigweed, velvetleaf
// Suppression of giant foxtail

High rate (40 ac. per jug) – recommended

// 220 mL/ha (89 mL/ac.)
// Control of above listed weeds plus Canada fleabane, giant ragweed, kochia, volunteer canola and waterhemp
// For kochia control, use higher rate within the labelled rate range of Laudis for weed control in dense weed populations or under adverse growing conditions
// Suppression of giant foxtail, green foxtail and wild buckwheat
// For glyphosate-resistant biotypes, use 220 mL/ha (89 mL/ac.)

Sequential Applications of Laudis in field corn only

Western Canada:

// One sequential application at the high rate of 220 mL/ha

Eastern Canada:

// A repeat application of Laudis at 145 mL/ha will provide control or suppression of late emerging weeds listed above for the same rate
// A repeat application of Laudis at 220 mL/ha will provide control or suppression of late emerging weeds, control of green foxtail and wild buckwheat
// The second application should be made at least 10 days after the first application

Application Tips

// Use of a spray-grade a liquid nitrogen fertilizer is recommended – UAN (28%) at 3.5 L/ha or AMS at 1 kg/ha (99%) or 2 L/ha (49% solution) or 2.5 L/ha (40% solution). If using an ammonium sulphate product with a different concentration, adjust the rate accordingly.
// Use of a spray-grade liquid nitrogen fertilizer is recommended. Use UAN under conditions of low relative humidity for greater weed control.
// For glyphosate-resistant weeds, such as common/giant ragweed and waterhemp, the addition of another effective mode of action (such as atrazine and/or Roundup Xtend 2 herbicide with VaporGrip Technology or XtendiMax 2 herbicide with VaporGrip Technology [dicamba]) will further improve control and should be used especially for waterhemp management
// For control of Canada fleabane, add Roundup Xtend 2 with VaporGrip Technology or XtendiMax 2 with VaporGrip Technology as a tank-mix partner to provide the best control
// Flat fan nozzles of 80° or 110° are recommended for optimum post-emergence coverage. Select nozzles and pressures that deliver medium spray droplets.
// When tank mixing Laudis with Roundup Xtend 2 with VaporGrip Technology or XtendiMax 2 with VaporGrip Technology, do not use UAN or an additional adjuvant

Application Timing

// The application window for Laudis is from the 2 to 8 leaf stage
// If using Roundup Xtend 2 or XtendiMax 2 as a tank-mix partner, the application window is from the 2 to 5 leaf stage

Crop Staging Sequential Application Option

CROP STAGE AT APPLICATION TIMING	FIELD CORN* AND SEED CORN**	SWEET CORN*
1	2-5 leaf stage	2 leaf stage up to and including the 8 leaf stage
2	Up to and including the 8 leaf stage	Do not apply

*Do not apply more than two applications of Laudis herbicide to field corn or more than one application to sweet corn, per growing season. For seed corn, use of this product must be approved by the contracting Seed Corn Company and comply with the directions given by the contractor.
**Use of seed corn as an immediate plant back crop and a rotational crop must be approved by the contracting seed corn companies and comply with the directions given by the contractor.

Water Volumes

Ground application only

// Apply in a minimum of 100 L/ha (10 gal./ac.) of water
// For weed control in dense seed populations or under adverse growing conditions, 150 to 200 L/ha (15 to 20 gal./ac.) of water is recommended

Rainfastness

// Rainfast 2 hours after application to most weed species

Residue and Grazing

// Do not apply within 45 days of harvesting corn forage
// Do not graze livestock within 45 days of application
// Restricted Entry Interval (REI) is 12 hours

Re-Cropping Intervals

TIME AFTER APPLICATION	CROPS
Immediate plant back[1]	Corn (field, seed**, sweet)
3 to 4 months	Wheat (winter), barley (winter)
10 months	Alfalfa, Canola[2], Corn (field, seed** and sweet), Dry beans (except kidney and cranberry), Field peas, Oats, Potatoes, Soybeans, Tomatoes, Wheat (spring)
22 months	Dry beans (kidney and cranberry)

[1] In the event that corn crop treated with Laudis is lost due to environmental conditions and reseeding is required, field corn and sweet corn may be reseeded immediately.
[2] Can be planted after a single application of Laudis up to 220 mL/ha per season.
**Use of seed corn as an immediate plant back crop and a rotational crop must be approved by the contracting seed corn companies and comply with the directions given by the contractor.

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Do not contaminate water, food or feed by storage or disposal
// Keep in original container during storage
// Store the tightly closed container away from feeds, fertilizers, foodstuffs, plants and seeds
// Do not use or store in or around the home

GROUP 27 GROUP 6

LAUDIS® + PARDNER®

CORN MANAGEMENT TANK MIX

HERBICIDE

CROPS FOR USE

Corn
(field, sweet)

PROVINCES

AB, MB, NB, NFLD, NS, ON, PEI, SK, QC

ACTIVE INGREDIENTS

Bromoxynil
- Group 6

Tembotrione
- Group 27

FORMULATION

LAUDIS
Suspension concentrate

PARDNER
Liquid-emulsifiable concentrate

PACKAGING

Laudis tank mixed with Pardner (½ Rate)

Laudis = 40 ac./jug (89 mL/ac.)

Pardner = 40 ac./jug (200 mL/ac.)

WEEDS CONTROLLED

Canada fleabane
Common lamb's-quarters (seedlings up to 8 leaf stage)
Common ragweed
Giant ragweed
Kochia (including glyphosate-resistant kochia, seedlings up to 4 leaf stage or 5 cm in height)
Hairy galinsoga
Redroot pigweed
Velvetleaf
Volunteer canola
Waterhemp (common and tall)
Wild buckwheat (seedlings up to 8 leaf stage)

For full details, please reference product label.

Features and Benefits

// Combines two trusted modes of action, Group 27 and Group 6, for enhanced weed control
// Excellent weed resistance management tool
// Flexible re-cropping window advantage over atrazine tank mix
// Controls a wide range of the toughest weeds including Canada fleabane, waterhemp, kochia and wild buckwheat
// Rapid activity of emerged weeds powered by tembotrione
// Eliminates the need for additional surfactant
// Tank-mix partner – Roundup WeatherMAX®

Application Guidelines

Crop safety

// Improved crop safety over solo bromoxynil

Rate

// Registered application rate:
// Laudis: 40 ac./jug (220 mL/ha (89 mL/ac.)
// Pardner: 40 ac./jug (200 mL/ac.)

Application Timing

// The application window is from the 2 to 8 leaf stage

Water Volumes

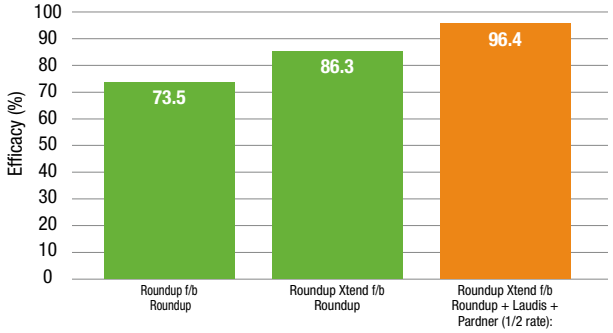
Ground

// AB, MB, SK – minimum of 10 gal./ac. (94 L/ha)
// ON, QC, NB, NS, NFLD, PEI – minimum of 15 gal./ac (140 L/ha)

Rainfastness

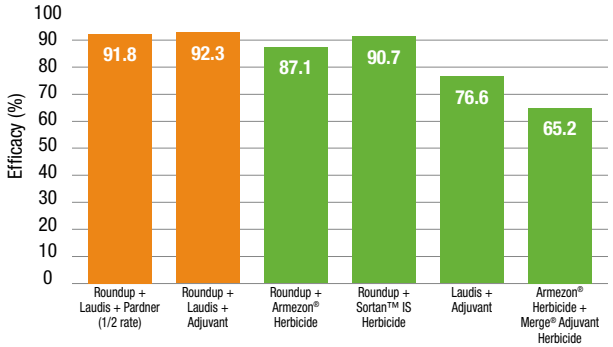
// Rainfast 2 hours after application

Laudis + Pardner in a 2-Pass Program



f/b = followed by

Laudis + Pardner in a Post Program



Source: 2021-2023 Western Canada Market Development Trials (n=29 locations). A total of 100 weed target evaluations and 15 different weed species (11 broadleaves and 4 grasses). Predominant weeds were kochia (22), volunteer canola (18), redroot pigweed (14) and wild buckwheat (9). Your results may vary depending on agronomic, environmental and pest pressure.

Storage

// Heated storage not required

Roundup XTEND2 With VaporGrip Technology

KNOW YOUR GROUPS

GROUP 4 GROUP 9

HERBICIDE

CROPS FOR USE

Corn
(field only, do not apply to sweet corn grown for seed production, or corn hybrids without Roundup Ready 2 Technology)

Soybeans
(RR2X trait only, do not apply to RR2Y or conventional soybeans)

ACTIVE INGREDIENTS

Dicamba
- Group 4
Present as diglycolamine salt

Glyphosate
- Group 9
monoethanolamine salt

FORMULATION

Liquid concentrate
Water soluble

PACKAGING

10 L jug = 7 ac.
450 L tote = 300 ac.

WEEDS CONTROLLED

ANNUAL BROADLEAF WEEDS

Annual sow thistle
Biennial wormwood
Buckwheat (tartary, wild)
Bur cucumber
Canada fleabane
Chickweed
Cleavers
Cocklebur
Common lamb's-quarters
Corn spurry
Cow cockle
Eastern black nightshade
Flixweed
Green smartweed
Hemp-nettle
Kochia
Lady's-thumb
Mustard (hare's ear, Indian, tumble, wild, wormseed)
Narrow-leaved hawk's beard
Narrow-leaved vetch
Night-flowering catchfly
Pennsylvania smartweed
Pigweed (redroot, Russian, smooth)
Prickly lettuce, ragweed (common, false, giant)
Round-leaved mallow
Russian thistle
Shepherd's-purse
Stinkweed
Stork's-bill
Velvetleaf
Volunteer adzuki beans
Volunteer canola (non-glyphosate-tolerant)
Volunteer flax
Wild tomato

ANNUAL GRASS WEEDS

Annual bluegrass
Barnyard grass
Crabgrass (large, smooth)
Downy brome
Fall panicum
Foxtail (green, yellow)
Persian darnel
Proso millet
Volunteer barley
Volunteer wheat
Wild oats

PERENNIAL WEEDS

Canada thistle
Common milkweed
Dandelion
Field bindweed
Foxtail barley
Perennial sow thistle
Quackgrass
Wire-stemmed muhly
Yellow nutsedge

For full details, please reference product label.

Features and Benefits

// Higher concentrated formulation for greater ease of use
// Same trusted control as the original Roundup Xtend herbicide with VaporGrip Technology
// Reduces early weed competition through short-term residual control of small seeded broadleaf weeds
// Helps manage weed resistance by adding another effective mode of action to Roundup
// Reduced volatility through VaporGrip Technology

Application Requirements

// Use nozzles and operating pressures that produce extremely coarse to ultra-coarse droplets to minimize drift
// Target weeds less than 10 cm tall
// Maintain boom height 50 cm above crop canopy or target weeds to reduce the risk of drift
// Optimal wind speeds for application typically occur between 5 and 15 km/h
// Maintain the required label buffer to protect sensitive areas
// Ensure ground speed is less than 25 km/h
// Use a triple rinse sprayer clean-out procedure
// Do not use ammonium sulfate and ammonium-based additives in application
// Use a minimum carrier water volume of 10 gal./ac. (100 L/ha) or 15 gal./ac. (140 L/ha) if including a drift reduction additive

Application Guidelines and Timing

Equivalent dose of Roundup WeatherMAX and XtendiMax 2 when using Roundup Xtend 2 with VaporGrip Technology

// At 1.5 L/ac. = 0.9 L/ac. Roundup WeatherMAX herbicide + 0.5 L/ac. XtendiMax 2 Herbicide
// At 1.14 L/ac. = 0.67 L/ac. Roundup WeatherMAX herbicide + 0.36 L/ac. XtendiMax 2 Herbicide
// At 0.8 L/ac. = 0.45 L/ac. Roundup WeatherMAX herbicide + 0.25 L/ac. XtendiMax 2 Herbicide

Pre-emergence

// 0.8, 1.14 or 1.5 L/ac. (1.9, 2.82 or 3.77 L/ha)

Note: 1.5 L/ac. is preferred for maximum residual opportunity and the most consistent weed control. Up to two post applications per season. Second post application should only be used to control glyphosate-resistant weeds.

Ensure corn seeds are placed at least 4 cm below the soil surface. If seeded less than 4 cm below the surface, delay application until the spike stage.

Do not incorporate.

Post-emergence (up to 5 leaf corn)

// 0.8, 1.14 or 1.5 L/ac. (1.9, 2.82 or 3.77 L/ha)

Do not apply to corn over 50 cm in height.

Refer to herbicide sensitivity ratings in seed guides to ensure crop safety with dicamba.

Pre-emergence Application Timing	Field Corn with Roundup Ready 2 Technology
Rate	0.8, 1.14 or 1.5 L/ac. (1.9, 2.82 or 3.77 L/ha)*
Notes	// Ensure corn seeds are placed at least 4 cm below the soil surface. If seeded less than 4 cm below the soil surface, delay application until the spike stage. // Do not incorporate

Post-emergence Application Timing	Field Corn with Roundup Ready 2 Technology
Crop Staging	Up to 5 leaf corn
Rate	0.8, 1.14 or 1.5 L/ac. (1.9, 2.82 or 3.77 L/ha)*
Notes	// Do not apply to corn over 50 cm in height // Refer to herbicide sensitivity ratings in seed guides to ensure crop safety with dicamba

Up to two post applications per season. Second post application should only be used for control of glyphosate-resistant weeds.**

The 1.5 L/ac. rate can be used only once in a season and should be applied pre-plant, pre-emergence or in-crop early post-emergence (up to the V2 growth stage in soybeans and up to the 5 leaf growth stage in corn).

*1.5 L/ac. is preferred for maximum residual opportunity and the most consistent weed control.

**3 L/ac. is the maximum total to be applied in a single season.

For other crops, see product label for rate

Application Window

Grazing Restrictions

// Do not permit lactating dairy animals to graze fields within 7 days after application
// Do not harvest forage or cut for hay within 30 days after application
// Withdraw meat animals from treated fields at least 3 days before slaughter

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

XTENDIMAX® 2 With VaporGrip® Technology

GROUP 4

HERBICIDE

CROPS FOR USE

Corn
(field only,
do not apply to sweet corn)
Soybeans

ACTIVE INGREDIENT

Dicamba
- Group 4

Present as diglycolamine salt

FORMULATION

Liquid concentrate herbicide
Water soluble

PACKAGING

10 L jug = 20 ac.
122 L drum = 245 ac.
450 L tote = 900 ac.

WEEDS CONTROLLED

ANNUAL BROADLEAF WEEDS

Buckwheat (tartary, wild)
Canada fleabane
Cleavers
Common lamb's-quarters
Corn spurry
Cow cockle
Green smartweed
Kochia (including Group 2 and Group 9 resistant kochia)
Lady's-thumb
Mustard (hare's ear, Indian, tumble, wild, wormseed)
Pigweed (redroot, Russian, smooth)
Ragweed (common, false, giant)
Velvetleaf

PERENNIAL WEEDS

Canada thistle
Field bindweed
Perennial sow thistle

For full details, please reference product label.

Features and Benefits

// Convenient higher concentrated formulation
// Same trusted control as the original XtendiMax herbicide with VaporGrip Technology
// Reduces early weed competition through short-term residual control of small-seeded broadleaf weeds
// Helps manage weed resistance by adding another effective mode of action to Roundup
// Reduced volatility through VaporGrip Technology

Application Requirements

// Use nozzles and operating pressures that produce extremely coarse to ultra coarse droplets to minimize drift
// Target weeds less than 10 cm tall
// Maintain boom height 50 cm above crop canopy or target weeds to reduce the risk of drift
// Optimal wind speeds for application typically occur between 5 and 15 km/h
// Maintain the required label buffer to protect sensitive areas; do not spray if sensitive crops are downwind
// Ensure the ground speed is less than 25 km/h
// Use a triple rinse sprayer clean-out procedure
// Do not use ammonium sulfate or ammonium-based additives in application
// Use a minimum carrier water volume of 10 gal./ac. (100 L/ha) or 15 gal./ac. (150 L/ha) if including a drift reduction additive

Application Guidelines and Timing

Pre-emergence

// Up to 0.5 L/ac.

Note: 0.5 L/ac. is preferred for maximum residual opportunity and the most consistent weed control.

Ensure corn seeds are placed at least 4 cm below the soil surface. If seeded less than 4 cm below the soil surface, delay application until the spike stage.

Do not incorporate.

Post-emergence (spike up to 5 leaf)

// 0.25 or 0.5 L/ac.

Note: Up to two post applications per season. Second post application should only be used to control glyphosate-resistant weeds.

Do not apply to corn over 50 cm in height.

The 0.5 L/ac. rate can be used only once in a season and should be applied pre-emergence or in-crop (up to the 5 leaf growth stage). 1 L/ac. is the maximum total to be applied in a single season.

Refer to herbicide sensitivity ratings in seed guides to ensure crop safety to dicamba.

Application Window

Grazing Restrictions

// Do not permit lactating dairy animals to graze fields within 7 days after application
// Do not harvest forage or cut for hay within 30 days after application
// Withdraw meat animals from treated fields at least 3 days before slaughter

Rainfastness

// Avoid applying this product when heavy rain is forecast. Rainfall occurring within 4 hours after application, particularly on weeds growing under stress conditions, may reduce the effectiveness of the application. Heavy rainfall within 2 hours after application may wash the chemical off the foliage and a repeat treatment may be required.

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

DELARO® Complete

KNOW YOUR GROUPS

GROUP 3 | GROUP 7 | GROUP 11

FUNGICIDE

CROPS FOR USE

Barley
Chickpeas
Corn
(field, pop, seed, sweet)
Dry beans
Field peas
Lentils
Oats
Soybeans
Wheat
(durum, spring, winter)

ACTIVE INGREDIENTS

Fluopyram
- Group 7
Prothioconazole
- Group 3
Trifloxystrobin
- Group 11

FORMULATION

Suspension concentrate

PACKAGING

7.1 L jug = 30 ac.
113.8 L = 480 ac.

DISEASES CONTROLLED

FIELD CORN
Common rust
Eye spot
Grey leaf spot
Northern corn leaf blight
Southern corn rust
Tar spot

For full details, please reference product label.

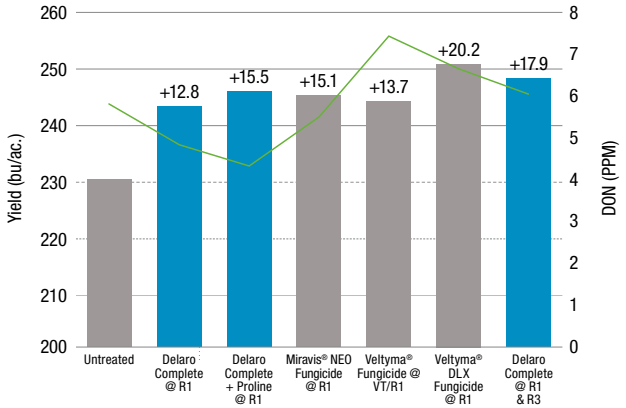
Features and Benefits

// Introduces a new Group 7 active, fluopyram, which offers excellent protection in high-disease situations
// Effective control of major corn and soybean diseases, including tar spot
// Delaro Complete fungicide delivers three modes of action (Groups 3, 7 and 11) to provide enhanced disease control in corn and soybeans under various environmental conditions to combat the toughest diseases

Directions for Use

// Apply when disease first appears, and apply a second application 7 to 14 days later if favourable conditions for disease development persist
// May be applied by ground or aerial spray equipment

2023 Yield and DON Values – All Locations



Source: 2023 Eastern Canada Bayer Market Development Trials (10 locations), 6 internal locations and 4 third party locations (Tenuta x 2, Hooker & BlackCreek). Treatment means are significantly different at P <0.5. Your results may vary according to agronomic, environmental and disease pressure variables.

Application Guidelines

// Do not apply more than 2 applications per season
// Do not apply with an adjuvant in corn

Rate

// 237 mL/ac. (586 mL/ha)

Rainfastness

// 1 hour

Pre-Harvest Interval

// CORN (field corn and popcorn, including corn grown for seed): Do not apply within 14 days of harvest for forage, grain and stover
// SWEET CORN (including corn grown for seed): Do not apply within 14 days of harvest for ears, forage and fodder

Storage

// Heated storage is required

PROLINE®

GROUP 3

FUNGICIDE

CROPS FOR USE

Canola
Chickpeas
Corn
(field, pop, seed and sweet)
Flax
Lentils
Mustard
Safflower
Sunflowers

ACTIVE INGREDIENT

Prothioconazole
- Group 3

FORMULATION

Suspension concentrate

PACKAGING

5.1 L jug = 40 ac.
Deoxynivalenol (DON) reduction in corn: 5.1 L jug = 30 ac.

DISEASES CONTROLLED

LOW RATE (40 ac.)
Eyespot
Northern blight
Rusts

DISEASES SUPPRESSED

DON REDUCTION RATE (30 ac.)
Fusarium ear rot
Gibberella ear rot
Grey leaf spot
Stalk rot pathogens
(*Colletotrichum* spp., *Fusarium* spp., *Gibberella* spp.)

For full details, please reference product label.

Features and Benefits

// Proline helps protect yield potential by providing leaf disease control, stalk rot protection and DON reduction

// In trials where there was Gibberella ear rot (GER) pressure, Proline provided a 55.6% DON reduction[1] and a 4.8 bu./ac. yield increase[2] over the untreated check

[1] Source: 6 Bayer Market Development Trials (2020).
[2] Source: 5 Bayer Market Development Trials (2020).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Application Guidelines

// Spray screens should be no finer than 50 micron mesh

Rate

// Leaf disease control: 127 mL/ac. (315 mL/ha)

// Ear protection (DON reduction), grey leaf spot and stalk rot pathogens: 170 mL/ac. (420 mL/ha)

Application Timing

// For fusarium and Gibberella ear rot suppression (DON reduction), late season leaf disease control and stalk rot pathogen protection:
- Apply from the development stage of corn between silking and silk browning
- Scout at Day 0 (early R1) when the first silks are present outside the husk

// Can be applied by ground or air

Water Volumes

BC, AB, SK, MB
Ground // Minimum of 10 gal./ac. (94 L/ha)
Aerial // Minimum of 4.5 gal./ac. (50 L/ha)
ON, QC, NB, NS, NFLD, PEI
Ground // Minimum of 19 gal./ac. (178 L/ha)
Aerial // Minimum of 5 gal./ac. (50 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

CROP	PRE-HARVEST INTERVAL (DAYS)
Corn (field, pop and sweet)	14

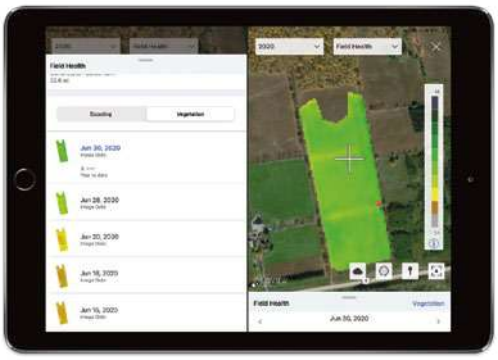
// For all other crops that are registered but not listed in the table, consult the Proline label for complete details. Crops not listed include barley, buckwheat, oats, pearl millet, proso millet, rye, sugar beets, triticale, wheat (durum, spring and winter), as well as many types of berries, cucurbits, melons and squash.

Storage

// Heated storage is required

FIELDVIEW™

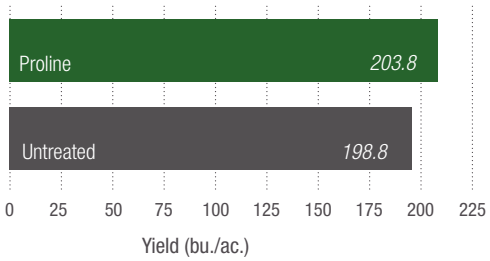
Scouting tools, including Field Health Imagery, can help monitor crop staging throughout the season. Keep notes on points of interest, which can easily be shared with your trusted advisors.



PROLINE®

Grain Corn Yield Results

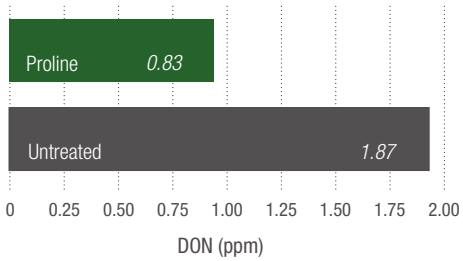
When there was gibberella ear rot (GER) pressure, Proline provided a +4.8 bu./ac. yield increase



Source: 5 Bayer Market Development Trials (2020).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

DON Reduction in Grain Corn

When there was gibberella ear rot (GER) pressure, Proline provided a 55.6% DON reduction over untreated

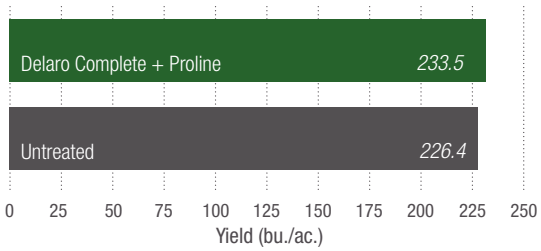


Source: 6 Bayer Market Development Trials (2020).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Proving Positive Yield Potential with Delaro Complete + Proline*

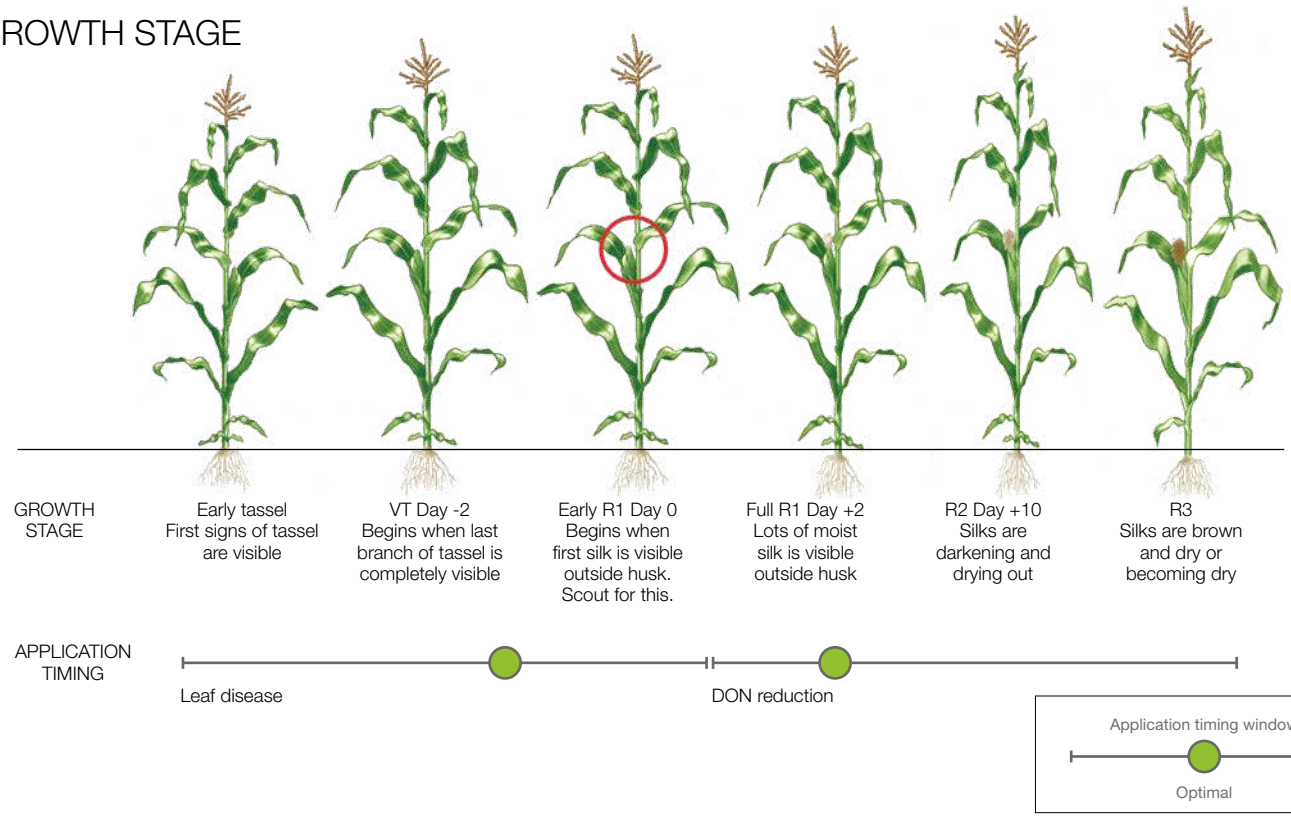
Have confidence that Delaro Complete + Proline can help deliver a positive yield potential and ROI. Trial data showed Delaro Complete + Proline yielded an average 7.1 bu./ac. over the untreated checks with a win rate of 77.5% in the trials.

*Proline applied at 60 ac./jug.



Source: Bayer Market Development Trials (2020-2021). 19 MDA Field Scale Plots and 21 MDR Small Plots trials. Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

GROWTH STAGE



decis®

GROUP 3

INSECTICIDE

CROPS FOR USE

Alfalfa
(seed production only)
Barley
Canola
Corn
(field, seed, sweet)
Dry beans
Field peas
Flax
Lentils
Oats
Oriental Mustard
Sugarbeets
Sunflower
Wheat

ACTIVE INGREDIENT

Deltamethrin
- Group 3

FORMULATION

Emulsifiable concentrate

PACKAGING

DECIS 100 EC
1.2 L jug
4.8 L jug

INSECTS CONTROLLED

CORN
Corn earworm
European corn borer
Western bean cutworm

For full details, please reference product label.

Features and Benefits

// Decis is registered for application either by ground or air and is not prone to gassing off, washing off or leaching
// Flexible application rates to address insect stages and temperature variations within insect populations
// Readily tank mixable with many leading herbicides identified on the label
// When spraying under high temperature (+25°C), it is recommended that the highest registered application rate be used

Application Tips

// Scout your fields often to ensure proper application and timing
// Scouting should occur in the early morning or in the evening when insects are actively feeding
// Use sufficient water to ensure thorough coverage; more water may be required when dense foliage is present
// Decis is a contact insecticide, so for best results spray when insects are feeding
// Avoid application when bees are foraging
// For best results, use the maximum recommended rate of application, as efficacy at lower rates may be affected by temperature

Application Guidelines

RECOMMENDED RATES

CROPS	INSECTS	100 EC RATE RECOMMENDED RATE	ACRES PER JUG 100 EC
Corn	European corn borer Western bean cutworm	50 mL/ac.	24 ac./1.2 L jug 96 ac./4.8 L jug
Corn (sweet)	Corn earworm	50 mL/ac.	24 ac./1.2 L jug 96 ac./4.8 L jug

decis®

Application Timing

Western bean cutworm

// Ground application – apply close to full silking when fresh silks are present
// Begin scouting once moths are active and corn reaches the pre-tassel stage
// Scout for egg masses on the top surface of the upper leaves
// Scout every 5 days during the pre-tassel and tasseling stage for approximately 2 weeks. As soon as a cumulative total of 5% of the plants contain egg masses, the threshold has been reached and an insecticide application is needed.
// Maximum of 3 applications per year in field and seed corn and 2 applications per year in sweet corn
// Can be applied by ground or aerial application in sweet corn
// Rate – 100 mL/ac.
// Pre-harvest interval – 1 day

Corn earworm

// Apply when insects are present in the silks
// Maximum of 2 applications per year
// Can be applied by ground or aerial application

European corn borer

// Apply when egg masses begin to hatch, but no later than when the first pinhole feeding is seen on the leaves
// Spray directly into the whorl of the plant. Repeat at 5 to 8 day intervals.
// For control of second generation insects, direct spray at ear zone
// Maximum of 3 applications per year in field and seed corn, and 2 applications in sweet corn
// Can be applied by ground or aerial application in sweet corn

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 1 gal./ac. (9.4 L/ha)

Rainfastness

// Rainfast 1 hour after application

Re-Cropping Intervals

// No re-cropping restrictions

Pre-Harvest Intervals

// Re-entry is 12 hours. Decis may not be applied within the following timelines:

CROPS	PRE-HARVEST INTERVAL (DAYS)
Corn (field and seed)	1
Corn (sweet)	5

If 3 applications are used, only the first or second application can be at the high rate (80 mL/ac.).

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage is required

PULSES

Crop Staging Guide (field peas)

Crop Staging Guide (lentils)

Seed Treatments

Trilex EverGol
Trilex EverGol SHIELD

Herbicide

Sencor

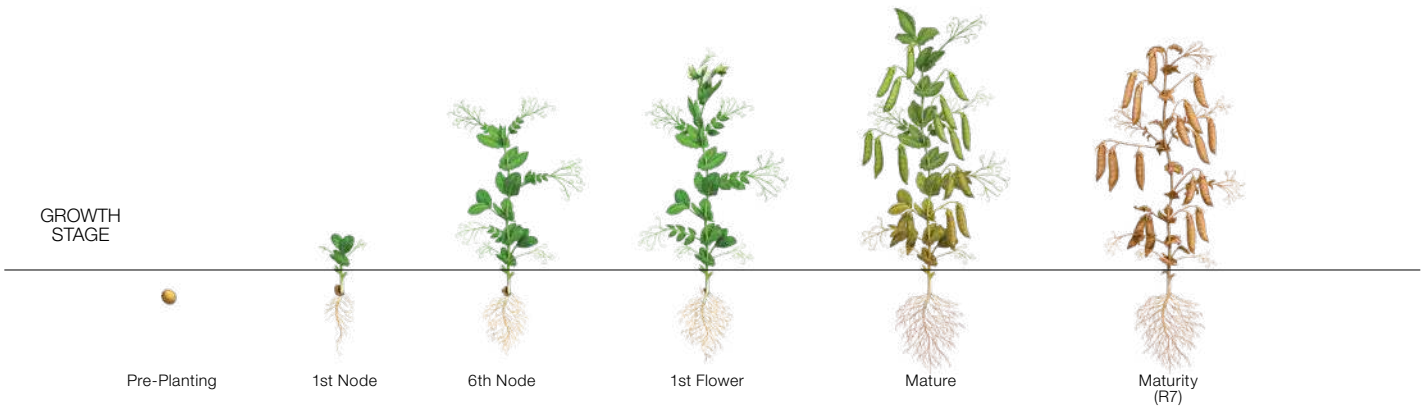
Fungicides

Delaro
Delaro Complete
Proline
Proline GOLD
Propulse

Insecticide

Decis

FIELD PEAS CROP STAGING GUIDE



SEED TREATMENT

Trilex EverGol

Trilex EverGol SHIELD

APPLICATION TIMING

sencor *

DELARO

DELARO Complete

Roundup Transorb HC HERBICIDE

Roundup WeatherMAX HERBICIDE

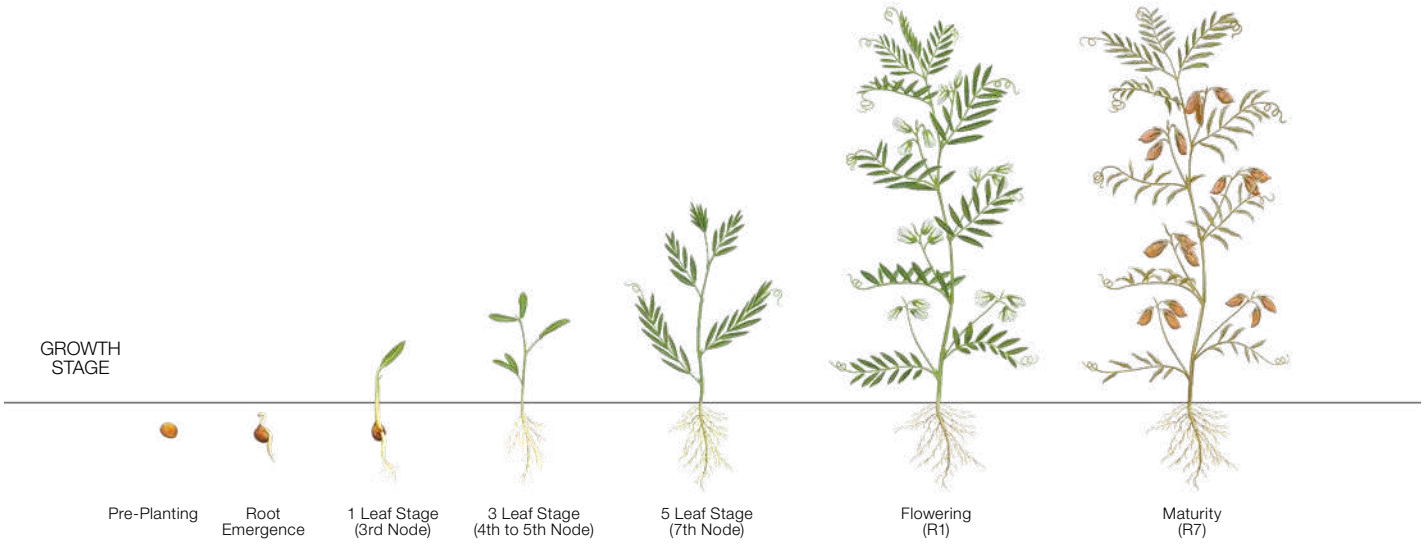
*Pea vines must be less than 15 cm long at the time of application.

Application timing window

Optimal

Note: Please consult the individual product labels to ensure that your specific pest is controlled/suppressed in the appropriate crop.

LENTILS CROP STAGING GUIDE



SEED TREATMENT

Trilex EverGol

Trilex EverGol SHIELD

APPLICATION TIMING

sencor

DELARO

DELARO Complete

Apply at the beginning of flowering or at first sign of disease.

DELARO

DELARO Complete

PROLINE

PROLINE GOLD

For chickpeas and lentils: when disease pressure is high or when conditions are conducive to disease development, make a second application 10 to 14 days later.

10 to 14 days post first pass application of Delaro.

Roundup Transorb HC HERBICIDE

Roundup WeatherMAX HERBICIDE

Application timing window

Optimal

Note: Please consult the individual product labels to ensure that your specific pest is controlled/suppressed in the appropriate crop.

KNOW YOUR GROUPS

GROUP 4 GROUP 7 GROUP 11

Trilex® EverGol® Trilex® EverGol® SHIELD

SEED TREATMENT

CROPS FOR USE

Beans
Chickpeas
Field peas
Lentils

TRILEX EVERGOL

ACTIVE INGREDIENTS

Metalaxyl
- Group 4

Penflufen
- Group 7

Trifloxystrobin
- Group 11

PACKAGING

1.5 L + 0.96 L of Trilex EverGol = 221 bushels

6.49 L + 4.15 L of Trilex EverGol = 954 bushels

TRILEX EVERGOL SHIELD

ACTIVE INGREDIENTS

Imidacloprid
- Group 4 (Stress Shield)

Metalaxyl
- Group 4

Penflufen
- Group 7

Trifloxystrobin
- Group 11

FORMULATION

Liquid water-based flowable suspension/ suspension

PACKAGING

1.5 L + 0.96 L of Trilex EverGol + 6.25 L of Stress Shield = 221 bushels

6.49 L + 4.15 L of Trilex EverGol + 27 L of Stress Shield* = 954 bushels

*27 L Stress Shield is sold separately.

TRILEX EVERGOL AND TRILEX EVERGOL SHIELD

DISEASES CONTROLLED

Seed rot and damping-off
- Caused by *Fusarium* spp. and *Rhizoctonia solani,* and *Pythium* spp.

Seed rot, damping-off and seedling blight
- Caused by seed-borne *Botrytis cinerea*

DISEASES SUPPRESSED

Seed-borne ascochyta blight
- Caused by *Ascochyta* spp.

TRILEX EVERGOL SHIELD

INSECT PROTECTION

Pea leaf weevil
Potato leafhopper
Wireworm

For full product details please reference label.

Plant Stand of Untreated and Treated Peas with Damaged Seed Coats

A Unsmashed, untreated B Smashed, untreated C Smashed, treated

Source: Bayer SeedGrowth. Saskatoon, SK (2022).

Trilex® EverGol®

Trilex® EverGol® SHIELD

Features and Benefits

Trilex EverGol

// Protects against the unique diseases and risks associated with early-season seeding

// Trio of active ingredients – metalaxyl, penflufen and trifloxystrobin – protects against ascochyta, botrytis, fusarium, pythium and rhizoctonia

// Unique Group 7 chemistry developed solely for seed treatment use, provides vigorous rhizoctonia control

// Promotes a high performing root system that supports optimal access to water and nutrients in a crop's youth phase, which helps produce a better final crop stand

// Concentrated formulation mixes easily with water, and provides you with the flexibility to adjust the water volume for a customized uniform application

// Strong inoculant compatibility with major manufacturers

Trilex EverGol SHIELD

// Offers all of the advantages of Trilex EverGol with the addition of Stress Shield, which provides exceptional insect protection including pea leaf weevils and wireworms

// Trilex EverGol SHIELD is one package that can be used by growers and custom seed treaters for small batches

// Trilex EverGol plus Stress Shield is a tank mix that can be used by growers and custom seed treaters for large batches

Directions for Use

// Trilex EverGol is a lineup of concentrated products that when mixed with water, allows the treater to control water volumes for accurate application rates and uniform distribution

// By varying the water volume, the treater can control the drying time on the seed and customize the application to fit their operation. This applies whether treating chickpeas or small red lentils.

// It is recommended that you start with a 7:1 water-to-product ratio for easy application and coverage

// Always ensure proper mixing of the components before application

// Always wear personal protective equipment when handling seed treatments or treated seed

// Always calibrate seeding equipment with the treated seed, as seed flow can be affected

// Refer to the Trilex EverGol and Stress Shield labels and instructions supplied with the treating systems for complete information on proper application techniques

NOTE: Check with inoculant manufacturers for product compatibility.

Application Guidelines

Package information

Trilex EverGol

// 1.5 L Trilex component A + 0.96 L Trilex component B = 221 bushels

// 6.49 L Trilex component A + 4.15 L Trilex component B = 954 bushels

// For the most effective mix, first rinse your seed treatment containers three times. Next add half the carrier solution, followed by Trilex A, then Trilex B and finally fill with the remaining carrier solution. Agitate or mix, and apply. Mixing should be completed before each application.

Storage

// Heated storage is required

Trilex® EverGol®

Trilex® EverGol® SHIELD

Trilex EverGol SHIELD

// 1.5 L Trilex component A + 0.96 L Trilex component B + 6.25 L jug Stress Shield = 221 bushels

Trilex EverGol + Stress Shield

// 6.49 L Trilex component A + 4.15 L Trilex component B + 27 L Stress Shield = 954 bushels

Rate

Trilex EverGol

// 25 mL/100 kg of seed for Trilex component A
// 16 mL/100 kg of seed for Trilex component B

Trilex EverGol SHIELD

// 25 mL/100 kg of seed for Trilex component A
// 16 mL/100 kg of seed for Trilex component B
// 104 mL/100 kg of seed for Stress Shield*

* Up to 208 mL/100 kg of seed for Stress Shield may be used for pea leaf weevil protection during early seeding or when populations are expected to be high

Tank Mixes

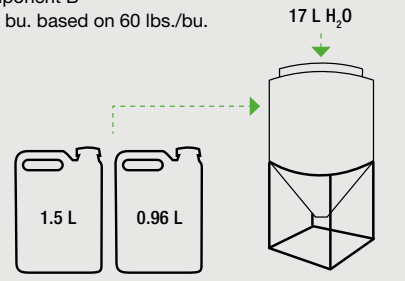
Stress Shield

// For increased plant protection, Stress Shield is also registered to protect against pea leaf weevil (faba beans and field peas only), potato leaf hopper (beans only) and wireworms
// Stress Shield curtails the negative effects of plant stresses by providing a supplemental energy pool for internal repair
// A healthier plant has a higher performing root system, as well as improved vigour and growth
// When using Trilex EverGol and Stress Shield, follow these simple steps for optimum success:

1. Trilex amount × Dilution rate = Carrier rate (10.64 L × 7 = 74.48 L)
2. Carrier rate - Stress Shield = Water rate (74.48 L - 27 L = 47.48 L)
3. Trilex amount + Stress Shield + Water rate = Total volume (10.64 L + 27 L + 47.48 L = 85.12 L)
4. Apply the total volume of solution to chickpeas, dry beans, lentils and peas

TRILEX EVERGOL (SMALL BOX)

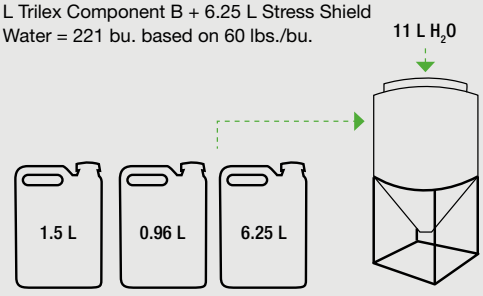
1.5 L Trilex Component A
+ 0.96 L Trilex Component B
+ 17 L Water = 221 bu. based on 60 lbs./bu.



(7:1 ratio water/carrier to product) 19.5 L Ready to use

TRILEX EVERGOL SHIELD

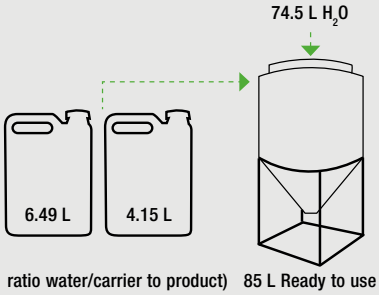
1.5 L Trilex Component A
+ 0.96 L Trilex Component B + 6.25 L Stress Shield
+ 11 L Water = 221 bu. based on 60 lbs./bu.



(7:1 ratio water/carrier to product) 19.7 L Ready to use

TRILEX EVERGOL (LARGE BOX)

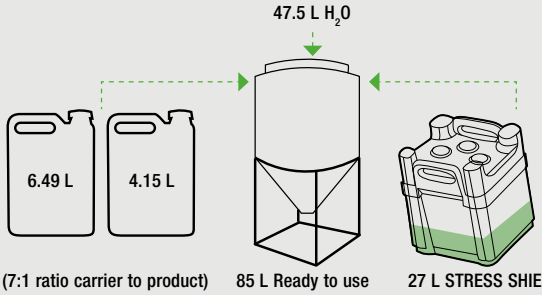
6.49 L Trilex Component A
+ 4.15 L Trilex Component B
+ 74.5 L Water = 954 bu. based on 60 lbs./bu.



(7:1 ratio water/carrier to product) 85 L Ready to use

TRILEX EVERGOL + STRESS SHIELD

6.49 L Trilex Component A
+ 4.15 L Trilex Component B + 27 L Stress Shield
+ 47.5 L Water = 954 bu. based on 60 lbs./bu.



(7:1 ratio carrier to product) 85 L Ready to use 27 L STRESS SHIELD

sencor®

GROUP 5

HERBICIDE

CROPS FOR USE

Chickpeas
Field peas
Lentils
Soybeans

PROVINCES
BC, AB, SK, MB

ACTIVE INGREDIENT
Metribuzin
- Group 5

FORMULATION
Dry flowable

PACKAGING
Each 2.5 kg jug treats 6.7 to 17.9 ha (16.5 to 44 ac.)

WEEDS CONTROLLED

FIELD PEAS

Ball mustard
Chickweed (including Group 2-resistant biotypes)
Corn spurry
Green smartweed
Hemp-nettle (including Group 2-resistant biotypes)
Lamb's-quarters
Stinkweed
Tartary buckwheat
Volunteer canola (including Clearfield® volunteer canola)
Wild mustard

WEEDS SUPPRESSED

CHICKPEAS AND LENTILS

Ball mustard
Chickweed (including Group 2-resistant biotypes)
Corn spurry
Green smartweed
Hemp-nettle (including Group 2-resistant biotypes)
Lamb's-quarters
Stinkweed
Tartary buckwheat
Volunteer canola (including Clearfield® volunteer canola)
Wild mustard

For full details, please reference product label.

Features and Benefits

// Residual activity provides control of weed flushes
// Group 5 herbicide that helps manage Group 2-resistant broadleaf weeds, including chickweed, hemp-nettle, kochia and wild mustard, which are issues in pulse crops that rely predominantly on Group 2 weed control options
// A program using both Edge® herbicide and Sencor will help manage Group 2- and Group 9-resistant weeds, such as kochia
// Controls many glyphosate-resistant and Group 2 herbicide-resistant weeds

Application Guidelines

Rate

// Rate to use is soil-type dependent, see label for details
// Dry flowable (DF): 57 to 151 g/ac. (140 to 375 g/ha)
// For chickpea, field pea and lentil rate guidelines, refer to the Crops, Rates and Staging section on the next page

Weed out herbicide resistance.
Sencor herbicide is an easy tool to control glyphosate and Group 2-resistant weeds.*
Visit **MixItUp.ca** to learn more.

*Refer to label for weeds controlled.

sencor®

Application Tips

// Apply Sencor as a broadcast spray mixed with a minimum of 18 gal./ac. (168 L/ha) of water – lower water volumes will increase the risk of leaf burn
// Sencor should only be mixed with water and not with fertilizer solutions
// If following a Sencor application with a post-grass treatment, such as Centurion® herbicide, allow 4 to 5 days between applications. If grass weeds emerge first, apply Centurion® herbicide followed by Sencor in 4 to 5 days.
// Better weed control performance can be attained with a split application of Sencor
// Growers applying Sencor herbicide on soils with low organic matter levels should reduce the rate and apply Sencor in split applications
// Use of Sencor herbicide requires that soils have greater than 4% organic matter

Crops, Rates and Staging

// Chickpeas and lentils are poor competitors with weeds; by removing weeds early, the crop is more competitive and increased yields will result
// Spray within crop staging guidelines. Applying after the recommended crop stage will increase the risk of leaf burn.

Lentils

// For best results, apply Sencor when lentil vines are less than 6 in. long or are in the 3 to 5 node stage
// Plant the seed at a depth of 2 in. to decrease the risk of product leaching into the root zone; larger seeded lentils are less prone to injury than smaller seeded lentils (for example, Laird versus Milestone)
// Single application – a 2.5 kg jug will treat 22.5 ac. at a rate of 111 g/ac. mixed with 18 gal./ac. (168 L/ha) of water
// Split application – a 2.5 kg jug will treat 32 ac. at a rate of 77 g/ac. or 44 ac. at a rate of 57 g/ac.; each application is mixed with 18 gal./ac. (168 L/ha) of water

Note: Apply the first application between the cotyledon and the 2 leaf weed stage and the second application when the second flush appears. Allow 7 to 10 days between first and second application. Apply first application at a rate of 77 g/ac. and the second at a rate of 57 to 77 g/ac.

Chickpeas (Desi and Kabuli types only)

// For best results, apply Sencor when chickpea vines are less than 2.5 in. high or are in the 1 to 3 node stage
// Single application – a 2.5 kg jug will treat 22.5 ac. at a rate of 111 g/ac. when mixed with 18 gal./ac. (168 L/ha) of water

Field peas

// For best results, apply Sencor with MCPA Na-salt when the vines are less than 6 in. long or before the 6 node stage
// Single application – a 2.5 kg jug will treat 16.5 to 22.5 ac. at rates of 152 g/ac. and 111 g/ac. mixed with 18 gal./ac. (168 L/ha) of water
// Split application – a 2.5 kg jug will treat 32 ac. at a rate of 77 g/ac. or 44 ac. at a rate of 57 g/ac.; each application is mixed with 18 gal./ac. (168 L/ha) of water

Tip: Five 2.5 kg jugs of Sencor plus three 10 L jugs of MCPA Na-salt will treat 160 ac.

Note: Apply the first application at the 2 leaf weed stage and the second application at the second flush.

Rainfastness

// 6 hours after application

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

DELARO®

GROUP 3

GROUP 11

FUNGICIDE

CROPS FOR USE

Barley
Chickpeas
Fava beans
Field peas
Lentils
Oats
Soybeans
Wheat
(durum, spring, winter)

PROVINCES

BC, AB, SK, MB

ACTIVE INGREDIENTS

Prothioconazole
- Group 3

Trifloxystrobin
- Group 11

FORMULATION

Suspension concentrate

PACKAGING

7.1 L jug
- 20 ac./jug

113.6 L tote
- 320 ac./tote

DISEASES CONTROLLED

CHICKPEAS
Ascochyta blight
Grey mould
White mould

FIELD PEAS
Ascochyta blight
Grey mould
Mycosphaerella blight
White mould

LENTILS
Anthracnose
Ascochyta blight
Grey mould
White mould

FAVA BEANS
Chocolate spot
Grey mould
White mould

For full details, please reference product label.

Features and Benefits

// Delaro combines two highly dynamic and complementary active ingredients – prothioconazole (Group 3) and trifloxystrobin (Group 11) – for a dual mode of action to provide quick and long-lasting protection

// A great choice for your first fungicide pass as it delivers broad-spectrum disease control for major pulse leaf, pod and stem diseases

Application Guidelines

Rate

// 355 mL/ac. (880 mL/ha)

Application Tips

// Good spray coverage and canopy penetration are important for best results

Application Timing

Chickpeas and field peas

// Apply at the beginning of flowering or at first sign of disease

Lentils

// Apply at the beginning of flowering or at first sign of disease

// Two Delaro applications can be made sequentially when the target pathogens are unique for each application (for example, target ascochyta with the first application and sclerotinia with the second)

// When disease pressure is high, use a program approach of Delaro, followed by a second application of Delaro or Proline 10 to 14 days after the first application

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 5 gal./ac. (47 L/ha)

Rainfastness

// Rainfast 1 hour after application

Storage

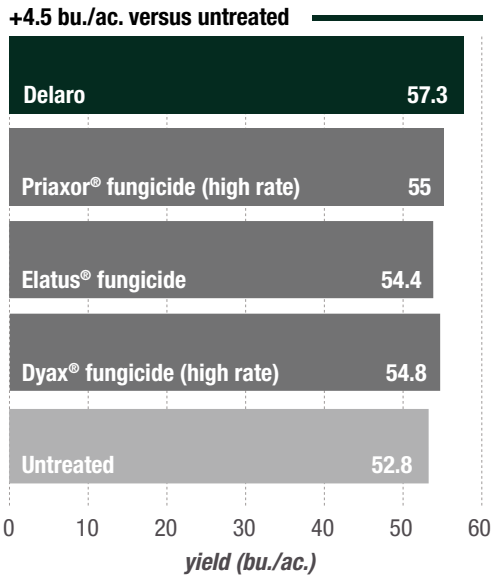
// Heated storage is required

DELARO®

Pre-Harvest Interval

CROPS	PRE-HARVEST INTERVAL (DAYS)
Chickpeas, field peas, lentils	30

2-Year Field Pea Fungicide Trials Summary

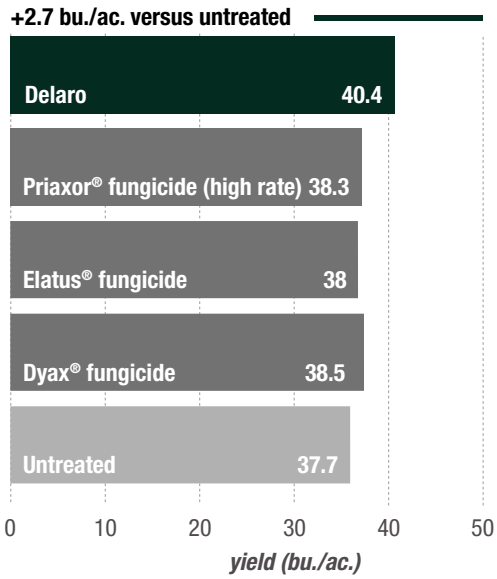


Tests showed an average of +4.5 bu./ac. (+8.5%) advantage for Delaro when compared to the untreated check.

To see local results, visit **ItPaysToSpray.ca**

Source: 12 Bayer replicated field scale trials (2018=7; 2019=5).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

2-Year Lentil Fungicide Trials Summary

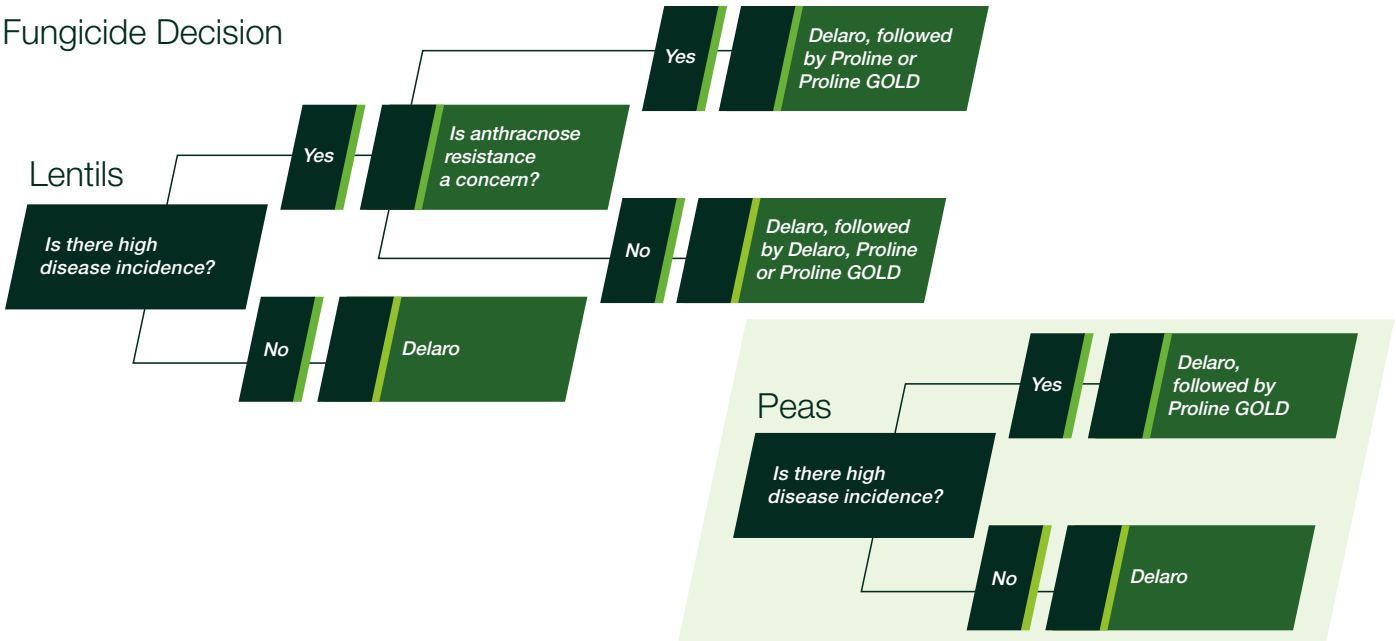


Tests showed an average of +2.7 bu./ac. (+7.2%) advantage for Delaro when compared to the untreated check.

To see local results, visit **ItPaysToSpray.ca**

Source: 8 Bayer replicated field scale trials (2018=5, 2019=3).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Fungicide Decision



KNOW YOUR GROUPS

GROUP 3 | GROUP 7 | GROUP 11

DELARO® Complete

FUNGICIDE

CROPS FOR USE

Barley
Chickpeas
Corn (field, pop, seed, sweet)
Dry beans
(Broad, Lablab, *Lupinus* spp., *Phaseolus* spp., *Vigna* spp.)
Edible beans
Field peas
Lentils
Oats
Soybeans
Wheat (durum, spring, winter)

ACTIVE INGREDIENTS

Prothioconazole
- Group 3

Fluopyram
- Group 7

Trifloxystrobin
- Group 11

FORMULATION

Suspension concentrate

PACKAGING

7.1 L jug = 20 ac./jug
113.8 L = 320 ac./drum

DISEASES CONTROLLED

Anthracnose (Dry beans, lentils, chickpeas)
Ascochyta blight
Asian soybean rust
Chocolate spot in fava bean
Grey mould
Mycosphaerella blight
Powdery mildew
White mould

For full details, please reference product label.

Features and Benefits

// Broad-spectrum systemic fungicide delivering protection against major pulse diseases across Western Canada including control of ascochyta blight, white and grey mould and anthracnose
// Effective control of major dry and edible bean diseases including white mould and anthracnose
// Three modes of action (Groups 3, 7, 11) that work together for added protection
// Offers excellent protection in high disease pressure situations

Application Guidelines

Rate

// 355 mL/ac. (880 mL/ha)

Application Tips

// Do not apply more than 2 applications per season
// A Non-Ionic Surfactant (NIS) may be used with Delaro Complete

Application Timing

Chickpeas, Field Peas and Lentils:

// Begin fungicide applications preventatively at first flower or the first signs of disease
// When disease pressure is high or when agronomic or weather conditions are conducive to disease development, make a second application of Delaro Complete 10 to 14 days later

Dry and Edible Beans:

// Apply preventatively at the beginning of flowering or at the first sign of disease.
// When disease pressure is high or when agronomic or weather conditions are conducive to disease development, make a second application 7 to 14 days later. Within the stated interval range, use shorter intervals for best protection.
// May be applied by ground or aerial spray equipment

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 5 gal./ac. (47 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

CROP	PRE-HARVEST INTERVAL (DAYS)
Chickpeas, dry and edible beans, field peas, lentils	30

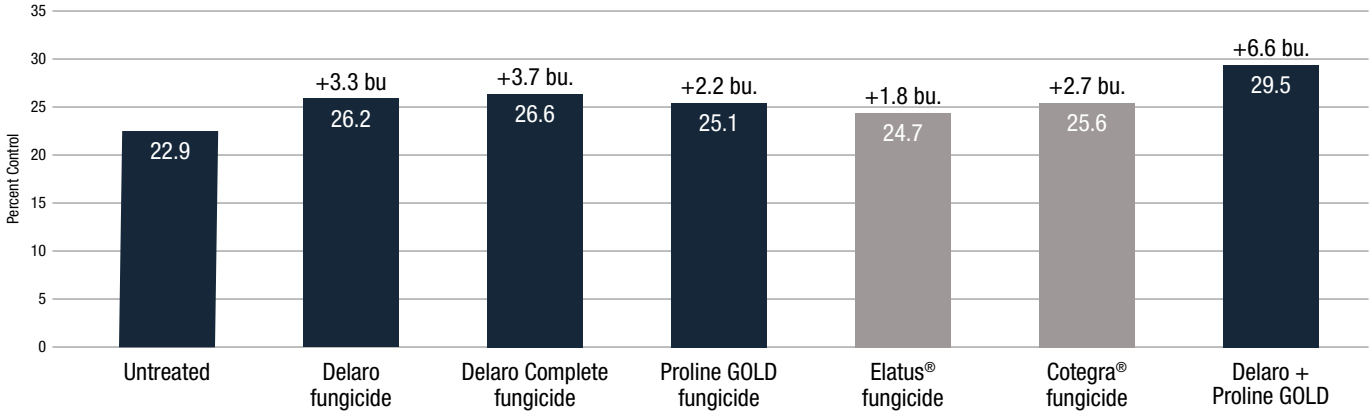
Storage

// Heated storage is required

DELARO® Complete

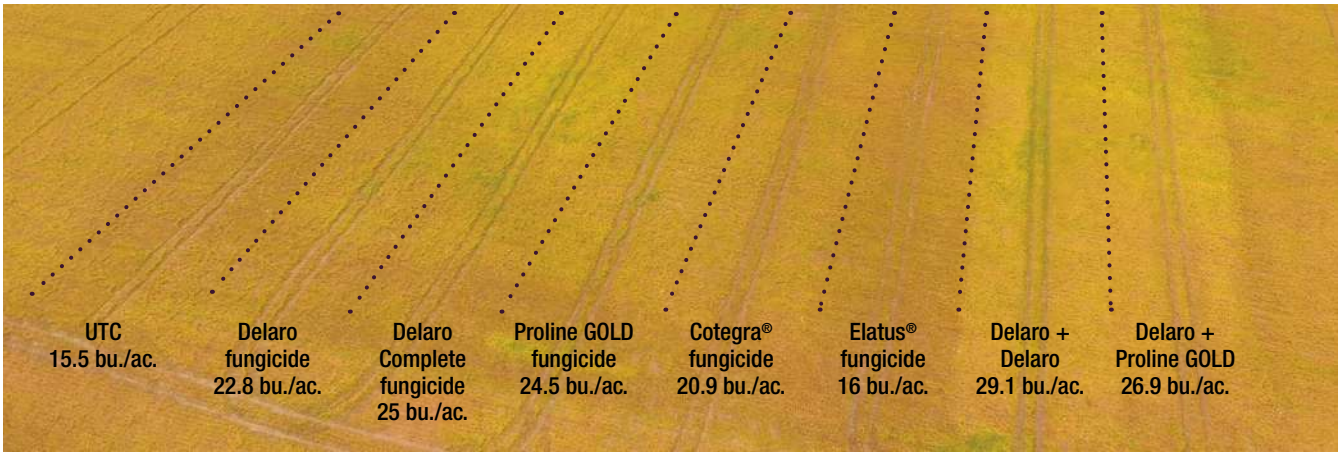
Early Weed Control for Optimal Performance

2022 Lentil Fungicide Trial Results



Source: 4 Bayer Crop Science Market Development small plot trials (2022).
Your results may vary depending on agronomic, environmental and disease pressure variables.

2021 Market Development Research



Holdfast, SK. First application made on July 6, second application made on July 15, photos taken on August 10.
Source: Bayer Crop Science Internal Trials (2021). Your results may vary depending on agronomic, environmental and disease pressure variables.

PROLINE®

GROUP 3

FUNGICIDE

CROPS FOR USE

Canola
Chickpeas
Corn
(field, pop, seed and sweet)
Flax
Lentils
Mustard
Safflower
Sunflowers

ACTIVE INGREDIENT

Prothioconazole
- Group 3

FORMULATION

Suspension concentrate

PACKAGING

5.1 L jug = 40 ac.

DISEASES CONTROLLED

CHICKPEAS
Ascochyta

LENTILS
Ascochyta
White mould

DISEASES SUPPRESSED

CHICKPEAS
Grey mould

LENTILS
Anthracnose*
Grey mould

* Including biotypes resistant to Group 11 (strobilurin) fungicides.

For full details, please reference product label.

Features and Benefits

// Proven, broad crop, systemic fungicide
// Provides white mould and ascochyta disease control, especially when disease pressure is high and multiple fungicide applications are required

Application Guidelines

Rate

// 128 to 170 mL/ac. (315 to 420 mL/ha)

Application Timing

// Proline may be applied at the first sign of disease
// For optimum disease control in lentils, apply Proline 10 to 14 days following the first application of Delaro
// Can be applied by ground or air

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 4.5 gal./ac. (42 L/ha)

Rainfastness

// Rainfast 1 hour after application

Pre-Harvest Interval

CROPS	PRE-HARVEST INTERVAL (DAYS)
Chickpeas Lentils	7

Storage

// Heated storage is required

PROLINE® GOLD

FUNGICIDE

CROPS FOR USE

Canola
Chickpeas
Dry beans
(Broad, Lablab, *Lupinus* spp., *Phaseolus* spp., *Vigna* spp.)
Edible beans
Field Peas
Lentils
Oriental mustard
(*Brassica juncea*)
Rapeseed
(*Brassica carinata*)

PROVINCES
BC, AB, SK, MB

ACTIVE INGREDIENTS
Fluopyram
- Group 7
Prothioconazole
- Group 3

FORMULATION
Suspension concentrate

PACKAGING
10.12 L jug = 33 ac.

DISEASES CONTROLLED
Anthracnose*
Ascochyta blight
Asian soybean rust
White mould

* Including biotypes resistant to Group 11 (strobilurin) fungicides.

For full details, please reference product label.

Features and Benefits

// Superior protection against both anthracnose and white mould
// The combined strength of two modes of action, including the proven protection of fluopyram (Group 7) and prothioconazole (Group 3)
// Excellent resistance management tool
// Contact and systemic protection for immediate and long-lasting disease control

Application Guidelines

Rate

// 304 mL/ac. for control of anthracnose in lentils and white mould
// 202 to 304 mL/ac. for control of anthracnose in dry beans, ascochyta and Asian soybean rust (the rate depends on the disease pressure)

Application Timing

// For best results, apply Proline GOLD preventatively. In lentils, the first Proline GOLD application should be made prior to the appearance of stem lesions, typically anywhere between the 8 to 10 node stage and early flowering.
// Proline GOLD may be applied 10 to 14 days after an application of Delaro
// A preventive application targeted just prior to the first pin bean being formed often provides the best white mould protection
// If conditions warrant, a second application can be made in 10 days, prior to canopy closure

Water Volumes

Ground only

// Minimum of 10 gal./ac. (94 L/ha)

Rainfastness

// Rainfast 1 to 2 hours after application, when dry

Re-Entry Interval

// 24 hours

Pre-Harvest Interval

// Proline GOLD may not be applied within 14 days of harvest

Maximum Application

// 2 applications per year
// Do not apply more than 608 mL/ac. of Proline GOLD per year

Storage

// Heated storage is required

GROUP 3 GROUP 7

PROPULSE®

FUNGICIDE

CROPS FOR USE

Dry beans
(Broad, Lablab, *Lupinus* spp., *Phaseolus* spp., *Vigna* spp.)
Edible beans

PROVINCES
ON, QC, NB, NS, NFLD, PEI

ACTIVE INGREDIENTS
Fluopyram
- Group 7

Prothioconazole
- Group 3

FORMULATION
Suspension concentrate

PACKAGING
6.1 L jug = 20 ac.

DISEASES CONTROLLED
Anthracnose
Ascochyta blight
Asian soybean rust
White mould

For full details, please reference product label.

Features and Benefits
// Superior protection against both anthracnose and white mould
// The combined strength of two modes of action, including the proven protection of fluopyram (Group 7) and prothioconazole (Group 3)
// Excellent resistance management tool
// Contact and systemic protection for immediate and long-lasting disease control

Application Guidelines
Rate
// 304 mL/ac. for control of anthracnose, ascochyta, Asian soybean rust and white mould
// 202 to 304 mL/ac. for control of anthracnose, ascochyta and Asian soybean rust (the rate depends on the disease pressure)

Application Timing
// For best results, apply Propulse preventively
// A preventive application targeted just prior to the first pin bean being formed often provides the best white mould protection
// If conditions warrant, a second application can be made in 10 days, prior to canopy closure

Water Volume
Ground only
// Minimum of 19 gal./ac. (178 L/ha)

Rainfastness
// Rainfast 1 to 2 hours after application, when dry

Re-Entry Interval
// 24 hours

Pre-Harvest Interval
// Propulse may not be applied within 14 days of harvest

Maximum Application
// 2 applications per year

Storage
// Heated storage is required

decis®

GROUP 3

INSECTICIDE

CROPS FOR USE

Alfalfa (seed production only)
Barley
Canola
Corn (field, seed, sweet)
Dry beans
Field peas
Flax
Lentils
Oats
Oriental Mustard
Sugarbeets
Sunflower
Wheat

PROVINCES
BC, AB, SK, MB

ACTIVE INGREDIENT
Deltamethrin
- Group 3

FORMULATION
Emulsifiable concentrate

PACKAGING
DECIS 50 EC
2.4 L jug
9.6 L jug

DECIS 100 EC
1.2 L jug = 40 ac.
4.8 L jug = 160 ac.
(see label for details on rate ranges and pests.)

INSECTS CONTROLLED
PULSES
Cutworm
Grasshopper

For full details, please reference product label.

Features and Benefits

// Decis is registered for application either by ground or air, and is not prone to gassing off, washing off or leaching
// Flexible rates to address insect stages and temperature variations within insect populations
// Readily tank mixable with many leading herbicides identified on the label
// When spraying under high temperature (+25°C), it is recommended that the highest registered application rate be used

Application Tips

// Scout your fields often to ensure proper application and timing
// Scouting should occur in the early morning or in the evening when insects are actively feeding
// Use sufficient water to ensure thorough coverage; more water may be required when dense foliage is present
// Decis is a contact insecticide, so for best results spray when insects are feeding
// Avoid application when bees are foraging
// For best results use the maximum recommended rate of application, as efficacy at lower rates may be affected by temperature

Application Guidelines

Recommended Rates

CROP	INSECT	100 EC RECOMMENDED RATE	ACRES PER JUG 100 EC
Lentils	Cutworm	40 mL/ac.	30 ac./1.2 L jug 120 ac./4.8 L jug
Lentils	Grasshopper	30 mL/ac.	40 ac./1.2 L jug 160 ac./4.8 L jug

Application Timing

Cutworm

// Ground or aerial – apply once per season when larvae are present and feeding
// Do not disturb the soil after application
// Under severe insect pressure, application should also be made to a 15 m strip along the fencerows around the field
// Do not apply to adjacent crops
// Best results will be achieved if product is applied in the late evening, nighttime or early morning

Grasshopper

// Ground – apply when grasshoppers are in the 2 to 4 nymphal stage
// Best control will be achieved when application is made prior to wing development
// Under severe insect pressure, application should also be made to a 15 m strip along the fencerows around the field
// Aerial – use as directed

Water Volumes

Ground

// Minimum of 10 gal./ac. (94 L/ha)

Aerial

// Minimum of 1 gal./ac. (9.4 L/ha)

Rainfastness

// Rainfast 1 hour after application

Re-Cropping Intervals

// No re-cropping restrictions

Pre-Harvest Intervals

// Re-entry is 12 hours. Decis may not be applied within the following timelines:

CROP	PRE-HARVEST INTERVAL (DAYS)
Lentils	30

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage is required

SOYBEANS

Crop Staging Guide

Traits

Roundup Ready 2 Xtend Soybeans

XtendFlex Soybeans

Seed Treatments

Acceleron Solutions

Allegiance

EverGol Energy

Herbicides

Roundup Xtend 2 with VaporGrip Technology

Sencor

XtendiMax 2 with VaporGrip Technology

Fungicides

Delaro Complete

SOYBEAN CROP STAGING GUIDE

KEY:
VE – cotelydons have emerged out of the soil
VC – unrolled unifoliate leaves
V1 – first trifoliate has unrolled
V2 – second trifoliate has unrolled
V3 – third trifoliate has unrolled
R1 – one open flower at any node
R3 – pods that are ¼" long (pin beans) on one of the top 4 nodes
R5 – seeds forming in pods at one of the top 4 nodes
R8 – 95% of pods have reached mature colour (non-green)

SEED TREATMENT

acceleron solutions | Allegiance | EverGol Energy | STRESSSHIELD

APPLICATION TIMING

sencor

Roundup XTEND2 with VaporGrip OR XTENDIMAX 2 with VaporGrip + Roundup WeatherMAX HERBICIDE with TRANSORB II

DELARO Complete

Application timing window

Optimal

Note: Please consult the individual product labels to ensure that your specific pest is controlled/suppressed in the appropriate crop.

ROUNDUP READY 2 XTEND SOYBEANS

TRAITS

Get Ahead of Weeds and Stay There

Since their introduction, Roundup Ready 2 Xtend soybeans have been providing the option to use both dicamba and glyphosate herbicides in soybeans. They also continue to provide not only excellent, but proven, yield performance for Canadian farmers.

Features and Benefits

Improved weed control

- Roundup Ready 2 Xtend soybeans have a built-in tolerance to both dicamba and glyphosate for control of tough grass and broadleaf weeds, including resistant broadleaf weeds such as Canada fleabane, kochia and waterhemp
- XtendiMax 2 (dicamba) and Roundup Xtend 2 (glyphosate/dicamba premix), both with VaporGrip Technology, are two chemistry options to help growers enhance their yield potential
- Employing multiple modes of action to control similar weed spectrums is part of a good weed resistance management strategy

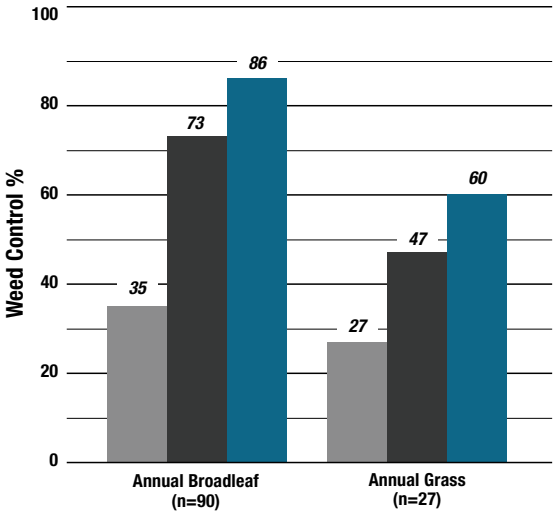
Residual activity for a wider window of weed control

- The residual activity of dicamba may reduce early weed competition and improve late-season control, supporting higher yield potential and cleaner fields at harvest
- The short-term residual activity provided by dicamba controls small-seeded broadleaf weeds, including common ragweed, lamb's-quarters and redroot pigweed, while helping to manage herbicide resistance concerns
- Research trials showed a 2.4 bu./ac. increase* due to reduced early weed competition from the residual activity of dicamba

*Source: 39 Bayer Market Development research trials (2008 to 2014). Average of 2.4 bu./ac. advantage over 2-pass glyphosate-only treatment.

Your results may vary depending on agronomic, environmental and pest pressure variables.

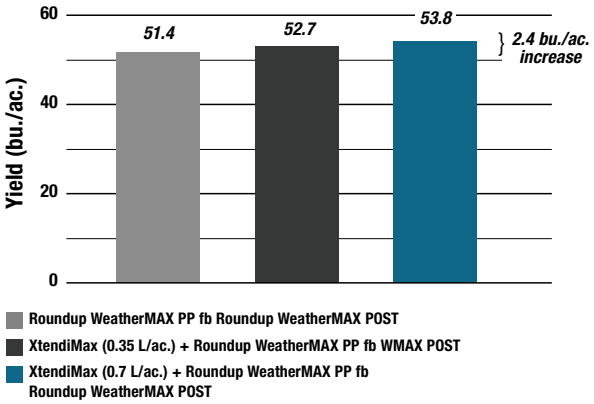
Pre-Plant Residual Weed Control



Extended activity on annual broadleaf and grass weeds from a pre-plant (PP) application of Roundup WeatherMAX (WMAX) and dicamba (D), as demonstrated in Bayer research trials.

Source: 39 Bayer Market Development Research trials (2008 to 2014).
Average of 2.4 bu./ac. advantage over 2-pass glyphosate-only treatment.
XtendiMax 2 herbicide with VaporGrip Technology delivers the same level of control as XtendiMax herbicide with VaporGrip Technology.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Yield Impact of Early Residual Weed Control



Enhance your yield potential from a pre-plant application of dicamba combined with Roundup WeatherMAX, as demonstrated in Bayer research trials.

PP = pre-plant/pre-emerge
POST = post-emergent application at 3rd trifoliate
fb = followed by Roundup WeatherMAX applied at 900 g/ha (0.67 L/ac.)
Source: 39 Bayer Market Development research trials (2008 to 2014).
Xtendimax 2 herbicide with VaporGrip Technology delivers the same level of control as XtendiMax herbicide with VaporGrip Technology.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

XtendFlex Soybeans

XtendFlex soybeans provides you with more choice, control and flexibility than ever before

// The Roundup Ready Xtend Crop System expanded in recent years with the introduction of XtendFlex soybeans

// XtendFlex soybeans are the ultimate soybean triple threat with tolerance to glyphosate, dicamba and glufosinate, thus providing choice and flexibility as well as the ability to manage tough-to-control and resistant weeds

// Provides the benefits of the Roundup Ready Xtend Crop System including the ability to use either Roundup Xtend 2 or XtendiMax 2, in your first herbicide pass for short-term residual activity on tough small-seeded broadleaf weeds

// Flexibility to apply a 200SN formulation of glufosinate herbicide as needed for non-selective post-emergent applications up to the R1 growth stage

// Allows greater choice and flexibility in selecting a herbicide based on weed spectrum and field conditions

// XtendFlex soybeans bring choice and flexibility while continuing to provide the benefits and proven performance of the Roundup Ready Xtend Crop System

Untreated check

Pre-/At Planting: Roundup Xtend herbicide with VaporGrip Technology (2 L/ac.)

Plus Fierce® Herbicide (96 g/ac.)
Late Post: Liberty® 200 SN Herbicide (1 L/ac.)

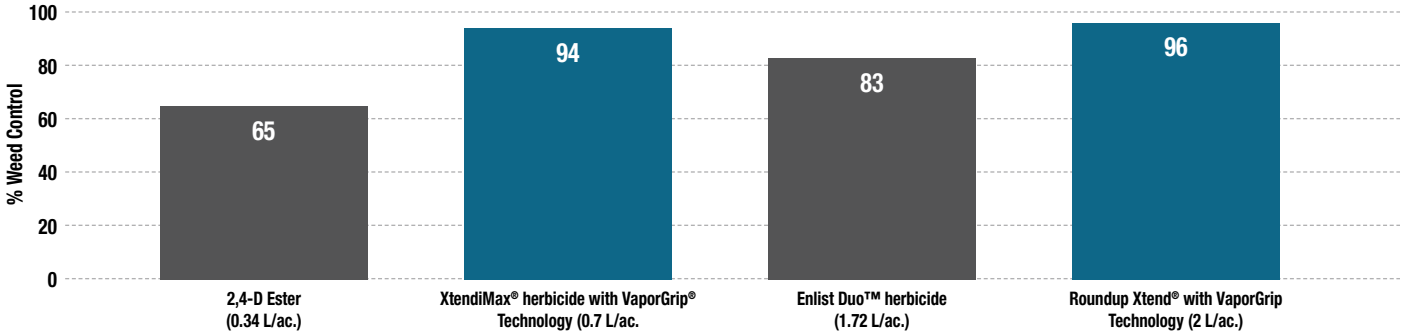
Pre-/At Planting: Roundup Xtend herbicide with VaporGrip Technology (2 L/ac.)

Late Post: Roundup WeatherMAX (0.67 L/ac.)

Source: Bayer Market Development Trials, Port Alma, ON. (photos taken July 28, 2020).
Roundup Xtend 2 herbicide with VaporGrip Technology delivers the same level of control as Roundup Xtend herbicide with VaporGrip Technology.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Canada Fleabane Control

28 DAYS AFTER APPLICATION



Source: 9 Canada Market Development Trials (2018 and 2019).
Treatments were spring applied at the time of burndown and planting. Predominate species rated were Canada fleabane, kochia, lamb's-quarters and redroot pigweed.
All rates are ai-ae/ha. Roundup Xtend 2 with VaporGrip Technology and XtendiMax 2 herbicide with VaporGrip Technology deliver the same level of control as the original formulations. Your results may vary depending on agronomic, environmental and pest pressure variables.

KNOW YOUR GROUPS

GROUP 3 GROUP 4 GROUP 7

acceleron® solutions

SEED TREATMENT

CROPS FOR USE

Soybeans

ACTIVE INGREDIENTS

BASIC

Metalaxyl
- Group 4

Penflufen
- Group 7

Prothioconazole
- Group 3

STANDARD

Metalaxyl
- Group 4

Penflufen
- Group 7

Prothioconazole
- Group 3

AND

Imidacloprid
(Neonic Option)
- Group 4

OR

Tetraniliprole
(Diamide Option)
- Group 28

AND

Flupyradifurone
- Group 4D

FORMULATION

Suspension concentrate

PACKAGING

- Commercially applied

DISEASES CONTROLLED

Early-season *Phytophthora*

Early-season root rot and seedling blight
- Caused by *Fusarium* spp., including *Fusarium graminearum* and *Rhizoctonia solani*

Seed rot/ pre-emergent damping-off
- Caused by *Phomopsis longicolla*

Seed rot/pre-emergent damping-off and post-emergent damping-off
- Caused by *Fusarium* spp., including *Fusarium graminearum*, *Pythium* spp. and *Rhizoctonia solani*

Seedling blight
- Caused by seed-borne *Botrytis cinerea*

DISEASES SUPPRESSED

Seed rot/pre-emergent damping-off
- Caused by seed-borne *Ascochyta rabiei*

INSECT PROTECTION

Bean leaf beetle
- Damage from early-season feeding

Seed corn maggot

Soybean aphids early season

Wireworm

For full details, please reference product label.

Features and Benefits

// Choose the Acceleron package that's right for your field

// Disease, insects, bad weather – there isn't a threat your soybean crops haven't faced. That's why our Acceleron seed treatment packages are designed to give you an ally in the field from day one, delivering total protection against a wide range of challenges.

// Combine this protection with a soybean inoculant to help soybean crops by enhancing nutritional availability. Plants benefit from improved nodule formation, increased nitrogen fixation and enhanced nutrient availability to support root and shoot growth.

Application Tips

// Commercially applied by a seed supplier for convenience and to ensure uniform and consistent coverage on each and every soybean

PROTECTION	acceleron BASIC	acceleron STANDARD	
FUNGICIDE	✔	✔	✔
INSECTICIDE		✔	✔

GROUP 4

Allegiance®

SEED TREATMENT

CROPS FOR USE

Soybeans

ACTIVE INGREDIENT

Metalaxyl

- Group 4

FORMULATION

Suspension concentrate

PACKAGING

3.79 L jug and 60 L drum

- Commercially applied

DISEASES CONTROLLED

Early-season *Phytophthora* spp.

Seed rots and seedling blights

- Caused by *Pythium* spp.

For full details, please reference product label.

Features and Benefits

// Dependable and consistent control of all seed rots and seedling blights caused by *Pythium* spp.

// A simple solution for early-season *Phytophthora* spp. protection

// Powerful systemic protection for seed, roots and emerging plants, combined with ease of use and low rates per acre

Application Rate

CROP	ALLEGIANCE
Soybeans	46 to 93 mL/100 kg of seed

Application Guidelines

// Must be applied with or as part of a seed treatment package that includes a colourant

Tank Mixes

// Recommended use is to include a permissible tank-mix partner, such as EverGol Energy, for comprehensive disease protection

Storage

// Heated storage is required

Allegiance fungicide seed treatment provides powerful control of early-season *Phytophthora* spp. and *Pythium* spp., and is used at low volume application rates with easy tank mixing.

KNOW YOUR GROUPS

GROUP 3 GROUP 4 GROUP 7

EverGol® Energy

SEED TREATMENT

CROPS FOR USE

Chickpeas
Faba beans
Field peas
Lentils
Soybeans

ACTIVE INGREDIENTS

Metalaxyl
- Group 4

Penflufen
- Group 7

Prothioconazole
- Group 3

FORMULATION

Suspension concentrate

PACKAGING

33.75 L drum
- Treats 2,290 units of soybean seed
- Commercially applied

DISEASES CONTROLLED

Early-season root rot and seedling blight
- Caused by *Fusarium* spp., including *Fusarium graminearum* and *Rhizoctonia solani*

Seed rot/ pre-emergent damping-off
- Caused by *Phomopsis longicolla*

Seed rot/ pre-emergent damping-off and post-emergent damping-off
- Caused by *Fusarium* spp., including *Fusarium graminearum*, *Pythium* spp. and *Rhizoctonia solani*

Seedling blight
- Caused by seed-borne *Botrytis cinerea*

DISEASES SUPPRESSED

Seed rot/ pre-emergent damping-off
- Caused by seed-borne *Ascochyta rabiei*

For full details, please reference product label.

Features and Benefits

// Outstanding disease control at one low application rate
// Enhanced emergence and crop establishment through stronger healthier roots
// Improved vigour and yield potential, especially under disease pressure
// Seed safe
// Excellent plantability (no planter plate buildup)
// Low dust-off properties
// Low treating area temperature – it can be used at a warehouse/treating area temperature of 5°C (minimum)
// Undiluted product has a very good shelf life, with minimal sedimentation when stored according to label recommendations
// Use with Stress Shield for premium insect protection to deliver a comprehensive seed treatment package
// Add Allegiance for early-season phytophthora control

Application Guidelines

Rate

// 65 mL/100 kg of soybean seed
// The blue dye that comes with EverGol Energy must be added – 2 × 5.5 L jugs for each EverGol Energy tote
// Blue dye application rate of 21 mL/100 kg soybean seed for a total application rate of 86 mL/100 kg (65 mL/100 kg EverGol Energy + 21 mL/100 kg blue dye)

Application Tips

// Commercially applied by seed suppliers for convenience and to ensure uniform and consistent coverage
// Diluted product should be applied above freezing temperature
// Uniform coverage is necessary for optimum performance
// An appropriate seed colourant (provided) must be added to EverGol Energy before it is applied to the seed
// Agitate before use
// Check with inoculant manufacturers for application and compatibility details

Water Volumes

// EverGol Energy can be diluted with water prior to application to ensure uniform coverage on the seed

Tank Mixes

// Allegiance at 35 mL/100 kg of soybean seed
// Stress Shield at 104 mL/100 kg of soybean seed

Storage

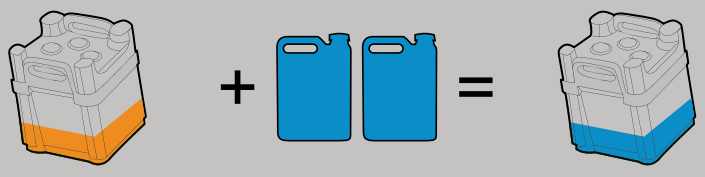
// Heated storage is required

EverGol® Energy

MIXING OPTION – EVERGOL ENERGY (If No Mix Tank Available)

To prepare one batch of EverGol Energy without a mix tank, add two jugs of blue dye into the EverGol Energy unit.

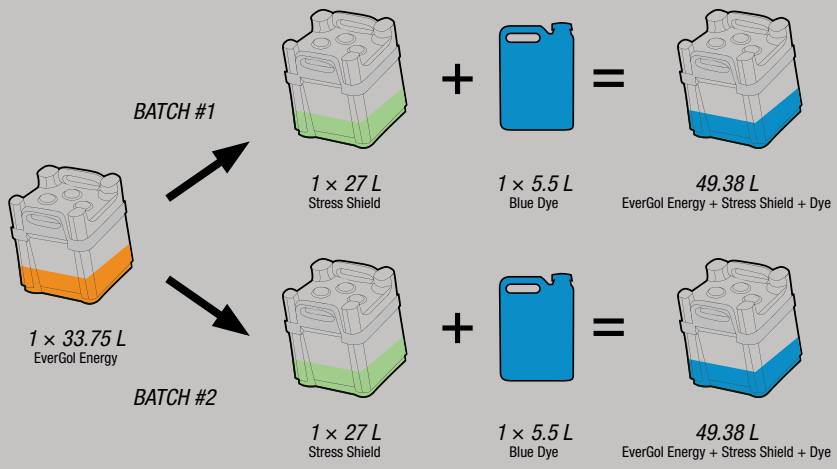
Each EverGol Energy unit comes with 2 × 5.5 L units of blue dye.



MIXING OPTION – EVERGOL ENERGY + STRESS SHIELD (If No Mix Tank Available)

To prepare one batch of EverGol Energy plus Stress Shield without a mix tank, pump half of the EverGol Energy into one of the Stress Shield units and the other half into the second Stress Shield unit. Then add one jug of blue dye into each of the Stress Shield units.

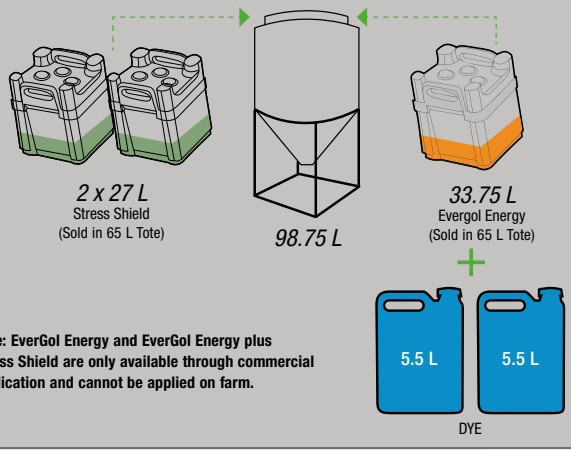
Each EverGol Energy unit comes with 2 × 5.5 L units of blue dye.



MIXING OPTION – EVERGOL ENERGY + STRESS SHIELD (With Mix Tank)

To prepare one batch of EverGol Energy plus Stress Shield with a mix tank, add one tote of EverGol Energy and two totes of Stress Shield into the mix tank. Then add the two jugs of blue dye.

Each EverGol Energy unit comes with 2 × 5.5 L units of blue dye.



Note: EverGol Energy and EverGol Energy plus Stress Shield are only available through commercial application and cannot be applied on farm.

WHAT IS EVERGOL? With its unique Group 7 active ingredient penflufen, EverGol offers your crop outstanding defense against diseases (including *Rhizoctonia solani*). As a testament to its efficacy, penflufen represents the first fungicidal active from Bayer specifically engineered for use only in seed treatment. This Group 7 fungicide is combined with Bayer's Group 3 and 4 fungicides to create EverGol Energy.

Roundup XTEND2 With VaporGrip Technology

KNOW YOUR GROUPS

GROUP 4 GROUP 9

HERBICIDE

CROPS FOR USE

Corn
(field only, Do not apply to sweet corn grown for seed production, or corn hybrids without Roundup Ready 2 Technology)

Soybeans
(XtendFlex and Roundup Ready 2 Xtend trait only. Do not apply to RR2Y or conventional soybeans)

ACTIVE INGREDIENTS

Dicamba
- Group 4

Present as diglycolamine salt

Glyphosate
- Group 9

Present as the monoethanolamine salt

FORMULATION

Liquid concentrate

PACKAGING

10 L jug = 7 ac.
450 L tote = 300 ac.

WEEDS CONTROLLED

ANNUAL BROADLEAF WEEDS

Annual sow thistle
Biennial wormwood
Buckwheat (tartary, wild)
Bur cucumber
Canada fleabane
Chickweed
Cleavers
Cocklebur
Common lamb's-quarters
Corn spurry
Cow cockle
Eastern black nightshade
Flixweed
Green smartweed
Hemp-nettle
Kochia
Lady's-thumb
Mustard (hare's ear, Indian, tumble, wild, wormseed)
Narrow-leaved hawk's beard
Narrow-leaved vetch
Night-flowering catchfly
Pennsylvania smartweed
Pigweed (redroot, Russian, smooth)
Prickly lettuce
Ragweed (common, false, giant)
Round-leaved mallow
Russian thistle
Shepherd's-purse
Stinkweed
Stork's-bill
Velvetleaf
Volunteer adzuki beans
Volunteer canola (non glyphosate-tolerant)
Volunteer flax
Wild tomato

ANNUAL GRASS WEEDS

Annual bluegrass
Barnyard grass
Crabgrass (large, smooth)
Downy brome
Fall panicum
Foxtail (green, yellow)
Persian darnel
Volunteer barley
Volunteer wheat
Wild proso millet
Wild oats

PERENNIAL WEEDS

Canada thistle
Common milkweed
Dandelion
Field bindweed
Foxtail barley
Perennial sow thistle
Quackgrass
Wire-stemmed muhly
Yellow nutsedge

For full details, please reference product label.

Features and Benefits

// A higher concentrated formulation for greater ease of use
// Same trusted control as the original Roundup Xtend herbicide with VaporGrip Technology
// Spray early with confidence with Roundup Ready 2 Xtend and XtendFlex soybeans to enhance the Roundup Ready Xtend Crop System
// Helps manage herbicide-resistant weeds by adding another effective mode of action to Roundup
// Reduced volatility through VaporGrip Technology
// Reduces early-weed competition through short-term soil residual activity
// Controls a broad spectrum of weeds

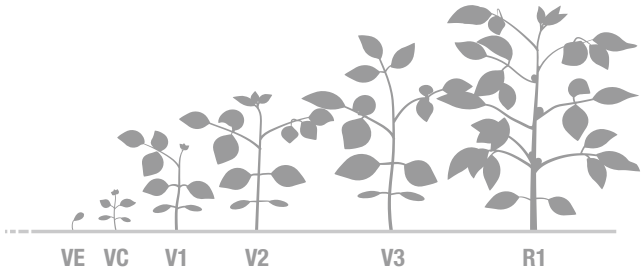
Application Requirements

// Use nozzles and operating pressures that produce extremely coarse to ultra-coarse droplets to minimize drift
// Target weeds less than 10 cm tall
// Maintain boom height 50 cm above crop canopy or target weeds to reduce the risk of drift
// Optimal wind speeds for application typically occur between 5 and 15 km/h
// Maintain the required label buffer to protect sensitive areas; do not spray if sensitive crops are downwind
// Ensure ground speed is less than 25 km/h
// Use a triple rinse sprayer clean-out procedure
// Do not use ammonium sulfate or ammonium-based additives in application
// Use a minimum carrier water volume of 10 gal./ac. or 15 gal./ac. if including a drift reduction additive

SUCCESSFUL APPLICATION STARTS HERE

// Applying Roundup Xtend 2 with VaporGrip Technology or XtendiMax 2 with VaporGrip Technology herbicides? Go to **SprayForecast.ca**
// The Spray Forecast tool provides real-time, location-specific data on temperature, humidity, wind speed and inversion risk

Roundup Xtend 2 Herbicide with VaporGrip Technology Application Guidelines



Equivalent dose of Roundup WeatherMAX and XtendiMax 2 with VaporGrip Technology when using Roundup Xtend 2 with VaporGrip Technology

// At 1.5 L/ac. = 0.9 L/ac. Roundup WeatherMAX herbicide + 0.5 L/ac. XtendiMax 2 Herbicide
// At 1.14 L/ac. = 0.67 L/ac. Roundup WeatherMAX herbicide + 0.36 L/ac. XtendiMax 2 Herbicide
// At 0.8 L/ac. = 0.45 L/ac. Roundup WeatherMAX herbicide + 0.25 L/ac. XtendiMax 2 Herbicide

Rainfastness

// Avoid applying this product when heavy rain is forecast. Rainfall occurring within 4 hours after application, particularly on weeds growing under stress conditions, may reduce the effectiveness of this product. Heavy rainfall within 2 hours after application may wash the chemical off the foliage and a repeat treatment may be required.

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

Pre-plant/pre-emergence Application Timing	Roundup Ready 2 Xtend or XtendFlex soybeans
Rate	0.8, 1.14 or 1.5 L/ac. (1.9, 2.82 or 3.77 L/ha)*

Post emergence Application Timing	Roundup Ready 2 Xtend or XtendFlex soybeans
Crop Staging	Up to R1
Rate	0.8, 1.14 or 1.5 L/ac. (1.9, 2.82 or 3.77 L/ha)*

Up to 2 post applications per season. Second post application should only be used for control of glyphosate-resistant weeds.**

The 1.5 L/ac. rate can be used only once in a season and should be applied pre-plant, pre-emergence or in-crop early post emergence (up to the V2 growth stage in soybeans and up to the 5 leaf growth stage in corn).

*1.5 L/ac. is preferred for maximum residual opportunity and the most consistent weed control.

**3 L/ac. is the maximum total to be applied in a single season.

For other crops, see product label for rates.

Roundup XTEND2 With VaporGrip Technology

Overall Weed Control

Herbicide Group 4 and Group 9

A pre-mix of our low-volatility dicamba formulation with Roundup for ease of use.

Glyphosate-Resistant Kochia Control Comparison

Roundup Xtend herbicide with VaporGrip Technology at 2 L/ac.

Enlist Duo™ herbicide at 1.72 L/ac.

Source: 35 days after Roundup Xtend Herbicide with VaporGrip Technology application in Carseland, AB (2019). Roundup Xtend 2 delivers the same level of control as Roundup Xtend herbicide with VaporGrip Technology.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Glyphosate-Resistant Canada Fleabane Control Comparison

XtendiMax herbicide with VaporGrip Technology at 0.7 L/ac.

2,4-D Ester 700 at 0.5 L/ac.

Source: 56 days after application in Thamesville, ON (2019). XtendiMax 2 delivers the same level of control as XtendiMax 2 herbicide with VaporGrip Technology.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Residual Weed Control

Photo taken on June 29, 2016 at the University of Guelph, Ridgetown, ON, 20 days after application of Roundup Xtend herbicide at 2 L/ac. Roundup Xtend 2 delivers the same level of control as Roundup Xtend

Waterhemp Control

Untreated Check

Pre/At Planting: Roundup Xtend® herbicide with VaporGrip® Technology (2 L/ac.)
Late Post: Roundup WeatherMAX® (0.67 L/ac.)

Pre/At Planting: Roundup Xtend herbicide with VaporGrip Technology (2 L/ac.) and Fierce® herbicide
Late Post: Liberty® 200 SN herbicide (1 L/ac.)

Source: Third Party Research Trials, Port Alma, ON (July 28, 2020). Your results may vary according to agronomic, environmental and pest pressure variables.

sencor®

GROUP 5

HERBICIDE

CROPS FOR USE

Chickpeas
Field peas
Lentils
Soybeans

ACTIVE INGREDIENT

Metribuzin
- Group 5

FORMULATION

BC, AB, SK, MB
Dry flowable

ON, QC, NB, NS, NFLD, PEI
Dry flowable
Liquid

PACKAGING

BC, AB, SK, MB
Each 2.5 kg jug treats 6.7 to 17.9 ha (16.5 to 44 ac.)

ON, QC, NB, NS, NFLD, PEI
Each 2.5 kg jug treats 1.7 to 4.5 ha (4 to 11 ac.)
Each 5 L jug treats 2.2 to 5.9 ha (5.5 to 14.5 ac.)

WEEDS CONTROLLED

GRASS WEEDS
Barnyard grass
Brome grass
Cheatgrass
Crabgrass
Fall panicum
Giant foxtail
Goosegrass
Green foxtail
Johnson grass (seedling)
Persian darnel
Stinkgrass
Wild oats
Witchgrass
Yellow foxtail

BROADLEAF WEEDS
Carpetweed[1]
Cocklebur
Common chickweed
Common ragweed
Cow cockle
Dandelion (seedling)
Green smartweed
Hemp-nettle
Jimsonweed[1]
Knotweed
Lady's-thumb
Lamb's-quarter
Prickly mallow[1]
Prostrate pigweed
Purslane
Redroot pigweed
Russian thistle
Shepherd's purse
Stinkweed[2]
Velvetleaf
Volunteer non-triazine tolerant canola
Wild buckwheat
Wild mustard
Wild potato vine
Yellow woodsorrel[1]

[1] Pre-emerge to weed.
[2] Post-emerge to weed.

For full details, please reference product label.

Features and Benefits

// Residual activity provides control of weed flushes
// Group 5 herbicide helps manage Group 2-resistant broadleaf weeds, including chickweed, hemp-nettle, kochia and wild mustard
// Tank mixing Sencor with Roundup Xtend or XtendiMax will help promote proper weed management stewardship and control Group 9-resistant weeds, such as Canada fleabane and kochia
// Controls many glyphosate-resistant and Group 2 herbicide-resistant weeds, including ragweed when applied pre-emerge in soybeans
// Controls volunteer canola in soybeans, including herbicide-tolerant canola

Application Guidelines

Rate

// Rate to use is soil-type dependent, see label for details
// DF: 57 to 607 g/ac. (140 to 1,500 g/ha)
// Liquid: 344 to 911 mL/ac. (850 to 2,250 mL/ha)

sencor®

Application Tips

BC, AB, SK, MB

// Apply Sencor as a pre-plant incorporation with other herbicides mixed with a minimum of 11 gal./ac. (103 L/ha) of water

// Sencor should only be mixed with water and not with fertilizer solutions

// Sencor should not be used on sandy or coarse soils with less than 2% organic matter

ON, QC, NB, NS, NFLD, PEI

// Heavy rains after application may result in some stunting or yellowing, but yield will not be substantially affected

// Sencor should not be used on sandy or coarse soils with less than 2% organic matter

// Apply no more than once per season

// Sencor will not control Triazine-resistant biotypes

Crops, Rates and Staging

// Spray within crop staging guidelines. Applying after the recommended crop stage will increase the risk of leaf burn.

BC, AB, SK, MB

// Apply as a pre-plant incorporation in combination with other herbicides

// Single application – a 2.5 kg jug will treat 11 to 22.5 ac. at rates of 223 g/ac. and 111 g/ac.

ON, QC, NB, NS, NFLD, PEI

// Apply as a pre-emergent broadcast spray or as a pre-plant incorporation

// Single application – a 2.5 kg jug will treat 4 to 11 ac. at rates of 607 g/ac. and 223 g/ac. A 5 L jug will treat 5.5 to 14.5 ac. at rates of 911 mL/ac. and 344 mL/ac.

Note: For further information, refer to the product label.

Rainfastness

// 6 hours after application

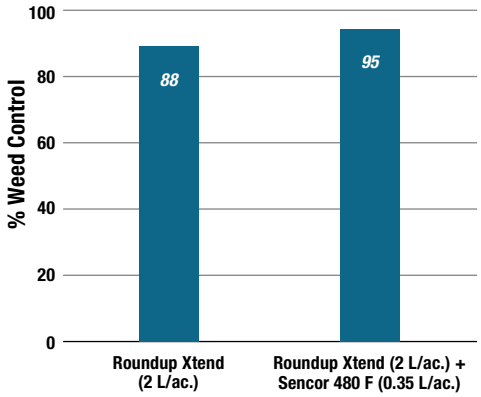
Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

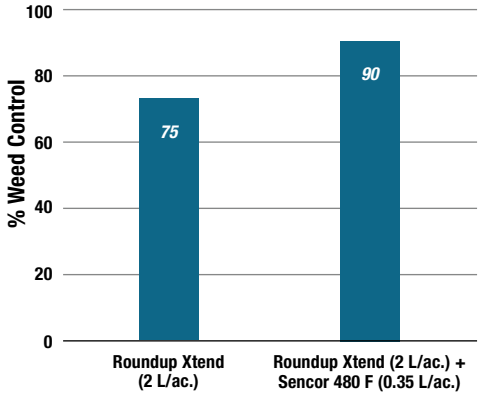
// Heated storage not required

Broadleaf Weed Control in Roundup Ready 2 Xtend Soybeans – 14 days after application



Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Broadleaf Weed Control – 56 days after application



Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Weed out herbicide resistance. Sencor herbicide is an easy tool that can help control glyphosate and Group 2-resistant weeds.
Visit **MixItUp.ca** to learn more.

XTENDIMAX® 2 With VaporGrip® Technology

GROUP 4

HERBICIDE

CROPS FOR USE

Corn
(field only, do not apply to sweet corn)

Soybeans
(XtendFlex soybeans and Roundup Ready 2 Xtend trait only. Do not apply to RR2Y or conventional soybeans)

ACTIVE INGREDIENT

Dicamba
- Group 4

Present as diglycolamine salt

FORMULATION

Liquid concentrate

PACKAGING

10 L jug = 20 ac.
122 L drum = 245 ac.
450 L tote = 900 ac.

WEEDS CONTROLLED

ANNUAL BROADLEAF WEEDS

Buckwheat (tartary, wild)
Canada fleabane
Cleavers
Common lamb's-quarters
Corn spurry
Cow cockle
Green smartweed
Lady's-thumb
Mustard (hare's ear, Indian, tumble, wild, wormseed)
Pigweed (redroot, Russian, smooth)
Ragweed (common, false, giant)
Velvetleaf

PERENNIAL WEEDS

Canada thistle
Field bindweed
Perennial sow thistle

For full details please reference product label.

Features and Benefits

// A convenient higher concentrated formulation
// Same trusted control as the original XtendiMax herbicide with VaporGrip Technology
// Reduces early weed competition through short-term residual control of small seeded broadleaf weeds
// Helps manage weed resistance by adding another effective mode of action to Roundup
// Reduced volatility through VaporGrip Technology

Application Requirements

// Use nozzles and operating pressures that produce extremely coarse to ultra-coarse droplets to minimize drift
// Target weeds less than 10 cm tall
// Maintain boom height 50 cm above crop canopy or target weeds to reduce the risk of drift
// Optimal wind speeds for application typically occur between 5 and 15 km/h
// Maintain the required label buffer to protect sensitive areas; do not spray if sensitive crops are downwind
// Ensure ground speed is less than 25 km/h
// Use a triple rinse sprayer clean-out procedure
// Do not use ammonium sulfate or ammonium-based additives in application
// Use a minimum carrier water volume of 10 gal./ac. or 15 gal./ac. if including a drift reduction additive

Rainfastness

// Avoid applying this product when heavy rain is forecast. Rainfall occurring within 4 hours after application, particularly on weeds growing under stress conditions, may reduce the effectiveness of this product. Heavy rainfall within 2 hours after application may wash the chemical off the foliage and a repeat treatment may be required.

Tank Mixes

// For a list of permissible tank mixes supported by Bayer, visit **cropscience.bayer.ca/TankMixList**

Storage

// Heated storage not required

FIELDVIEW™

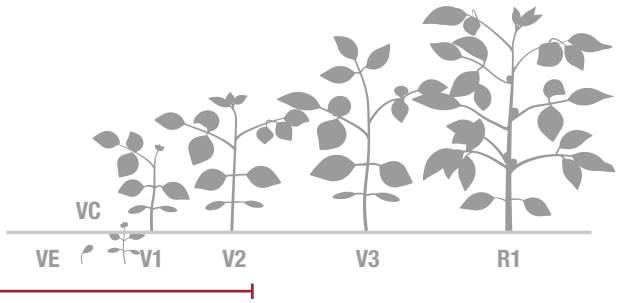
Tracking and reporting tools can keep scouting notes organized to help you manage weed resistance and easily review field history all season long. In addition, you can keep track of what products are being sprayed in each field and at what rate they are being applied to help with identifying year-over-year trends and manage resistance.

Soybean varieties with the Roundup Ready 2 Xtend and XtendFlex soybean traits are the first step towards achieving high yield potential in your fields. Complete the Roundup Ready Xtend Crop System by applying Roundup Xtend 2 or XtendiMax 2 herbicides with VaporGrip Technology for short-term residual weed control of hard-to-kill and key glyphosate-resistant broadleaf weeds, such as Canada fleabane.

ROUNDUP READY 2 XTEND SOYBEANS
XTENDFLEX SOYBEANS
+
Roundup XTEND2 with VaporGrip Technology
OR
XTENDIMAX® 2 with VaporGrip Technology
Roundup WeatherMAX® HERBICIDE with TRANSORB 2 TECHNOLOGY
=
ROUNDUP READY® XTEND CROP SYSTEM

XTENDIMAX® 2 With VaporGrip® Technology

XtendiMax 2 Herbicide Application Guidelines



Preferred application window for 0.5 L/ac. rate to maximize residual weed control benefits.

Application window for XtendiMax 2 herbicide with VaporGrip Technology in Roundup Ready 2 Xtend Soybeans.

Pre-plant/pre-emergence Application Timing	Roundup Ready 2 Xtend or XtendFlex soybeans
Rate	0.25 L/ac. (0.608 L/ha) to 0.5 L/ac. (1.26 L/ha)*

0.5 L/ac. is preferred for maximum residual opportunity and the most consistent weed control

Post emergence Application Timing	Roundup Ready 2 Xtend or XtendFlex soybeans
Crop Staging	Up to R1
Rate	0.25 L/ac. (0.608 L/ha) to 0.5 L/ac. (1.26 L/ha)*

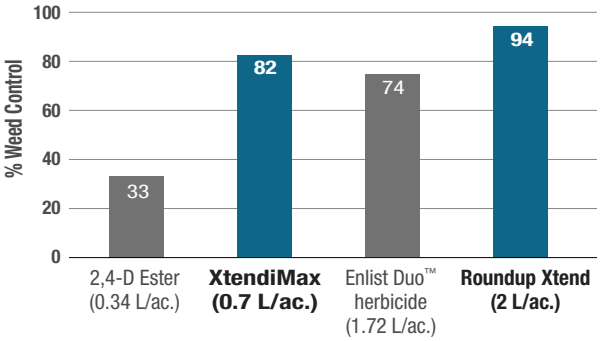
Up to two post applications per season. Second post application should only be used to control glyphosate-resistant weeds.**

*The 0.5 L/ac. rate can be used only once in a season.

**1 L/ac. is the maximum total to be applied in a single season.

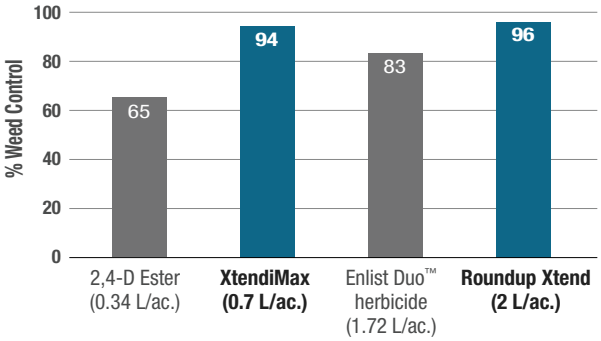
For other crops, see product label for rates.

Kochia Control – 28 Days After Application



Source: 9 Canada Market Development Trials (2018 and 2019).
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Canada Fleabane Control



Source: 9 Canada Market Development Trials (2018 and 2019).
Treatments were spring applied at the time of burndown and planting. Predominate species rated were Canada fleabane, kochia, lamb's-quarters and redroot pigweed. All rates are ai-ae/ha.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Glyphosate-Resistant Kochia Control Comparison

Roundup Xtend herbicide with VaporGrip Technology at 2 L/ac.

Enlist Duo™ herbicide at 1.72 L/ac.

Source: 35 days after Roundup Xtend Herbicide with VaporGrip Technology application in Carseland, AB (2019). Roundup Xtend 2 delivers the same level of control as Roundup Xtend herbicide with VaporGrip Technology.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

Glyphosate-Resistant Canada Fleabane Control Comparison

XtendiMax herbicide with VaporGrip Technology at 0.7 L/ac.

2,4-D Ester 700 at 0.5 L/ac.

Source: 56 days after application in Thamesville, ON (2019). XtendiMax 2 delivers the same level of control as XtendiMax 2 herbicide with VaporGrip Technology.
Your results may vary depending on agronomic, environmental, pest and disease pressure variables.

DELARO® Complete

FUNGICIDE

CROPS FOR USE

Barley
Chickpeas
Corn
(field, pop, seed, sweet)
Dry beans
Field peas
Lentils
Oats
Soybeans
Wheat
(durum, spring, winter)

ACTIVE INGREDIENTS

Fluopyram
- Group 7
Prothioconazole
- Group 3
Trifloxystrobin
- Group 11

FORMULATION

458.5 SC

PACKAGING

7.1 L jug = 30 ac.
113.8 L = 480 ac.

DISEASES CONTROLLED

SOYBEANS
Asian soybean rust
Brown spot
Frogeye leaf spot
Phomopsis stem blight

DISEASES SUPPRESSED

SOYBEANS
Charcoal rot
White mould

For full details, please reference product label.

Features and Benefits

// Introduces a new Group 7 active, fluopyram, which offers excellent protection in high-disease situations
// Effective control of major corn and soybean diseases
// Delaro Complete fungicide delivers three modes of action (Groups 3, 7 and 11) to provide enhanced disease control in corn and soybeans under various environmental conditions to combat the toughest diseases

Directions for Use

Soybeans

// Apply preventively or at the first signs of disease from early flowering (R1) to complete pod fill (R5)
// When disease pressure is high or when agronomic or weather conditions are conducive to disease development, make a second application of Delaro Complete 10 to 14 days later
// May be applied by ground or aerial spray equipment

Application Guidelines

// Do not apply more than 2 applications per season
// Do not apply with an adjuvant in corn

Rate

// 237 mL/ac. (586 mL/ha)

Rainfastness

// 1 hour

Pre-Harvest Interval

// Do not apply within 20 days of harvest. Do not graze or feed treated soybean forage or hay to livestock.

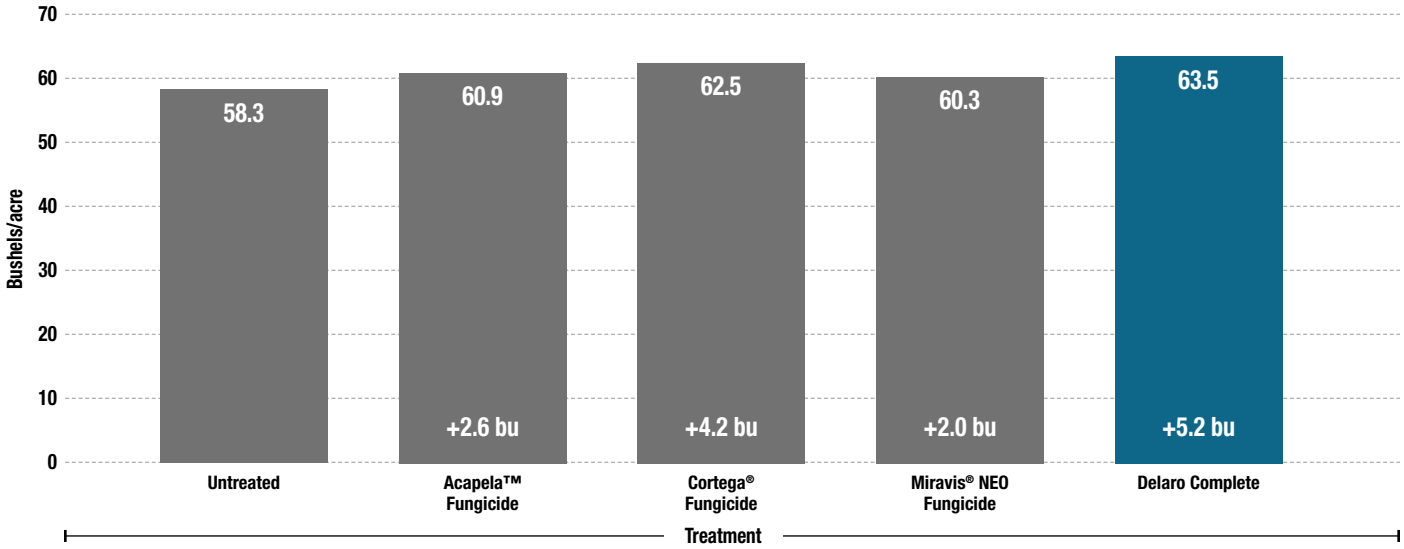
Storage

// Heated storage is required

DELARO® Complete

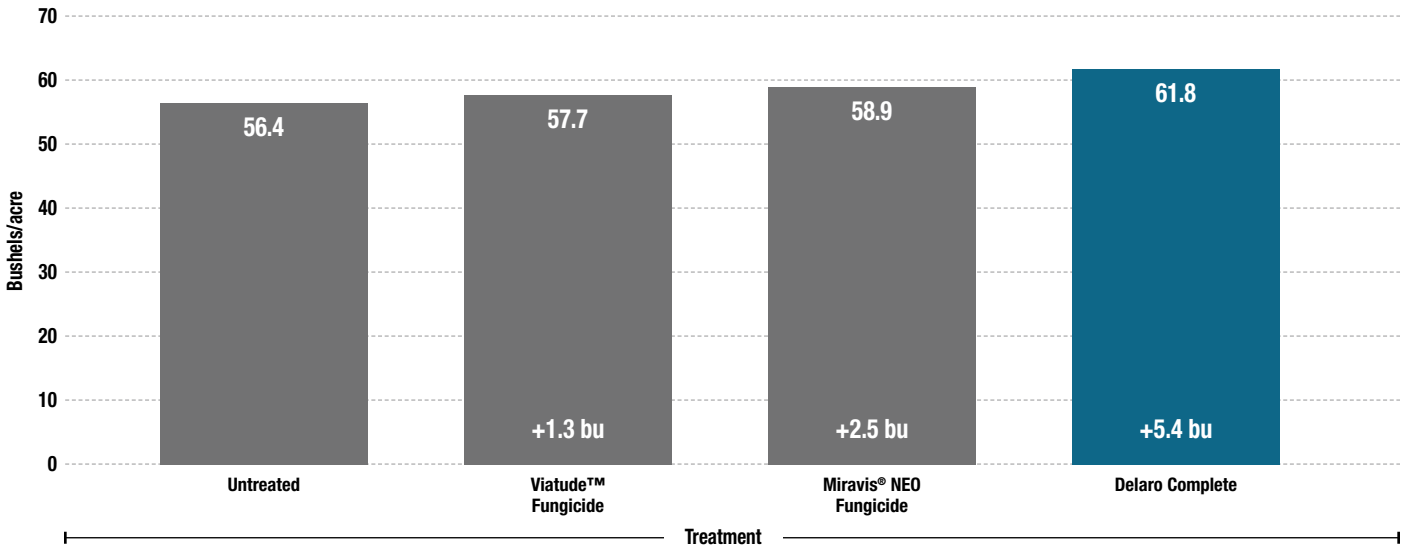
Soybean Competitive Fungicide Small Plot Yield Averages – Moderate/High Pressure – All Locations

3-YEAR SUMMARY



Source: 11 Bayer Market Development small plot trials from locations in ON & QC. 2020 (n=3), 2021 (n=1), 2023 (n=7). Your results may vary according to agronomic, environmental and disease pressure variables.

2023 Soybean Competitive Fungicide Small Plot Yield Averages – All Locations



Source: 7 Bayer Market Development small plot data analysis using locations in ON & QC 2023 (n=7). Treatment means are significantly different at P<0.1. Your results may vary according to agronomic, environmental and disease pressure variables.

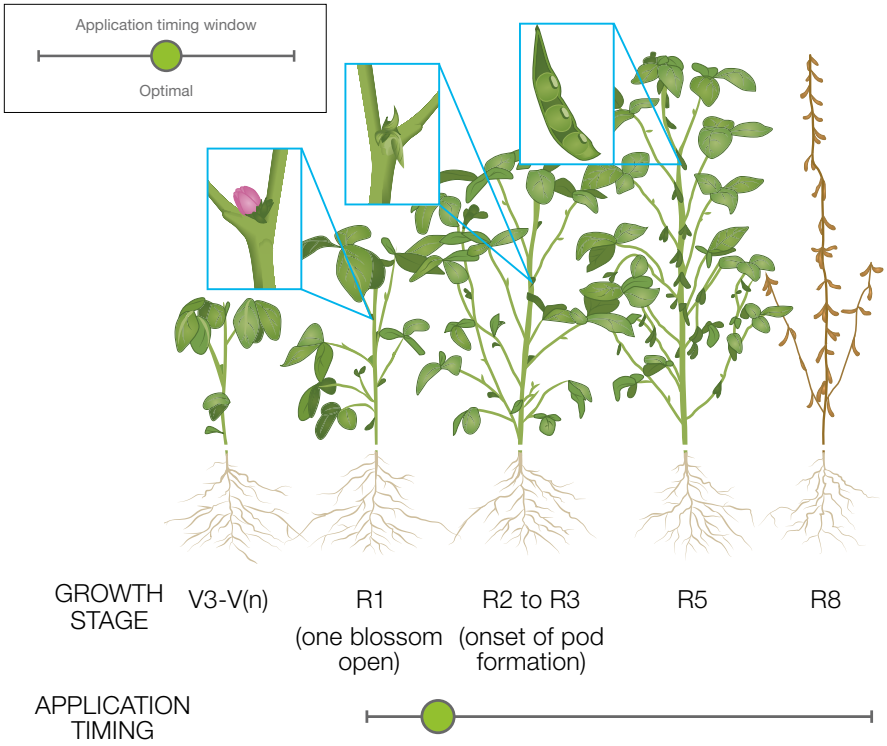
DELARO® Complete

Triple-action Delaro Complete fungicide combats the toughest diseases for outstanding protection and higher yield potential.

Delaro Complete adds an additional mode of action for even better protection against major corn and soybean diseases including tar spot and white mould. Get exceptional protection in high disease situations with Delaro Complete. It's one tough fungicide.*

For best white mould protection, protect flowers and apply before disease is present.

*See label for diseases controlled.



RESOURCES

Tank Mixes

Temperature Consideration for Herbicide Application

W.A.M.L.E.G.S.

Tank Mixes

The **Pest Management Regulatory Agency (PMRA) Guidance Document** provides that tank mixes are permitted only if both tank mix product labels contain general tank mix statements or at least one product specifically references the other product as a tank mix on a label. Please see **cropscience.bayer.ca/TankMixList** or **scan the QR code** to learn more about conducting a tank mix with any Bayer crop protection product.

Temperature Consideration for Herbicide Application

Herbicides, their activity and weed control ability, as well as their crop safety characteristics, can be affected by temperature. Below are application guidelines based on overnight temperatures that when followed, will help you get the most from your herbicide application.

These guidelines are based on temperatures taken within 12 inches of ground level. If temperatures are taken 4 feet above this, add 1°C to each of the temperatures shown in the table.

OVERNIGHT TEMPERATURE	GUIDELINES
-1°C to -3°C (after a frost)	Wait for at least 72 hours of good growing weather before applying herbicides. Good growing conditions typically occur when the minimum daytime temperature is at least +18°C with overnight lows no lower than +3°C.
0°C	Wait for at least 48 to 72 hours of good growing weather before applying herbicides.
+1°C	Wait for at least 24 to 48 hours of good growing weather before applying herbicides.
+2°C	Wait for at least 24 hours of good growing weather before applying herbicides.
+3°C	Wait until temperatures warm up to at least +15°C that day before applying herbicides.
+4°C	Spray herbicides early that morning.

Note: Please consult product labels for specific temperature-related usage instructions.

Remember W.A.M.L.E.G.S. for the Proper Tank-Mix Order

Similar to W.A.L.E.S., W.A.M.L.E.G.S. describes the order in which permissible tank-mix partners are added to the sprayer tank. The order is important to reduce the likelihood of chemical incompatibility.

Steps for Successful Tank Mixing

Follow these best practices to ensure proper tank mixing and the reduced possibility of product incompatibility. There are two types of incompatibility problems – physical and chemical.

Physical Incompatibility

Permissible tank mixes partners with physical incompatibility problems may separate into layers (that is, oil and water), and solids may settle faster than normal. In severe cases, physical incompatibility may cause the solution to gel or cause solids to clump. When this happens, tanks will have to be drained and flushed and all filters, screens and nozzles removed and cleaned.

Examples of physical incompatibility include:

// Dry products fail to disperse or suspend properly in the solution. When this happens, sediment can form a cake-like layer that accumulates on the bottom of the tank or form particles that can clog screens and filters.

// Liquid solutions can curdle and thicken into a paste or gel, making it difficult to clean the tank

// Undissolved materials can clog screens and nozzles

// Oil residue coatings or films can collect on tank walls and rubber hoses

// Active ingredients separate into distinct layers in the spray tank

// Excess foaming can arise from trapped air in the tank mixture

Chemical Incompatibility

Chemical incompatibility can negatively affect spray quality, product uptake and plant surface retention of the application. The effect of a chemically incompatible tank mixture may not always be obvious. Visible crop injury (phytotoxicity) may occur a few hours to several days following an application. Sometimes, reduced efficacy is the only observable effect of a chemically incompatible solution. Solving the problem may require additional applications that can decrease yield, harm crop quality, or both.

BAYER

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Scan to create a MyBayer account and find your nearest rep

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ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS. It is a violation of federal law to use any pesticide product other than in accordance with its labelling. NOT ALL formulations of dicamba or glyphosate are approved for in-crop use with products with Roundup Ready 2 Xtend® soybeans. NOT ALL formulations of dicamba, glyphosate or glufosinate are approved for in-crop use with products with XtendFlex® Technology. ONLY USE FORMULATIONS THAT ARE SPECIFICALLY LABELLED AND APPROVED FOR SUCH USES. Contact the Pest Management Regulatory Agency with any questions about the approval status of dicamba herbicide products for in-crop use with Roundup Ready 2 Xtend® soybeans or products with XtendFlex® Technology.

TruFlex®canola and Roundup Ready® Technology contain genes that confer tolerance to glyphosate. Roundup Ready® 2 Technology contains genes that confer tolerance to glyphosate. Roundup Ready 2 Xtend® soybeans contains genes that confer tolerance to glyphosate and dicamba. Products with XtendFlex® Technology contain genes that confer tolerance to glyphosate, glufosinate and dicamba. LibertyLink® Technology contains genes that confer tolerance to glufosinate. Glyphosate will kill crops that are not tolerant to glyphosate. **Dicamba** will kill crops that are not tolerant to dicamba. **Glufosinate** will kill crops that are not tolerant to glufosinate. Contact your Bayer retailer, refer to the Bayer Technology Use Guide, or call the technical support line at 1-888-283-6847 for recommended Roundup Ready® Xtend Crop System weed control programs.

Tank mixtures: For permissible tank mixes, the appplicable labelling for each product must be in the possession of the user at the time of application. Follow applicable use instructions, including application rates, precautions and restrictions for each product permitted to be used in the tank mixture. Bayer has not tested all permissible tank mix product formulations for compatibility or performance other than specifically listed by brand name. Always predetermine the compatibility of permissible tank mixtures by mixing small proportional quantities in advance.