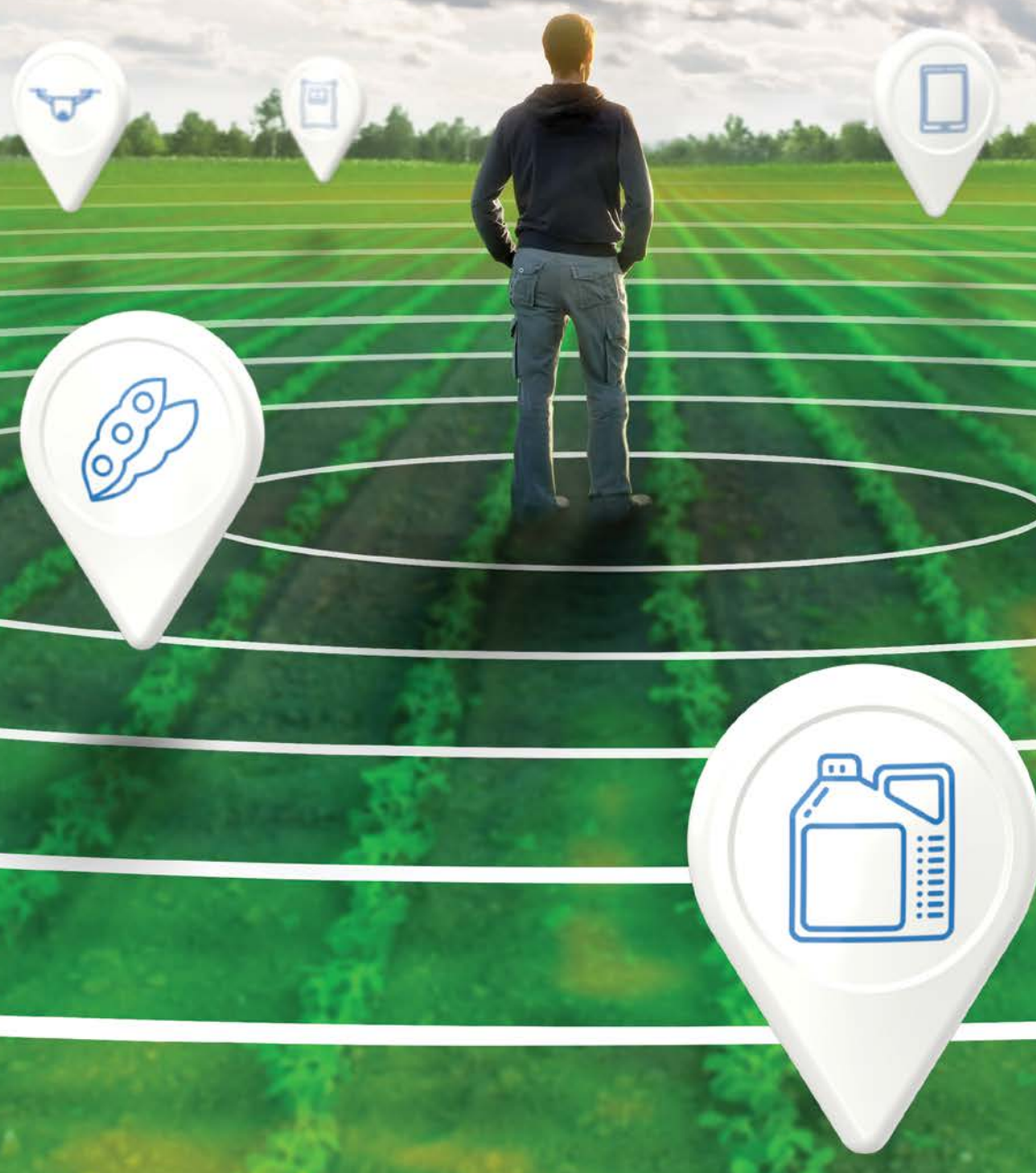




EASTERN CANADA

FIELD GUIDE

2022



Innovation at Corteva Agriscience

OUR PURPOSE:

To enrich the lives of those who produce and those who consume, ensuring progress for generations to come.

Our R&D organization strives to be the best at designing, discovering and developing innovations that create value for farmers and deliver consumer benefits in planet-friendly ways.

Key Sources of Differentiation



Germplasm

Developed through 90-plus years of expertise, our germplasm library is unparalleled in its breadth and depth and is focused squarely on helping farmers improve their performance and profitability.



Targeted Breeding

Targeted breeding tools such as CRISPR enable us to explore the development of improved crops in years instead of decades, both in our labs and by licensing our industry-leading intellectual property to other innovators.



Digital Tools

We combine the latest advances in technologies, artificial intelligence, data analytics and agronomic insights to give farmers timely, actionable data they can use to make more informed decisions and make their operations less complex.



Environmental Impact and Sustainability

With more Green Chemistry Awards than any other company, we're building on our industry leadership in natural and naturally derived products by continuing to research new ways of helping farmers conserve the land that sustains them.



Integrated Solutions

Our industry-leading capabilities across seeds, crop protection and digital tools enable us to provide solutions that together create more value for farmers than any solution could on its own.

QUICK FACTS

Our open and agile agriculture research organization brings together worldwide resources:



5,000
scientists and researchers



2 innovation hubs:
• Johnston, Iowa
• Indianapolis, Indiana



150+ multi-platform R&D
facilities in **32** countries



100+ crops

INDUSTRY LEADING CAPABILITIES

Seed

- Genomics and breeding systems
- Biotech
- Advanced phenotyping

Crop Protection

- Chemistry discovery
- Formulation and process chemistry
- Natural products

Digital Tools

- Data analytics
- Predictive agriculture tools
- Farm management software

CLEAR INNOVATION PRINCIPLES



Market driven



Disciplined and accountable



Built to differentiate



Global yet local



Focused on productivity





**Be in control
with leading Crop
Protection, Fertility
Management and
Biological solutions.**

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A young corn plant with vibrant green, elongated leaves is the central focus, growing out of dark brown, textured soil. The plant's leaves are arranged in a fan-like pattern, with some showing slight yellowing at the edges. In the background, other similar plants are visible, slightly out of focus, suggesting a field setting. The top of the image features a green header with a white diagonal line.

**Weeds don't
stand a chance**

herbicides

BY CROP

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Accent™

HERBICIDE



Field Corn
For Grain



Field Corn
For Silage



Field Corn
For Forage Fodder



Corn
For Seed



Sweet Corn

Accent™ herbicide has all you need for control of tough grassy weeds in corn: excellent control, crop safety, wide window of application, and re-cropping flexibility.

WHY USE ACCENT HERBICIDE?

- Excellent control of grass weeds
- Wide post-emergence window of application
- Crop safety and flexibility. Use Accent on low heat unit corn hybrids as well as many seed corn inbreds and sweet corn varieties

WEEDS CONTROLLED

- Barnyard Grass
- Foxtail, Green
- Foxtail, Yellow*
- Old Witchgrass
- Panicum, Fall
- Quackgrass
- Sandbur, Longspine

* Suppression only.

** Use only on labelled sweet corn varieties

*** Use only on seed corn inbreds approved by the seed corn company

¹ Recommended non-ionic surfactants include Sidekick®, Citowett Plus, Agral90® and Ag-Surf®.

² Non-ionic surfactants may be applied with 28% liquid urea ammonium nitrate (UAN) at 5 L/ha for improved performance on certain weeds.

³ 1.25% v/v UAN must also be included for tank mixes with Distinct.

CROPS

Field Corn

Sweet corn**

Seed corn***

ACCENT APPLICATION GUIDELINES

RATES AND ACRES TREATED

Rates:

- 13.5 grams/acre

Acres treated:

- 10 ac/pouch
- 20 ac/bottle

PACKAGING

- 10 acre (4 ha) pouch, containing 4 x 2.5 acre (33.4 g) water soluble bags.
- 270 gram bottle.

WHEN TO APPLY

- **Corn (field and seed):** 1- to 8-leaf stage (6 visible collars)
- **Corn (sweet):** 1- to 6-leaf stage

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

Registered:

Banvel® II
Callisto® 480SC
Callisto 480SC
+ Aatrex Liquid 480
Distinct

Marksman®
Pardner®
Peak® 75 WG plus either
one of Banvel II or
Banvel Dry

Application information

Annual grasses: 1- to 6-leaf (up to early tillering, 2-leaf tillers). Annual grasses not emerged at the time of application will not be controlled.

Quackgrass: 3- to 6-leaf (10-20 cm in height, leaf extended). Apply when the majority of the quackgrass shoots are actively growing and in the 3- to 6-leaf stage.

Yellow foxtail: Apply with 28% liquid urea ammonium nitrate (UAN) at 2 L/ac (5 L/ha) plus a recommended non-ionic surfactant (NIS) or apply with Merge® at 5 L/1000 L.

Longspine sandbur: Apply at the 3- to 5-leaf stage.

Accent must be applied with one of the following recommended adjuvants:

NIS¹ plus 28% UAN² Rate: 2 L/1,000 L of spray solution + 2 L/ac (5 L/ha)

NIS¹ plus 28% UAN³ Rate: 2 L/1,000 L of spray solution + 12.5 L/1,000 L

NIS¹ Rate: 2 L/1,000 L

Adapt Oil Concentrate Rate: 10 L/1,000 L

Merge® Rate: 5 L/1,000 L

Sure-Mix® Rate: 5 L/1,000 L

Crop rotation

4 months: winter wheat

10 months: spring barley, canola, soybeans, white beans, red clover, sorghum, field corn and alfalfa

Pre-harvest interval

- The PHI for corn (silage, fodder or grain) is 30 days.
- The PHI for sweet corn is 40 days

Broadstrike™ RC

HERBICIDE



Field Corn



Soybeans

Broadstrike™ RC herbicide is your soil applied broadleaf weed control solution for soybeans.

WHY USE BROADSTRIKE RC HERBICIDE?

- Soil-applied weed control solution
- Season-long control
- Outstanding crop safety in all soybean varieties

WEEDS CONTROLLED

Field corn (25 g/ac)

- Canada Fleabane¹
- Chickweed, Common
- Lamb's-quarters, Common⁴
- Mustard, Wild
- Mustard, Wormseed
- Nightshade, Eastern Black
- Pigweed, Redroot⁴
- Ragweed, Common^{2,3}
- Velvetleaf

Soybeans (35 g/ac)

- Canada Fleabane¹
- Carrot, Wild²
- Chickweed, Common
- Cocklebur³
- Foxtail, Green²
- Horsetail, Field²
- Lady's-thumb²
- Lamb's-quarters, Common⁴
- Mustard, Wild
- Mustard, Wormseed
- Nightshade, Eastern Black
- Pigweed, Redroot⁴
- Ragweed, Common^{2,3}
- Velvetleaf

¹ Populations resistant to Group 2 herbicides exist in certain areas of Eastern Canada. Broadstrike RC alone may not control all weed biotypes resistant to Group 2 herbicides.

² Suppression

³ If weed pressure in soybeans is heavy, tank mix with another product that provides a different mode of action.

⁴ Including triazine-tolerant biotypes

CROPS

Field Corn

Soybeans

BROADSTRIKE RC APPLICATION GUIDELINES

RATES AND ACRES TREATED

Rates:

- **Soybeans:** 35 g/ac
- **Field corn:** 25 g/ac

Acres treated:

- **Soybeans:** 20 ac/bottle
- **Field corn:** 28 ac/bottle

Water volume: 10-20 US gal/ac

PACKAGING

Case:

- 12 x 0.715 kg bottles

WHEN TO APPLY

- **Soybeans:** Surface Pre-plant, pre-plant incorporated, pre-emergence
- **Field corn:** Surface Pre-plant, pre-emergence, pre-plant incorporated, early post-emergence

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

Field Corn:

Registered:

Dual II Magnum®

Supported:

Atrazine
Elevore™ herbicide
Enlist Duo™ herbicide
VP480™ herbicide
Polaris™ MAX herbicide
Other straight glyphosate products

Soybeans:

Registered:

Dual II Magnum
Treflan™ E.C.
Other straight
glyphosate products

Supported:

Boundary®
Elevore
Enlist Duo

Application information

Apply Broadstrike RC™ in conventional, conservation tillage or no-till corn, and soybean production systems.

Field corn: Do not apply to areas where the soil pH is greater than 7.8 or where the soil organic matter is less than 2.0%.

Soybeans: Do not apply to areas where the soil pH is greater than 7.8 and organic matter is less than 2% (both apply) as this may result in decreased crop tolerance.

Crop rotation

4 months: winter wheat

10 months: spring wheat, spring barley, oats, soybeans, common beans (dry, snap), lima beans, processing peas, field corn and seed corn

Rotational crop restrictions: Following an application of Broadstrike RC in a dry year, the risk of injury to rotational crops may increase in light-textured soils containing less than 2% organic matter due to a higher bioavailability of herbicide residues for plant uptake.

Pre-harvest interval

- The PHI is 90 days.

Canopy™ PRO



Soybeans

HERBICIDE

Canopy™ PRO pre-emergence herbicide delivers broad-spectrum and residual activity to help maximize early-season control of tough weeds.

WHY USE CANOPY PRO HERBICIDE?

- Powerful weed control performance
- Proactive weed resistance management
- Production system flexibility

WEEDS CONTROLLED

Broadleaf weeds

- Buckwheat, Wild
- Canada Fleabane⁴
- Carpetweed
- Chickweed, Common
- Cocklebur¹
- Corn Spurry
- Dandelion
- Hemp-nettle
- Jimsonweed¹
- Lady's-thumb
- Lamb's-quarters, Common
- Mustard, Wild
- Pigweed, Prostrate
- Pigweed, Redroot
- Potato Vine, Wild
- Ragweed, Common

- Shepherd's-purse
- Smartweed, Green
- Sow-thistle, Annual⁵
- Thistle, Russian
- Velvetleaf
- Woodsorrel, Yellow

Annual grasses

- Barnyard Grass²
- Cheatgrass²
- Crabgrass²
- Foxtail, Giant²
- Foxtail, Green²
- Foxtail, Yellow²
- Johnsongrass²
- Nutsedge, Yellow³
- Panicum, Fall²
- Witchgrass²

¹ Large-seeded weeds that germinate deep in the soil, such as cocklebur and jimsonweed, may not be fully controlled.

² Partial control

³ Suppression

⁴ Including glyphosate-resistant biotypes. Must be tank mixed with Elevore™ or Eragon®.

For RoundupReady 2 Xtend™ soybeans, tank mix with a low volatile dicamba product such as FeXapan™ herbicide Plus VaporGrip™ Technology. For Enlist E3™ soybeans, tank mix with Enlist Duo™.

⁵ Must be tank mixed with glyphosate

CANOPY™ PRO APPLICATION GUIDELINES

CROPS

Soybeans

RATES AND ACRES TREATED

Rates:

- 14.4 g/ac + 220 g/ac

Acres treated:

- 20 ac/case
- New 40 ac/case

Water volume:

- 10–20 US gal/ac

PACKAGING

Case:

- Classic 288 g bottle + TriCor 75 DF 2 x 2.2 kg jugs
- New – Classic 2 x 288 g bottles + Metribuzin Mx 2 x 4.5 kg jugs

WHEN TO APPLY

PRE: Apply after planting but prior to crop emergence

Pre-Plant Burndown: Apply up to 14 days before planting

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

Registered:

- 2,4-D Ester
- Dual II Magnum®
- Enlist Duo™ or Enlist™ 1⁶
- Eragon®

- Eragon® LQ
- Frontier® MAX
- Glyphosate

⁶ Only for use in Enlist E3™ soybeans

Application information

Formulated as a dry flowable granule to be mixed in water and applied as uniform broadcast spray. Only apply using ground equipment. This product is not registered for aerial application.

Crop rotation

The recropping intervals are dependent on the pH of the soil, as well as the sensitivity of the specific rotational crop. Consult product labels for rotation intervals across a full range of soil pH levels.

Soil pH ≤ to 7.4:

3 months: winter wheat

10 months: field corn, soybeans, white beans and alfalfa

12 months: tomatoes

Crops such as onions, celery, peppers, cole crops, lettuce and spinach, sugar beets, table beets and turnips, pumpkin and squash, cucumbers and melons, tobacco and non-triazine-tolerant canola are sensitive to Canopy PRO and may be injured if planted in soil treated with Canopy PRO herbicide during the year of application or the following crop year.

Fall-seeded or cover crops such as wheat, oats and rye may be injured if seeded within the same season as the application of Canopy PRO herbicide.

Pre-harvest interval

- The PHI is 60 days.

Classic™

HERBICIDE



Classic™ herbicide offers exceptional control of hard-to-control broadleaf weeds in soybeans.

WHY USE CLASSIC HERBICIDE?

- **Hard-to-control weeds.** Classic helps you manage some of the toughest weeds including nutsedge, sow-thistle and dandelions
- **Convenience.** Low use rate and easy to tank-mix with PRE and POST herbicides
- **Application flexibility.** Classic has a wide window of application from 14 days pre-plant up to early post-emergence

WEEDS CONTROLLED

Weeds controlled at 14.4 g/ac + Non-Ionic surfactant at 0.2% v/v

- Bean, Adzuki²
- Carrot, Wild²
- Dandelion¹
- Nutsedge, Yellow
- Pigweed, Redroot
- Ragweed, Common
- Velvetleaf

Additional weeds controlled when tank-mixed with glyphosate at 900 g ae/ha

- Annual sow-thistle
- Prickly lettuce

¹ Top growth control

² Suppression

CROPS

Soybeans

CLASSIC APPLICATION GUIDELINES

RATES AND ACRES TREATED

Rates:

Classic: 14.4 g/ac

Acres treated:

• 20 ac/288 g bottle

• 40 ac/576 g bottle

Water volume:

• 15–20 US gal/ac

PACKAGING

• 288 g bottle

• 576 g bottle

WHEN TO APPLY

Crop Stage:

Soil applied: Apply 14 days pre-plant up to pre-emergence

Post-emergence: Apply from soybean emergence up to just before the initiation of flowering. For best performance apply by the 3rd trifoliate stage

RAINFEST

• 2 hours

HERBICIDE TANK MIXES

Registered:

Assure® II

Glyphosate

Metribuzin 75 DF

Imazethapyr 240 SL

Supported:

Elevore

Enlist Duo™³

Enlist™ 1³

³ Only for use in Enlist E3™ soybeans

Application information

Add a registered NIS such as Agral 90® or Ag-Surf® at 2 L per 1,000 L of spray solution (0.2% v/v).

For more consistent control of velvetleaf, add 28% UAN at 0.8 L/ac

For tank-mixes with glyphosate, a non-ionic surfactant is not required.

Apply Classic only once per year.

Crop rotation

The recropping intervals are dependent on the pH of the soil, as well as the sensitivity of the specific rotational crop. Consult product labels for rotation intervals across a full range of soil pH levels.

3–4 months: winter wheat

10 months: field corn, white beans, soybeans and alfalfa (soil pH value <7.4 only)

11 months: cabbage, garden peas and sweet corn (southern Ontario only, pH value <7.0 only)

12 months: tomatoes

Rotational crop restrictions: Warning: sweet corn varieties may vary in their sensitivity to Classic residues.

Pre-harvest interval

• The PHI 60 days.

Commenza™



HERBICIDE

Commenza™ herbicide provides three active ingredients and residual activity for soil applied cross-spectrum broadleaf and grass control in soybeans. Multi-mode of action technology ensures robust performance against resistant and hard-to-control weeds.

WHY USE COMMENZA HERBICIDE?

- **Soil-applied weed control solution.** Commenza is a pro-active approach to establish early season control of most major annual weeds in soybeans. For IP soybeans, this is essential to starting the growing season clean
- **Multi-mode of action.** Commenza contains 3 proven active ingredients from 3 herbicide groups for overlapping effective modes of action on key weeds such as Eastern Black nightshade
- **Convenience and confidence.** 20 acre co-pack is easy to handle and measure. A complete herbicide program from one manufacturer provides you with confidence and assurance of performance

WEEDS CONTROLLED

- | | | |
|-----------------------------------|--|--|
| • Barnyard Grass | • Horsetail, Field ² | • Nightshade, Eastern Black |
| • Canada Fleabane ¹ | • Jimsonweed (pre-emergence only) | • Nutsedge, Yellow (PPI only) |
| • Carpetweed (pre-emergence only) | • Johnson Grass (seedling) | • Old Witchgrass |
| • Carrot, Wild ² | • Lady's-thumb (suppression if pre-plant incorporated application) | • Panicum, Fall |
| • Cheatgrass | • Lamb's-quarters, Common ⁴ | • Pigweed, Prostrate |
| • Chickweed, Common | • Mallow, Prickly (pre-emergence only) | • Pigweed, Redroot ^{1,4} |
| • Cocklebur ³ | • Mustard, Wild | • Ragweed, Common ^{1,2,3} |
| • Corn Spurry | • Mustard, Wormseed | • Shepherd's-purse |
| • Crabgrass, Hairy | • Nightshade, American | • Smartweed, Green |
| • Crabgrass, Smooth | | • Thistle, Russian |
| • Dandelion (seedling) | | • Velvetleaf |
| • Foxtail, Giant | | • Wild Potato Vine |
| • Foxtail, Green | | • Yellow Woodsorrel (pre-emergence only) |
| • Foxtail, Yellow | | |

¹ Populations resistant to Group 2 herbicides exist in certain areas of Eastern Canada. Commenza alone may not control all weed biotypes resistant to Group 2 herbicides.

² Suppression

³ If weed pressure in soybeans is heavy, tank mix with another product that provides a different mode of action.

⁴ Including triazine-tolerant biotypes

CROPS

Soybeans

COMMENZA™ APPLICATION GUIDELINES

RATES AND ACRES TREATED

Rates:

- 35 g/ac + 225 g/ac + 525 ml/ac

Acres treated:

- 20 ac/case

Water volume:

- 10-20 US gal/ac

PACKAGING

Case:

- Broadstrike RC:
715 g bottle
- Metribuzin Mx 75 DF:
4.5 kg jug
- S-Metolachlor 960:
10.5 L jug

WHEN TO APPLY

Soybean Application Methods:

Surface pre-plant, pre-emergence, pre-plant incorporated

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

Registered:

Glyphosate

Supported:

Elevore™ herbicide

Enlist Duo™ herbicide⁵

Enlist™ 1 herbicide⁵

⁵ Only for use in Enlist E3™ soybeans

Application information

Apply Commenza in conventional, conservation tillage or no-till soybean production systems.

Soybeans: Do not apply to areas where the soil pH is greater than 7.8 and organic matter is less than 2% (both apply) as this may result in decreased crop tolerance.

Crop rotation

4 months: winter wheat

10 months: spring wheat, spring barley, oats, soybeans, common beans (dry, snap), lima beans, processing peas, field corn and seed corn.

Following an application of Commenza in a dry year, the risk of injury to rotational crops may increase in light-textured soils containing less than 2% organic matter due to a higher bioavailability of herbicide residues for plant uptake.

Pre-harvest interval

- The PHI is 90 days.

Destra™ IS



Field Corn

HERBICIDE

Destra™ IS herbicide delivers convenient, one-pass, early post-emergence weed control in glyphosate-tolerant corn.

WHY USE DESTRA IS HERBICIDE?

- **Easy to Use.** Advanced dry blend formulation and low use rate of Destra IS makes sprayer loading efficient and allows you to cover more acres
- **Wide application window.** Destra IS has both knockdown and residual activity allowing you to start as early as the 3 leaf stage and spray as late as the 8 leaf stage
- **Excellent crop safety.** Because Destra IS contains isoxadifen, a built-in safener, Destra IS provides crop safety on a wide range of hybrids including short-season corn hybrids

WEEDS CONTROLLED

- Canola, Volunteer¹
- Foxtail, Green
- Lamb's-quarters, Common
- Nightshade, Eastern Black
- Old Witchgrass
- Panicum, Fall
- Pigweed, Green
- Pigweed, Redroot
- Quackgrass*
- Ragweed, Common*
- Velvetleaf

* Suppression

¹ Excluding Clearfield® canola

CROPS

Field Corn

DESTRA™ IS APPLICATION GUIDELINES

RATES AND ACRES TREATED

Rates:

- Destra IS: 110 g/ac

Acres treated:

- 40 ac/4.4 kg jug

Water volume:

- 15-20 US gal/ac

PACKAGING

Case:

- 2 x 4.4 kg jugs

WHEN TO APPLY

Crop Stage: 3 to 8 leaf stage of corn
(2-6 visible collars)

Weed Stage: Ideal application timing is when weeds are small and the extended residual activity can help to control later flushes of weeds.

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

Registered:

Glyphosate (glyphosate-tolerant corn only)
AAtrex® Liquid 480

Supported:

Lontrel™ XC

Application information

For post-emergence applications, Destra IS herbicide must be tank mixed with a recommended non-ionic surfactant, either Citowett Plus, Agral® 90 or Ag-Surf® at 2 L per 1,000 L spray solution (0.2% v/v).

When Destra IS herbicide is tank mixed with a glyphosate herbicide, a non-ionic surfactant is not required.

Crop rotation

4 months: winter wheat

10 months: field corn

11 months: soybeans and white beans

Pre-harvest interval

- The PHI is 100 days.

Diligent™



Soybeans

HERBICIDE

Diligent™ herbicide offers flexible defense against a range of tough and resistant broadleaf weeds in soybeans, including glyphosate-resistant waterhemp.

WHY USE DILIGENT HERBICIDE?

- **Early control for a strong start.** It can be applied from early pre-plant to pre-emergence
- **Two modes of action defend against resistance.** With a multi-mode defense against Group 2, 5 and 9 resistant broadleaf weeds, Diligent provides a proactive approach to weed resistance management
- **Flexible defense.** Diligent can be used in any production system, including Enlist E3™ soybeans, Roundup Ready 2 Xtend® soybeans or identity-preserved (IP)

WEEDS CONTROLLED

- Amaranth, Palmer
- Chickweed, Common
- Dandelion¹
- Foxtail, Green²
- Lamb's-quarters, Common
- Nightshade, Eastern Black
- Nightshade, Hairy
- Panicum, Fall²
- Pigweed, Green
- Pigweed, Redroot
- Ragweed, Common
- Waterhemp³

¹Early-season control on medium-textured soils

²Suppression

³Including biotypes resistant to herbicide Groups 2, 5 and 9

CROPS

Soybeans

DILIGENT™ APPLICATION GUIDELINES

RATES AND ACRES TREATED

Rates:

- Diligent: 70.4 g/ac

Acres treated:

- 40 ac/2.816 kg jug

Water volume:

- 10–20 US gal/ac

PACKAGING

Case:

- 2 x 2.816 kg jugs

WHEN TO APPLY

Soybeans:

Pre-plant: up to 30 days before planting

Pre-emergence: Up to 3 days after planting, prior to soybean emergence

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

- Prowl® H2O
- Focus® or Zidua™

If weeds are present at the time of application, tank mix Diligent herbicide with a glyphosate herbicide for the burndown of emerged weeds.

Application information

No-till planters that incorporate the soil during planting may result in decreased weed control in the row. When these types of planters are used, apply Diligent Herbicide within 3 days after planting and before soybeans emerge.

Moisture is necessary to activate Diligent Herbicide in soil for residual weed control.

Crop rotation

Crop rotation varies by crop and soil pH.

4 months: winter wheat

10 months: field corn (soil pH \leq 7.8 only) and soybeans (soil pH \leq 7.8 only)

11 months: alfalfa (soil pH \leq 7.4 only)

Pre-harvest interval

- The PHI is 60 days.

Elevore™

Arylex™ active

HERBICIDE

Field Corn



Soybeans

Use Elevore™ herbicide for a clean start in field corn and soybean crops. Elevore delivers powerful pre-plant burndown of tough broadleaf weeds, including glyphosate-resistant Canada fleabane.

WHY USE ELEVORE HERBICIDE?

- **Weed control and resistance management.** Elevore delivers broad-spectrum control of broadleaf weeds, including group 2 and 9 resistant Canada fleabane and common ragweed
- **Flexibility.** Can be used in any soybean trait system including Enlist E3™ and Roundup Ready 2 Xtend® soybeans
- **Consistent performance.** Arylex™ active provides systemic action that gets to the root of the problem

WEEDS CONTROLLED

- Canada Fleabane^{1,2}
- Cleavers
- Flax, Volunteer
- Hemp-nettle³
- Lamb's-quarters, Common
- Pigweed, Redroot³
- Ragweed, Common¹

¹ Including Group 9 and Group 2 resistant biotypes

² Light to moderate infestations

³ Suppression only

CROPS

Field Corn
Soybeans

ELEVORE™ APPLICATION GUIDELINES

RATES AND ACRES TREATED

Rates:

- Elevore: 29.5 ml/ac

Acres treated:

- 40 ac/1.18 L bottle

Water volume:

- 10-20 US gal/ac

PACKAGING

Case:

- 4 x 1.18 L bottles

WHEN TO APPLY

Field corn: 5 days pre-plant

Soybeans: 7 days pre-plant

Apply to actively growing weeds at the 1-8 leaf stage. Only weeds emerged at the time of application will be controlled.

HERBICIDE TANK MIXES

Elevore™ herbicide can be tank mixed with other effective herbicide groups to target key weed species with at least two or more effective modes of action, including:

Registered:

Broadstrike™ RC herbicide

Glyphosate

Supported Soybean tank-mixes:

Canopy™ PRO

Commenza™

Diligent™

Freestyle™

Application information

Elevore herbicide is a suspension concentrate. Shake bottle before using.

Elevore must be applied with a methylated seed oil (or an equivalent crop oil concentrate) at 0.5-1% v/v.

Planting depth: minimum 4 cm (1.6 inches)

Crop rotation

4 months: winter wheat

10 months: vulgaris species (including pinto, kidney and white types), alfalfa, oats, canola, flax, Juncea canola, Abyssinian, oriental, brown and yellow mustard, field peas, sunflower, canaryseed, timothy or fields can be summer fallowed

22 months: lentils

Pre-harvest interval

- The PHI for field corn is 100 days.

- The PHI for soybeans is 125 days

Engarde™



Field Corn

HERBICIDE

Engarde™ herbicide gives you flexibility, convenience and performance against yield-robbing weeds in corn, for clean fields from start to finish.

WHY USE ENGARDE HERBICIDE?

- **Early knockdown and residual control of weeds.** Application flexibility from pre-emergence to the 2-leaf stage of corn allows you to keep spraying even after crop emergence
- **Two modes of action.** Engarde has 2 powerful modes of action to provide early season weed control
- **Easy to use.** Low use rate dry blend technology makes handling, sprayer loading and application easy

WEEDS CONTROLLED

Broadleaf Weeds

- Canola, Volunteer
- Lamb's-quarters, Common
- Mustard, Wild
- Pigweed, Redroot (including triazine resistant)
- Ragweed, Common¹
- Velvetleaf

Grasses

- Barnyard Grass
- Foxtail, Green
- Crabgrass, Hairy/ Large¹
- Foxtail, Yellow¹
- Panicum, Fall
- Quackgrass¹
- Witchgrass

¹ Suppression only

ENGARDE™ APPLICATION GUIDELINES

CROPS

Field Corn

RATES AND ACRES TREATED

Rates:

- Engarde: 139.2 g/ac

Acres treated:

- 40 ac/5,568 kg jug

Water volume:

- 15-20 US gal/ac

PACKAGING

Case:

- 2 x 5,568 kg jugs

WHEN TO APPLY

Field corn:

Pre-emergence

Post-emergence up to the 2 leaf stage

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

For additional residual annual weed control, tank mix Engarde with a registered, soil-applied grass herbicide

Application information

For early post-emergence applications, Engarde herbicide must be tank mixed with a recommended non-ionic surfactant, either Agral® 90, Citowett Plus or Ag-Surf® at 2 L per 1,000 L spray solution (0.2% v/v).

When tank mixed with a glyphosate herbicide containing a built-in adjuvant system, a non-ionic surfactant is not required.

Crop rotation

4 months: winter wheat

10 months: field corn

11 months: soybeans and white beans

Pre-harvest interval

- The PHI is 100 days.



The Enlist™ weed control system will change how you think about weed management in soybeans.

Talk to your local seed supplier about the availability of Enlist E3™ soybeans.

Introducing the Enlist weed control system

The Enlist weed control system will help growers meet the challenge of farming today and in the future.

Why use the Enlist weed control system?

- A system with new traits providing herbicide tolerance in soybeans and corn
- Herbicide solutions built on an improved form of 2,4-D that lands and stays on target, enables management of hard-to-control and resistant weeds with Group 4 herbicides
- Enlist Stewardship resources that support the use of multiple modes of action to manage resistant weeds, provide training, and promote responsible and sustainable use

Enlist E3™ Soybeans

Enlist E3 soybeans provide high-yielding soybean genetics and industry leading triple-mode of action herbicide tolerance.

Why use Enlist E3 soybeans?

- Enlist E3 soybeans are tolerant to 2,4-D, glyphosate and glufosinate herbicides, which are part of a strong resistance management strategy
- Excellent crop tolerance enabling applications up to the R2 growth stage

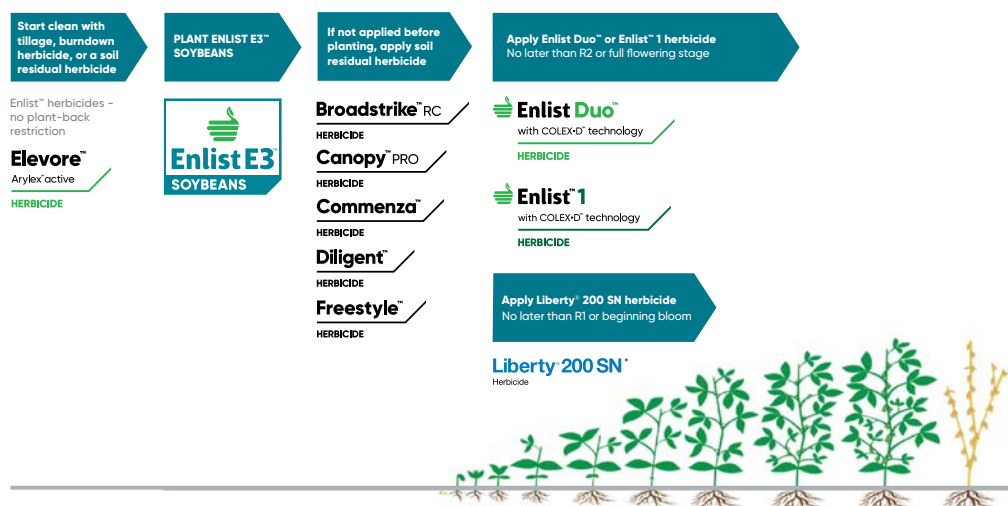
Program Approach to weed control

Why use a Program Approach to weed control?

- The program approach to weed control utilizes multiple tools included in integrated Pest Management (IPM) techniques to control weeds, reduce weed populations, and delay or prevent resistance
- The recommended weed control program for Enlist™ E3™ soybeans is to apply a soil residual or burn-off product with a different mode of action in addition to groups 9 and 4, followed by a post-emergence application of Enlist™ herbicides.
- If a second post application of an Enlist™ herbicide is needed, it must be made at least 12 days after the first application, per the product label.
- Additional Modes of action for in-crop weed control – Glufosinate such as Liberty 200 SN* is also a valuable tool that can be incorporated into the Program Approach, allowing for another effective mode of action.
 - Liberty 200 SN* (Glufosinate) is a group 10 herbicide with no known weed resistance in Canada.

Benefits of a Program Approach to weed control

- Eliminates yield-robbing early competition from a broad spectrum of early-season grass and broadleaf weeds
- Multiple modes of action for resistance management
- Timely post-emergent herbicide applications for optimum weed control and reduced weed competition when the crop is most vulnerable
- Application window is the same as glyphosate in glyphosate cropping system



*Pending registration; Approval expected in January 2022.



Enlist Duo™

with COLEX•D™ technology



Field Corn
Enlist™



Soybeans
Enlist E3

HERBICIDE

Enlist Duo™ provides the convenience of both 2,4-D choline and glyphosate in one formulation for control of grasses and broadleaf weeds including hard-to-control and resistant weeds.

WHY USE ENLIST DUO HERBICIDE?

- Enlist Duo with Colex-D™ technology is designed to land and stay on target with excellent performance on the toughest weeds
- Multiple modes of action deliver superior control: Groups 4 & 9
- Improved tank stability for a spray solution that stays mixed
- Spray solution does not adhere to sprayer components providing easy and fast sprayer cleanout

WEEDS CONTROLLED

Enlist E3™ soybeans (1.74 L/ac)

- Barley, Volunteer
- Barnyard Grass
- Biennial Wormwood²
- Bindweed, Field³
- Bindweed, Hedge
- Blue Lettuce²
- Bluebur
- Buckwheat, Tartary
- Buckwheat, Wild
- Burdock (before 4-leaf)
- Burdock²
- Canola, Volunteer¹
- Chickweed, Common
- Chickweed, Mouse-eared²
- Cleavers, Common
- Cocklebur
- Corn Spurry
- Cow Cockle
- Crabgrass, Large
- Crabgrass, Smooth
- Dandelion
- Fall Panicum
- False Flax
- Field Peppergrass
- Fleabane, Canada

- Fleabane, Daisy
- Flixweed
- Foxtail, Giant
- Foxtail, Green
- Goat's-beard
- Hairy Galinsoga
- Hawk's-beard, Narrow-leaf
- Hemp-nettle
- Hoary Cress
- Horsetail, Field
- Knotweed (before 4-leaf)
- Kochia
- Lady's-thumb
- Lamb's-quarters
- Leafy Spurge²
- Mallow, Roundleaf³
- Milkweed, Common^{3,4}
- Mustard, Dog
- Mustards (except green tansy)
- Nightflowering Catchfly
- Nightshade, Eastern Black Flowering
- Nutsedge, Yellow^{3,6}
- Oak Leaf Goosefoot
- Palmer Amaranth³

- Pigweed, Redroot
- Pigweed, Russian
- Pigweed, Smooth
- Pineappleweed
- Plantain, Common
- Proso Millet, Wild
- Purslane, Common
- Quackgrass
- Ragweed, Common
- Ragweed, Giant
- Russian Thistle
- Shepherd's Purse
- Smartweed, Green
- Smartweed, Pennsylvania
- Sow-thistle, Annual
- Sow-thistle, Perennial^{3,5}
- Stinkweed
- Sunflower, Annual
- Sweet Clover
- Tansy, Common
- Thistle, Canada^{3,4}
- Velvetleaf
- Vetch
- Waterhemp, Common
- Wheat, Volunteer
- Wild Oats
- Wild Radish
- Wild Tomato

¹ Including glyphosate-tolerant and Clearfield™ canola varieties.

² Top growth control only.

³ Use 2 applications for best control. The 2nd application should be no later than the R2 stage (full flowering stage) of soybeans.

⁴ Milkweed: 15-60 cm in height and actively growing.

⁵ Thistle, Canada and Sow-thistle, Perennial: should be from the rosette stage to 50 cm in height and actively growing.

⁶ Nutsedge, Yellow: 5-15 cm in height and actively growing.

ENLIST DUO™ WITH COLEX-D™ TECHNOLOGY APPLICATION GUIDELINES

CROPS

Enlist™ corn

Enlist E3™
soybeans

Burndown
before field corn,
wheat (spring,
winter, durum),
barley, rye

RATES AND ACRES TREATED

Rates:

Enlist™ field corn and

Enlist E3™ soybeans:

• 1.18 – 1.74 L/ac

Burndown ahead of corn and
cereal crops:

• 0.89 – 1.74 L/ac

Acres treated (1.74 L/ac rate):

• 10 ac/case

• 320 ac/tote

Water volume:

• 10–15 gal/ac

PACKAGING

Case:

• 2 x 8.7 L

Tote:

• 556.8 L

WHEN TO APPLY

Crop Stage:

Enlist corn: Up to V8 growth stage or 120 cm height

Enlist E3 soybeans: Up to R2 stage (full flowering)

Burndown before field corn, wheat (spring, winter, durum), barley, rye: Prior to planting or after planting
(BUT BEFORE CROP EMERGENCE)

RAINFAST

• 2 hours

HERBICIDE TANK MIXES

Consult the Enlist Product Use Guide available at
EnlistCanada.ca.

Application information

On-Target Application Requirements:

Droplet Size: Coarse to extremely coarse (ASAE S-572 Standard) to greatly reduce drift potential.

Boom Height: 60 cm or less

Spray Volume: 10–15 gal/ac is optimum

Wind: 3–16 km/hr. Do not spray during a temperature inversion. Do not spray in winds that exceed 25 km/h

Enlist corn, Enlist E3 soybeans: Make 1 to 2 applications with a minimum of 12 days between applications.

Crop Rotation

Any crop may be grown the year following an application of Enlist Duo

Pre-harvest Interval

Enlist E3 soybeans:

Do not harvest for forage or hay. Do not graze treated Enlist E3 soybeans

Enlist corn:

Do not permit lactating dairy animals to graze fields within 7 days after application.

Do not harvest forage or cut hay within 30 days after application. Withdraw meat animals from treated fields at least 3 days before slaughter.



Enlist™ 1

with COLEX•D™ technology



Field Corn
Enlist™



Soybeans
Enlist E3

HERBICIDE

Enlist™ 1, a standalone 2,4-D choline formulation provides the flexibility to tank-mix and adjust the rates of glyphosate or glufosinate for hard-to-control and resistant weeds.

WHY USE ENLIST 1 HERBICIDE?

- Enlist 1 with Colex-D technology is designed to land and stay on target with excellent performance on the toughest weeds
- **Flexibility.** Enlist 1 allows you to customize use rates and ratios of tank-mix partners
- **Compatibility.** Enlist 1 can be tank-mixed with glyphosate (group 9), Liberty® 200 SN (glufosinate, group 10), or other approved products

WEEDS CONTROLLED

Enlist E3™ soybeans (0.73 L/ac)

- Biennial Wormwood²
- Bindweed, Field²
- Bindweed, Hedge
- Blue Lettuce²
- Bluebur
- Buckwheat, Tartary
- Buckwheat, Wild
- Burdock (before 4-leaf)
- Burdock²
- Canola, Volunteer¹
- Chickweed, Common
- Chickweed, Mouse-eared²
- Cocklebur
- Dandelion
- False Flax

- Field Peppergrass
- Fleabane, Daisy
- Flixweed
- Goat's-beard
- Hairy Galinsoga
- Hoary Cress
- Horsetail, Field
- Knotweed (before 4-leaf)
- Kochia
- Lady's-thumb
- Lamb's-quarters
- Leafy Spurge²
- Mustard, Dog
- Mustards (except green tansy)
- Oak Leaf Goosefoot
- Pigweed, Redroot
- Pigweed, Russian

- Pineappleweed
- Plantain, Common
- Purslane, Common
- Ragweed, Common
- Ragweed, Giant
- Russian Thistle
- Shepherd's Purse
- Smartweed, Green
- Smartweed, Pennsylvania
- Sow-thistle, Annual
- Sow-thistle, Perennial²
- Sunflower, Annual
- Sweet Clover
- Tansy, Common
- Thistle, Canada²
- Velvetleaf
- Vetch
- Wild Radish

¹ Including glyphosate-tolerant and Clearfield canola varieties.

² Top growth control only.

ENLIST™ 1 WITH COLEX-D™ TECHNOLOGY APPLICATION GUIDELINES

CROPS

Enlist™ corn

Enlist E3™
soybeans

RATES AND ACRES TREATED

Rates:

Enlist 1: 0.3 to 0.73 L/ac
Hard-to-Control weeds: 0.73 L/ac

Acres treated (0.73 L/ac rate):

- 28 ac/case
- 750 acres/tote

Water volume:

- 10-15 gal/ac
- **Do not exceed 1.46 L/ac per use season**

PACKAGING

- 2 x 10.2 L Case
- 547 L tote

WHEN TO APPLY

- E3 soybeans tank-mix with glyphosate up to R2 (full flower)
- E3 soybeans tank-mix with Liberty 200 SN* (glufosinate) up to R1 (beginning bloom)
- Enlist corn up to V8 or 120 cm in height

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

Consult the Product Use Guide available at EnlistCanada.ca

Registered tank-mixes:

Glyphosate at 900 gai/ha (group 9)

Supported tank-mixes:

Liberty 200 SN* (glufosinate – group 10)

Control of volunteer Enlist corn in Enlist E3 soybeans:
Select™, Centurion®, Poast® Ultra

** Pending registration; Approval expected in January 2022.*

Application information

On-Target Application Requirements:

Droplet Size: Coarse to extremely coarse (ASAE S-572 Standard) to greatly reduce drift potential.

Boom Height: 60 cm or less.

Spray Volume: 10-15 gal/ac is optimum.

Wind: 3-16 km/hr. Do not spray during a temperature inversion. Do not spray in winds that exceed 25 km/h.

Enlist corn: Make 1 to 2 applications with a minimum of 12 days between applications before the V8 growth stage.

Enlist E3 soybeans: Make 1 to 2 applications with a minimum of 12 days between applications. Apply up to R2 stage.

Crop Rotation

Any crop may be grown the year following an application of Enlist 1.

Pre-harvest interval

Enlist E3 soybeans: Do not harvest for forage or hay. Do not graze treated Enlist E3 soybeans.

Enlist corn: Do not permit lactating dairy animals to graze fields within 7 days after application. Do not harvest forage or cut hay within 30 days after application. Withdraw meat animals from treated fields at least 3 days before slaughter.

FirstRate™



HERBICIDE

FirstRate™ herbicide is your solution for effective pre- and post-emergence control of the most troublesome broadleaf weeds in soybeans.

WHY USE FIRSTRATE HERBICIDE?

- **Broadleaf weed control.** FirstRate provides a high level of control of some of the toughest broadleaf weeds including cocklebur, horsenettle and jimsonweed
- **Wide application window.** FirstRate can be applied any time from pre-emergence up to just before flowering (R1)
- **Tank mix flexibility.** FirstRate can be tank-mixed with other herbicides and used in non-GMO or glyphosate tolerant soybeans to improve control of broadleaf weeds

WEEDS CONTROLLED

Pre-emergence (8.5 g/ac)

- Ragweed, Common¹
- Lamb's-quarters, Common¹
- Velvetleaf
- Cocklebur, Common (4-8 leaf)
- Jimsonweed (2-4 leaf)

Pre-emergence (17 g/ac)

- Above weeds plus
- Cocklebur
- Lamb's-quarters (heavy infestations)

Post-emergence (8.5 g/ac)

- Ragweed, Common¹ (4-8 leaf)
- Ragweed, Giant¹ (4-6 leaf)
- Velvetleaf (2-4 leaf)

¹Note: Group 2 resistant biotypes are known to exist and these populations will not be controlled

FIRSTRATE™ APPLICATION GUIDELINES

CROPS

Soybeans

RATES AND ACRES TREATED

Rates:

Pre-emergence: 8.5–17 g/ac

Post-emergence: 8.5 g/ac

Acres treated:

(Post-emergence rate):

- 40 ac/bottle
- 160 ac/case

Water volume:

- 10–20 US gal/ac

PACKAGING

10 x 17 g packets
per package

340 g Bottle:

- 4 x 340 g/case

WHEN TO APPLY

- Pre-emergence:
 - Apply after planting but prior to crop or weed emergence
- Post-emergence:
 - Any time prior to soybean flowering stage

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

Registered:

Broadstrike™Dual

Pursuit®

Roundup®

Application information

Application prior to full emergence of 1st trifoliate leaf may cause temporary yellowing of soybeans. This effect is transient and has no effect on yields.

Adequate soil moisture is necessary for optimal efficacy. Sufficient rainfall to moisten the soil to depth of 5cm is generally sufficient. If no rainfall within 7–10 days, a shallow cultivation or rotary hoe is recommended.

Post-emergent applications of FirstRate require the addition of a non-ionic surfactant at 0.25% v/v plus liquid fertilizer (28–0–0 or 32–0–0) at 2.5% v/v.

Crop rotation

0 months: soybeans:

4 months: Wheat

9 months: Corn

Pre-harvest interval

- The PHI is 65 days.

Freestyle™



HERBICIDE

Freestyle™ herbicide is a flexible solution for early-season weed control in any soybean production system. It provides enhanced residual control of grass and broadleaf weeds, including tough weeds like Eastern black nightshade.

WHY USE FREESTYLE HERBICIDE?

- **Adds residual.** Freestyle adds residual control of broadleaf and grass weeds to your herbicide program
- **Fits any soybean production system.** Soil applied or early post-emergence, Freestyle fits conventional IP soybeans or enhances glyphosate in a GT system
- **Broad-spectrum and residual season-long weed control.** Adds control of weeds such as velvetleaf, Eastern black nightshade and nutsedge

WEEDS CONTROLLED

Broadleaf weeds:

- Dandelion¹
- Lady's-thumb
- Lamb's-quarters, Common
- Lettuce, Prickly¹
- Mustard, Wild
- Nightshade, Eastern Black
- Pigweed, Redroot
- Smartweed
- Velvetleaf

Grass weeds:

- Barnyard Grass
- Foxtail, Green
- Foxtail, Yellow
- Old Witchgrass
- Nutsedge, Yellow

¹ Pre-plant burndown applications

CROPS

Soybeans

FREESTYLE™ APPLICATION GUIDELINES

RATES AND ACRES TREATED

Rates:

- Pre-plant or pre-emergence:
• 14.4 g/ac + 125 ml/ac
- Early post-emergence:
• 9.6 g/ac + 83 ml/ac

Acres treated:

- Pre-plant or pre-emergence:
• 20 ac/case or 40 ac/case
- Early post-emergence:
• 30 ac/case or 60 ac/case

Water volume:

- 10-20 US gal/ac

PACKAGING

Case:

- 288 g jug of Classic® + 2.5 L/jug of Imazethapyr SL herbicide
- New: Classic
2 x 288 g bottle + 2 x 2.5 L Imazethapyr 240 SL herbicide

WHEN TO APPLY

- Glyphosate tolerant soybeans: Pre-plant or pre-emergence (20 acres/case)
- Glyphosate tolerant soybeans: Early post-emergence (30 acres/case)
- Non-GM soybeans: Early pre-plant to pre-emergence (20 acres/case)

RAINFAST

- 4 hours

HERBICIDE TANK MIXES

- Glyphosate – burndown or Post-emergence in soybeans
- Boundary® LQD – for IP soybeans

Application information

Glyphosate tolerant soybeans – Pre-plant or Pre-emergence (14.4g/ac + 125 ml/ac)

- Apply up to 14 days before planting
- Removes early season weed pressure
- Follow up in-crop with glyphosate

Glyphosate tolerant soybeans – Early Post-emergence (9.6 g/ac + 83 ml/ac)

- Apply up to the 3rd trifoliate stage
- Adds residual weed control
- Tank-mix with 0.67-1 L/ac of a 540 g/L glyphosate
- Post applications of Freestyle may shorten the internodes and stunt soybeans but will not result in yield reduction

Non-GM soybeans – Early pre-plant to pre-emergence (14.4 g/ac + 125 ml/ac)

- Tank-mix with a pre-emergence grass herbicide such as Boundary LQD for additional residual and modes of action

Adjuvants: For control of emerged weeds add a non-ionic surfactant at 2 L/1,000 L of spray solution (0.2% v/v). When tank mixed with a glyphosate herbicide containing a built-in adjuvant system, a non-ionic surfactant is not required.

Crop rotation

Based on soil pH of ≤ 7.4 :

3 months: winter wheat

10 months: field corn, soybeans and white beans

Pre-harvest interval

- The PHI is 100 days.

Lontrel™ XC

HERBICIDE



Rutabagas



Sugar Beets



Field Corn



Canola



Durum Wheat



Spring Wheat



Winter
Wheat



Barley

Lontrel™ XC herbicide improves the control of thistles and other hard to control broadleaf weeds in field corn and other field crops.

WHY USE LONTREL XC HERBICIDE?

- **Gets to the root of the problem.** Lontrel XC is highly systemic and moves down to the roots to help manage deep rooted perennials
- **Gets hard-to-control weeds.** Targets the toughest broadleaf weeds in corn including certain glyphosate resistant biotypes
- **Crop safety.** Lontrel XC is a different group 4 than products like dicamba. You can apply with confidence up to the 8 leaf stage without fear of injury or volatility

WEEDS CONTROLLED

- Alfalfa, Volunteer/
Stands
- Alsike Clover
- Buckwheat, Wild
- Chamomile, Scentless
- Daisy, Oxeye¹
- Groundsel, Common
- Kudzu
- Ragweed, Common
- Sorrel, Sheep¹
- Sow-thistle, Perennial
- Thistle, Canada
- Vetch

¹ Suppression

LONTREL™ XC APPLICATION GUIDELINES

CROPS

Barley

Canola

Durum Wheat

Field Corn

Rutabagas

Spring Wheat

Sugar Beets

Winter Wheat

RATES AND ACRES TREATED

Rates:

- 69–202 mL/ac
(Use rates vary by crop)

Field corn: 69–101 mL/ac

Acres treated:

Field corn: 26–39 ac/jug

Water volume:

- 10–20 US gal/ac

PACKAGING

Case:

- 4 x 2.67 L

WHEN TO APPLY

Crop Stage:

- Field corn: spike to 8 leaf (V6)
- Canola: 2–6 leaf
- Cereals: 3 leaf to flag leaf
- Sugar beets: Cotyledon to 8 leaf

Weed Stage:

- Canada thistle, Perennial sow thistle, Scentless chamomile – rosette to pre-bud
- Volunteer alfalfa – 5–50 cm height

RAINFEST

- 4 hours

HERBICIDE TANK MIXES

May be safely tank mixed with many other registered herbicides. Refer to the specific crop use recommendations for tank mix guidance.

Application information

Field Corn: 69 mL/acre: Tank mix with glyphosate (glyphosate tolerant corn only) for enhanced control of Canada thistle, dandelions, perennial sow-thistle and wild buckwheat.

101 mL/acre: Canada thistle (top growth), vetch and alsike clover

101 mL/acre : Chardon des champs (sommets), vesce jargeau et trèfle alsike

Ne pas appliquer sur du maïs de semence, sur le maïs sucré ou le maïs soufflé.

Cereals (spring wheat, winter wheat, durum wheat, barley): 69–101 mL/acre: Tank mix with 2,4-D Ester or Amine, MCPA Ester or Amine

Canola (Ontario only): 101 mL/acre: For top growth control of Canada thistle

Apply at the 2–6 leaf stage of canola.

Sugar Beets: 138–202 mL/acre

Rutabaga: 138 mL/acre: For control of common ragweed

Lontrel XC does not require additional adjuvants or surfactants.

Crop Rotation

Fields previously treated with Lontrel XC herbicide can be seeded the following year to wheat, oats, barley, rye (not underseeded with legumes, clover or alfalfa), forage grasses, flax, canola, mustard, soybeans*, field peas*, sugar beets.

* Refer to product label for detailed information.

Pre-harvest interval

Field corn – do not allow livestock to graze treated areas or harvest treated field corn for silage as feed within 40 days after last treatment.

Sugar beets – 90 days.

Rutabaga – 83 days.

Durum wheat – 60 days.

Pixxaro™

Arylex™ active



Durum
Wheat



Spring
Wheat



Winter
Wheat



Barley

HERBICIDE

Spray Pixxaro™ when you want, with confidence.

WHY USE PIXXARO HERBICIDE?

- **Flexibility.** 95% or greater control of most labelled weeds. Whether they are small or large weeds, in early or late crop staging and even in cool or dry conditions
- **Elite performance.** Control your toughest weeds, including glyphosate resistant Canada fleabane, cleavers, chickweed and hemp-nettle and many other broadleaf weeds
- **Convenient packaging.** Comes in a convenient 40 acre co-pack

WEEDS CONTROLLED

- Alfalfa, Volunteer (up to 25 cm in height)
- Barnyard Grass (up to the 5-leaf, 2-tiller stage)
- Buckwheat, Wild
- Burdock (before the 4-leaf stage)
- Canada Fleabane²
- Canola, Volunteer
- Chickweed, Common
- Cleavers¹
- Cocklebur
- Dandelion^{**}
- Flixweed
- Hemp-nettle¹
- Henbit
- Horsetail, Field (up to 15 cm in height)*
- Kochia¹
- Lady's-thumb*
- Lamb's-quarters, Common
- Mallow, Roundleaf
- Mustard, Ball
- Mustard, Wild¹
- Nightshade species, (including eastern black, hairy and cutleaf, up to the 6-leaf stage)
- Pennycress, Field
- Pigweed, Redroot
- Plantain, Common
- Prickly Lettuce
- Ragweed, Common²
- Ragweed, Giant²
- Shepherd's-purse
- Smartweed, Annual*
- Smartweed, Green*
- Sow-thistle, Annual
- Sow-thistle, Perennial (up to the 6-leaf stage)*
- Stork's-bill, Long
- Thistle, Canada (up to the bolting stage, 30 cm in height)*
- Vetch

*Suppression.

** Dandelion suppression – seedlings and over-wintered rosettes up to 30 cm in diameter.

¹ Including ALS resistant.

² Including ALS and glyphosate resistant.

PIXXARO™ WITH ARYLEX™ ACTIVE APPLICATION GUIDELINES

CROPS

Durum Wheat
Spring Wheat
Winter Wheat
Barley

RATES AND ACRES TREATED

Rates:

- Pixxaro A: 123 ml/ac
- Plus M Ester 600: 236 ml/ac

Acres treated:

- 40 ac/case

Water volume:

- 10-20 US gal/ac

PACKAGING

Case:

- Pixxaro A: 1 x 4.9 L jug
- Plus M Ester 600:
1 x 9.45 L jug

WHEN TO APPLY

Crop Stage:

3 leaf to just prior to flag leaf emergence

Weed Stage:

1-8 leaf (or larger; see label)

RAINFAST

- 1 hour

HERBICIDE TANK MIXES

For grass and broadleaf weed control, tank mix with any grass herbicide registered for use in wheat or barley.

Registered fungicides:

- Stratego®
- Tilt™

Recommended fungicides:

- Cerefit™ fungicide

Application information

If Plus M Ester 600 is used with Pixxaro A as intended (supplied in the Pixxaro co-pack), no surfactant is required.

Crop rotation

3 months: fall rye and winter wheat

10 months: spring wheat, spring barley, oats, canola, corn, soybeans, sunflowers, flax, field peas, potatoes (except seed potatoes), mustard, alfalfa, dry beans (species including pinto, kidney and white types) and timothy or fields can be summer fallowed.

22 months: lentils

Pre-harvest interval

- The PHI for treated crops is 60 days.
- The PHI for hay or silage is 21 days.

Prism™ SG



HERBICIDE

Outstanding post-emergent control of quackgrass, pigweed and annual grasses.

WHY USE PRISM™ SG HERBICIDE?

- Can be used on all types of potatoes, including seed and early maturing varieties.
- Flexible re-cropping options.

WEEDS CONTROLLED

- Barnyard Grass
- Fall panicum
- Foxtail, Green
- Foxtail, Yellow
- Lamb's-Quarters*
- Nightshade, Hairy
- Pigweed, Redroot
- Quackgrass
- Witchgrass

*Suppression

CROPS

Potatoes

PRISM™ SG APPLICATION GUIDELINES

RATES AND ACRES TREATED

- 24 grams/ac
- Water volume: 40 L/ac
(10 US gal/ac)

PACKAGING

- NEW 12 x 480 g jug

WHEN TO APPLY

- Application to control annual grasses and quackgrass must be made before the crop canopy can interfere with spray coverage of the target weeds.
- Cultivation is NOT recommended within 7-10 days prior to or after application of Prism SG Herbicide.

RAINFAST

- 4 hours

HERBICIDE TANK MIXES

Prism SG can be tank mixed with Tricor 75DF herbicide post-emergent, plus a non-ionic surfactant i.e. Agral 90 or AgSurf at 2 L per 1000 L of spray solution (0.2% v/v).

Crop rotation

Anytime: field corn

4 months: winter wheat

10 months: spring barley, spring wheat (including durum), oats, canola, soybeans, dry beans, white beans, red clover, sorghum, chickpeas, potatoes, sunflowers, corn (sweet or seed), field peas, lentils, flax and faba beans.

Adjuvant information

Prism SG must be applied with a recommended non-ionic surfactant, either Agral 90 or Ag-Surf, at 2 L per 1000 L spray solution (0.2% v/v).

Pre-harvest interval

The PHI for potatoes is 30 days.



NEW

Prominex™

Arylex™ active

HERBICIDE

Prominex™ herbicide with Arylex™ active delivers exceptional control of annual AND perennial broadleaf weeds with the convenience of an all-in-one formulation.

WHY USE PROMINEX™ HERBICIDE IN WHEAT AND BARLEY?

- **Unmatched Weed Control.** Prominex provides control of both annual AND perennial broadleaf weeds.
- **Just GO.** Thanks to Arylex active, you can Just GO on small or large broadleaf weeds, in early or late crop staging, and even in cool or dry conditions.
- **Tank Mix Flexibility.** Choose whether to tank mix with a Group 1 grass herbicide in your wheat or barley and a Group 2 grass herbicide in your wheat.
- **Convenient Formulation.** All-in-one ME formulation allows for ultimate convenience and easy loading.
- **Expanded Group 4 Mode of Action Control.** Tank mix with MCPA Ester 600 or 2, 4-D Ester for expanded Group 4 broadleaf weed control.

Prominex + 235 ml/ac (5 oz./ac) MCPA Ester 600

GRASS WEEDS CONTROLLED

- Barnyard grass

ANNUAL WEEDS CONTROLLED

- | | | |
|-----------------------|---|---|
| • American dragonhead | • Hemp-nettle* | • Stork's-bill |
| • Ball mustard | • Henbit | • Velvetleaf |
| • Burdock | • Kochia** | • Vetch |
| • Canada fleabane** | • Lamb's-quarters | • Volunteer alfalfa |
| • Canada thistle | • Nightshade species
(<i>Eastern black, hairy
and cutleaf</i>) | • Volunteer canola
(<i>all herbicide tolerant
varieties</i>) |
| • Chickweed** | • Plantain | • Volunteer flax |
| • Cleavers** | • Prickly lettuce | • Wild buckwheat |
| • Cocklebur | • Redroot pigweed | • Wild mustard |
| • Common ragweed** | • Round-leaved mallow | • Wild radish |
| • Cow cockle | • Shepherd's purse* | |
| • False ragweed | • Stinkweed | |
| • Flixweed* | | |
| • Giant ragweed** | | |

WEEDS SUPPRESSED

- Dandelion
- Field horsetail
- Perennial sow-thistle
- Smartweed*

PROMINEX™ WITH ARYLEX™ ACTIVE APPLICATION GUIDELINES

CROPS

Barley
Durum wheat
Spring wheat
Winter wheat

RATES AND ACRES TREATED

RATES:

– 414 ml/ac

ACRES TREATED:

– 40 ac/case (20 ac/jug)

PACKAGING:

Case:

• 2 x 8.3 L jugs

WHEN TO APPLY

• 3-leaf to just prior to flag leaf emergence

RAINFAST

• 4 hours

HERBICIDE TANK MIXES

• MCPA Ester 600 • 2, 4-D Ester 700
• Simplicity™ GoDRI

Recommended fungicides:

Cerefit™ fungicide

2020 Research Authorizations

Prominex was showcased in 53 x 80 acre research authorization sites applied by farmers throughout Alberta, Saskatchewan and Manitoba.



Prominex + Simplicity GODRI (10 DAA)

Crop rotation

- Barley
- Canola
- Corn
- Flax
- Forage grasses
- Oats
- Mustard
- Peas¹

- Fall rye (*not underseeded with legumes, clover or alfalfa*)
- Soybeans
- Summerfallow
- Wheat

22 months:

- Lentils
- Chickpeas

¹For pea or soybean rotation, rainfall from June 1 to August 31 in the year of application must be greater than 140 mm (5.5 inches) and annual rainfall must be greater than 175 mm (6.9 pouces).

^{*}Including Group 2 resistant biotypes

^{**}Including Groups 2 & 9 resistant biotypes

For a complete weed list and specific weed staging, please refer to the Prominex label.

Simplicity™ GoDRI™

HERBICIDE



Durum
Wheat



Spring Wheat



Winter
Wheat

Simplicity™ GoDRI™ herbicide delivers superior control of wild oat, annual grass and broadleaf weeds with no re-cropping restrictions. It comes in a convenient, easy-to-use, highly concentrated, low dose formulation.

WHY USE SIMPLICITY GoDRI HERBICIDE?

- **Effective resistance management with a wide application window.**
The only group 2 wild oat herbicide that can be applied up to the flag leaf stage
- **Exceptional flexibility.** Allows for tank mixing with many Corteva Agriscience crop protection products such as Pixxaro™
- **Convenient formulation.** GoDRI Rapid Dispersion Technology is a highly concentrated easy to use formulation

WEEDS CONTROLLED

Group 1 resistant wild oats, and bonus broadleaf weeds in wheat.

Grass

- Barnyard Grass
- Brome, Downy
- Brome, Japanese
- Foxtail, Green*
- Foxtail, Yellow
- Oat, Wild
- Hemp-nettle
- Lady's-thumb
- Mallow, Roundleaf
- Pennycress, Field
- Pigweed, Redroot
- Shepherd's-purse
- Smartweed*

Broadleaf

- Buckwheat, Wild*
- Canola, Volunteer (excluding Clearfield®)
- Chickweed, Common
- Cleavers
- Cowcockle
- Dandelion*
- Flixweed
- Spurry, Corn
- Thistle, Canada*
- Thistle, Russian*

**Suppression. Corteva Agriscience research trials indicate that application to small stage, actively growing plants provides an increased level of control.*

SIMPLICITY™ GoDRI™ APPLICATION GUIDELINES

CROPS

Durum Wheat

Spring Wheat

Winter Wheat

RATES AND ACRES TREATED

Rates:

- 28 g/ac

Acres treated:

- 80 ac/jug (320 ac/case)

Water volume:

- 10-20 US gal/ac

PACKAGING

Case:

- 4 x 2.24 kg jugs

WHEN TO APPLY

Crop Stage:

2 leaf stage to the flag leaf stage

Weed Stage:

Wild oats: 1 to 6 leaf

Broadleaf weeds: 1 to 5 leaf

RAINFAST

- 2 hours

HERBICIDE TANK MIXES

Broadleaf herbicides:

2,4-D Ester
Buctril™ M
MCPA™ Ester
Pixxaro™
Refine™ SG

Fungicides:

Acapela™
Cerefit™
Stratego™
Tilt™

Application information

Simplicity GoDRI always requires the addition of a non-ionic surfactant (NIS) at 0.25% v/v such as: Agral 90 at 0.25% v/v, Sentry™ at 0.25% v/v, Ag-Surf Original at 0.25% v/v.

Crop rotation

10 months: field corn, sunflower and potatoes

11 months: barley, brown mustard, canola, dry beans (species including pinto, kidney and white types), flax, canola, lentils, oats, field peas, chickpea, spring wheat, soybean and yellow mustard or fields can be summer fallowed

Pre-harvest interval

- The PHI is 50 days

Steadfast™ IS



Field Corn

HERBICIDE

Steadfast™ IS herbicide provides robust post-emergence grass control in field corn including non-GMO hybrids

WHY USE STEADFAST IS HERBICIDE?

- **Proven control of annual grasses.** Steadfast IS provides dependable control of key annual grasses such as green foxtail and wild oat
- **Crop safety under a wide range of conditions.** Includes a safener allowing for use on short season hybrids
- **Wide window.** Steadfast IS can be safely applied to field corn up to the 8 leaf stage (V6)

WEEDS CONTROLLED

- Foxtail, Green
- Canola, Volunteer
- Oat, Wild
- Wheat, Volunteer

CROPS

Field Corn

STEADFAST™ IS APPLICATION GUIDELINES

RATES AND ACRES TREATED

Rates:

- 27 g/ac

Acres treated:

- 20 ac/bottle

Water volume:

- 10–20 US gal/ac

PACKAGING

Case:

- 6 x 540 g bottles

WHEN TO APPLY

Crop Stage:

Spike to 8 leaf (V6)

Weed Stage:

Annual grasses: 1–4 leaf (up to early tillering)

Volunteer canola: cotyledon to 5 leaf

RAINFEST

- 2 hours

HERBICIDE TANK MIXES

Non-GMO field corn:

Steadfast IS can be tank-mixed with registered broadleaf herbicides to ensure cross-spectrum control of grass and broadleaf weeds

Glyphosate Tolerant Corn:

Glyphosate

Application information

When using Steadfast IS herbicide in conventional corn, it must be tank mixed with a non-ionic surfactant at 2 L/1000 L (0.2% v/v).

Steadfast IS must be applied only when the temperature in the 24 hours before and after application ranges between 5°C and 30°C. Temperatures beyond this range increase the potential for crop response. Make only one application per growing season.

For maximum crop safety, Steadfast IS should only be applied to corn which has not been treated with a highly systemic organophosphorus soil insecticide, such as Lorsban™. Do not tank mix with any organophosphorus insecticide. Do not apply a foliar organophosphorus insecticide within 7 days before or after applying Steadfast IS.

Crop rotation

4 months: winter wheat

10 months: spring wheat (including durum), oats, barley, canola, soybeans, dry beans, white beans, chickpeas, potatoes, sunflowers, corn (sweet or seed), field peas, lentils and flax

Anytime: field corn

Pre-harvest interval

- 30 days for corn (silage, fodder or grain).

Disease Control For Healthier Crops



fungicides

BY CROP

Corn



Acapela™ 50

Soybeans



Acapela™ 50

Cereals



Acapela™ 50

Cerefit™ 52

Other Crops

Dithane™ Rainshield™54

– Potatoes

Acapela™

FUNGICIDE



Cereals



Corn
For Seed



Dry Legumes



Sweet Corn



Field Corn



Popcorn



Soybeans

Protect your soybean and corn crops against key diseases with Acapela™ fungicide, a unique Group 11 fungicide.

WHY USE ACAPELA FUNGICIDE?

- **Outstanding disease protection** in soybeans, corn, cereals & dry legumes.
- **One-of-a-kind movement properties** that quickly and efficiently surrounds, penetrates, and protects.
- **Rapidly absorbed**, moving quickly into and within each plant.
- **Supports positive plant performance** by increasing chlorophyll content and plant productivity, even in stressful conditions.

DISEASES CONTROLLED

Soybeans

- Brown spot
- Frogeye leaf spot
- Asian soybean rust
- White mould¹

Corn (field, sweet, seed, popcorn)

- Northern corn leaf blight

Cereals (barley, oats, rye, triticale, wheat)

- Scald (barley and rye)
- Crown rust (oats)

- Septoria leaf blotch (wheat, rye, barley and triticale)
- Leaf rust (wheat, rye and triticale)
- Net blotch (barley)
- Powdery mildew (cereal grains)
- Stripe rust (cereal grains)
- Tan spot (wheat)

Dry legumes

- Anthracnose (lentils and dry beans)
- Asian soybean rust
- Mycosphaerella blight¹ (field peas)
- White mould¹

Potatoes

- Early blight
- Late blight
- White mould

Oilseed (flax)

- Pasma

¹Suppression



Untreated, White mould infection

Acapela

ACAPELA™ APPLICATION GUIDELINES

CROPS

Soybeans

Cereals

Corn

(for seed)

Dry legumes

Sweet corn

Field corn

Popcorn

RATES AND ACRES TREATED RATES:

WATER VOLUME

Ground: 10 US gal/ac minimum

Air: 4.5 US gal/ac minimum

• Soybeans:

For white mould (Sclerotinia)

- 0.35 L/ac (27 ac/jug)

For Asian soybean rust, brown spot (Septoria) and frogeye leaf spot (Cercospora sojina)

- 0.24L/ac (40 ac/jug)

• Corn (field, sweet, seed, popcorn)

For northern corn leaf blight

- 0.24L/ac (40 ac/jug)

PACKAGING

- Case 2 x 9.6 L Jugs

- Drum 115.2 L

WHEN TO APPLY

• Acapela fungicide is registered for ground sprayer and aerial application.

• Use sufficient water to obtain thorough coverage of plants. Minimum aerial application volume is 4.5 US gal/ac and minimum ground application volume is 10 US gal/ac.

• Field sprayer application

RAINFAST

• 1 hour

Application information

Soybeans:

For white mould, make initial preventative application at R1 (beginning bloom). Follow with 2nd application 7-10 days later at R2 (full bloom).

For Asian soybean rust, brown spot (Septoria) and frogeye leaf spot (Cercospora sojina) begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.

For foliar diseases, the optimal time for application is typically at the R2 to R3 growth stage (full bloom to beginning pod).

Corn (field, sweet, seed, popcorn)

For northern corn leaf blight begin applications prior to disease development and continue on a 7 to 14 day interval. Use higher rate and shorter interval when disease pressure is high.

For optimal disease control, apply at full tassel (VT) to milk stage (R3) corn.

Crop Rotation

Any crop the following year.

Pre-harvest interval

- The PHI in corn is 7 days, grazing, forage is 0 days.
- The PHI in soybeans is 14 days.

Cerefit™

FUNGICIDE



Durum
Wheat



Spring
Wheat



Winter
Wheat



Barley



Oats

Cerefit™ fungicide is a new dual mode of action fungicide developed to be applied at herbicide timing to protect your high yielding winter wheat from yield limiting leaf diseases.

WHY USE CEREFIT™ FUNGICIDE?

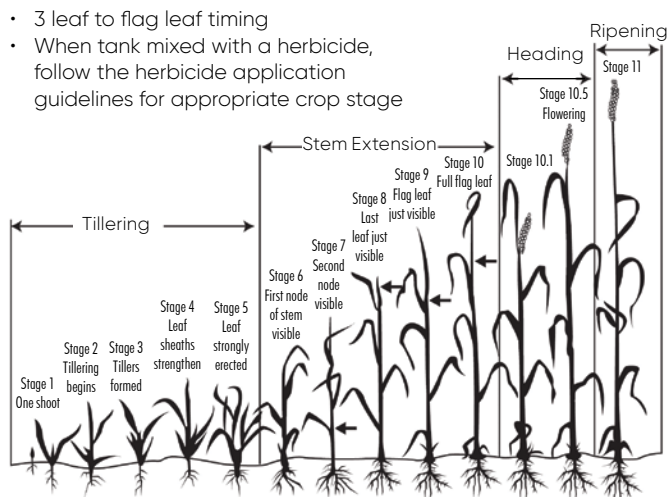
- Cerefit provides **broad-spectrum control** of leaf diseases in winter wheat
- The **multiple modes of action** in Cerefit provide a unique combination of 2 active ingredients (Group 11 and 3) each contributing to excellent disease control and resistance management
- Research authorization results show that when Pixxaro™ and Cerefit are used together, they deliver **a clean and healthy winter wheat crop**

DISEASES CONTROLLED

- Stripe Rust
- Septoria Leaf Spot
- Septoria Glume Blotch
- Septoria Complex
- Powdery Mildew
- Crown Rust
- Leaf and Stem Rust
- Net Blotch
- Scald
- Spot Blotch
- Tan Spot

Apply Cerefit at 3 leaf to Flag leaf timing to protect your high yielding crops from yield-limiting leaf diseases.

Crop
Stage



CEREFIT™ APPLICATION GUIDELINES

CROPS

Wheat

(Winter, Spring, Durum)

Oats

Barley

RATES AND ACRES TREATED

Acres treated:

- Treats 40 acres

PACKAGING

Case:

- 1 case (5.3 L + 3.5 L)

WATER VOLUME

- Ground application is 10-20 US gal/ac

WHEN TO APPLY

- 3 leaf to flag leaf timing

RAINFAST

- 1 hour

HERBICIDE TANK MIXES

Pixxaro™ herbicide

Mixing instructions

1. Shake well before use
2. Fill clean spray tank $\frac{1}{3}$ to $\frac{1}{2}$ full of water
3. While agitating, add Cerefit A and then add Cerefit B, continuing agitation until the product is completely dispersed.
4. Continue filling the tank with agitation. Mix thoroughly to fully disperse the fungicide; once dispersed continued agitation is required.
Use mechanical or hydraulic means; do not use air agitation

Application information:

Cerefit can be applied from the 3-leaf stage up to the flag leaf stage. In Winter wheat we are targeting an application at herbicide timing tank mixed with Pixxaro for a clean and healthy crop.

Crop rotation:

- There are no restrictions to crops that can be planted following the use of Cerefit



For Clean & Healthy Winter wheat.

Maximize your yields with Cerefit™,
a new dual mode of action fungicide

Dithane™

Rainshield™



FUNGICIDE

Forty years and counting as the world's most trusted fungicide.

WHY USE DITHANE™ RAINSHIELD™ FUNGICIDE?

- **Yield.** Protect yields by managing damaging diseases in potatoes
- **Economics.** Rapid control of numerous diseases at an economical price
- **Resistance management.** Unique multi-site activity explains why no fungal resistance has developed in over 40 years of use
- **Rotation option.** Contact control provides a rotation option from systemic fungicides in potatoes

DISEASES CONTROLLED

Potatoes

- Early blight
- Late blight



DITHANE™ RAINSHIELD™ APPLICATION GUIDELINES

CROPS

Potatoes*

RATES AND ACRES TREATED

- **Potatoes:** 0.45–0.9 kg/ac
(start with low rate, increase to maximum rate as foliage develops)

PACKAGING

- 20 kg bag

WATER VOLUME:

- Ground: minimum 40 L/ac (10 US gal/ac)
- Aerial: minimum 17 L/ac (4.5 US gal/ac)

WHEN TO APPLY

- **Potatoes:** When plants are 10 to 15 cm tall; repeat at 7 to 10 days intervals.

FUNGICIDE TANK MIXES

- Compatible with most common pesticides
- Check mix partner labels for registered crops and additional restrictions

Mixing instructions – ground application

1. Pour Dithane Rainshield slowly into filled spray tank while the agitator is running
2. Completely fill tank with water
3. After Dithane Rainshield has been mixed into a suspension, add other co-applied pesticides, growth regulators, micronutrients or spray adjuvants

Mixing instructions – aerial application

1. Premix Dithane Rainshield thoroughly in a nurse tank
2. Fill spray hopper to the desired final water volume
3. Add slurry from Step 1 to spray hopper
4. Top off hopper to desired final water volume

Crop rotation:

- Any crop the following year.

Pre-harvest interval

- The PHI for potatoes is 1 day.

**Always read and follow label directions.*

A close-up photograph of a man with a serious expression, looking down at a corn cob he is holding. He is wearing a blue denim button-down shirt over a white t-shirt. The background is a blurred field of green corn plants. The top of the image has an orange header with a white diagonal line.

Powerful control in one portfolio

insecticide

BY CROP

Corn



Closer™	58
Delegate™	60
Intrepid™	62
Lannate™	64

Dried Beans



Intrepid™	62
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Soybeans



Delegate™	60
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Wheat



Delegate™	60
-----------	----

Potatoes



Closer™	58
Delegate™	60

Closer™

Isoclast™ active



Corn



Potatoes

INSECTICIDE

Exceptional speed and control of aphids and scale in vegetable, fruit and field crops.

WHY USE CLOSER™ INSECTICIDE?

- **Fast-acting with residual control.** Apply Closer insecticide with Isoclast™ active for quick targeted control of sap feeding insects such as aphids, scales and leafhoppers when outbreaks occur
- **Moves throughout the plant.** Excellent systemic and translaminar activity
- **Valuable rotational partner.** A unique sub-class of insecticides, Isoclast™ active is effective against both resistant and non-resistant pests
- **Virus reduction.** Closer's rapid results decrease the chance of virus transmission in seed potato production
- **Selective.** Can be used safely around beneficial populations when used according to the product label

INSECTS CONTROLLED

Corn

- Aphids

Potatoes

- Aphids
- Leafhoppers
- Tarnished plant bugs

CLOSER™ APPLICATION GUIDELINES

CROPS

Field corn

Popcorn

Seed corn

Sweet corn

Potatoes

RATES AND ACRES TREATED

PACKAGING

– 12 x 1 L jug

Potatoes

- Aphids: 20 to 61 mL/ac
- Leafhoppers: 121 mL/ac
- Tarnished plant bugs: 121 mL/ac

Corn (field, sweet, seed and popping)

- Aphids: 30 to 61 mL/ac

INSECTICIDE TANK MIXES

- No registered tank mixes.

Application instructions:

Ground application: boom height must be 60 cm or less above the crop or ground, use a minimum of 40 L/ac of water to ensure thorough coverage of plant foliage.

Aerial application: use a minimum spray volume of 12 L/ac. Refer to the section of the label titled Aerial Application for detailed use instructions.

Pre-harvest interval:

- The PHI for sweet corn, forage and potatoes is 7 days.
- The PHI for grain corn and stover harvest is 14 days.



Delegate™

Jemvelva™ active



Corn



Soybeans



Potatoes



Wheat

INSECTICIDE

Stay one step ahead of Western bean cutworm and European corn borer in corn.

WHY USE DELEGATE™ INSECTICIDE?

- **Performance.** Delegate insecticide with Jemvelva™ active (spinetoram) provides quick and effective control of foliage feeding insects including Western bean cutworm and European corn borer
- **Resistance management.** Delegate contains a unique Group 5 active ingredient, Jemvelva active, making it an excellent Integrated Pest Management tool
- **Ease of use.** Low use rates delivered through a convenient dry formulation

INSECTS CONTROLLED

Corn

- European corn borer
- Western bean cutworm

Wheat

- Armyworm

Soybeans

- Armyworm

Potatoes

- Colorado potato beetle
- European corn borer

DELEGATE™ APPLICATION GUIDELINES

CROPS

Field corn

Popcorn

Seed corn

Soybeans

Wheat

Potatoes

RATES AND ACRES TREATED

- **Corn:**

- Western bean cutworm: 50 to 85 g/ac
- European corn borer: 50 to 85 g/ac

- **Wheat and soybeans:**

- Armyworm: 40 to 80 g/ac

- **Potatoes:**

- Colorado potato beetle: 65 to 97 g/ac
- European corn borer: 65 g/ac

PACKAGING

- **Case:**

- 6 x 840 g bottles

WHEN TO APPLY

- Western bean cutworm and European corn borer: applications should be timed at egg hatch or to small larvae.
- Armyworm: time the application to target small larvae.
- Colorado potato beetle: time the application for egg hatch or small larvae.

Use the higher rate for higher pest pressure or for larger larvae. Ensure sufficient water volume for complete coverage of the plant foliage.

RAINFAST

- 2 hours

INSECTICIDE TANK MIXES

- Delegate can be mixed with fungicides and micro-nutrients. Consult your Corteva Agriscience representative if you are tank mixing Delegate.

Application information

Ground application: use spray equipment capable of thorough coverage of the crop, ensuring uniform coverage of the target pest.

Aerial application: apply only by fixed wing or rotary aircraft equipment. Use a minimum spray volume of 30 L/ha (12 L/ac). For potatoes and corn only.

A spray solution pH between 5 and 9 is preferred for optimal performance.

Crop rotation

- No rotational restrictions

Pre-harvest interval

- The PHI for sweet corn and seed corn is 1 day.
- The PHI for forage and potatoes is 7 days.
- The PHI for wheat is 21 days.
- The PHI for field corn, popcorn, stover harvest and soybeans is 28 days.

Intrepid™



Dried Beans



Corn

INSECTICIDE

Performance and peace of mind. With Intrepid™ insecticide, there's no need to choose.

WHY USE INTREPID™ INSECTICIDE?

- **Two-pronged attack on pests.** Intrepid has both ovicidal and larvicidal activity. Ingestion is the main source of activity on pests, causing the larvae to cease feeding within 24 hours
- **Ideal for Integrated Pest Management programs.** Intrepid controls lepidopterous pests without adversely affecting beneficial insects such as bees when used according to the product label

INSECTS CONTROLLED

Corn

- European corn borer
- Western bean cutworm

Dried beans

- Western bean cutworm



INTREPID™ APPLICATION GUIDELINES

CROPS

Corn

Dried beans

RATES AND ACRES TREATED

Corn:

- European corn borer
- 0.12–0.24 L/ac
- Western bean cutworm
- 0.24 L/ac

Dried beans:

- Western bean cutworm
- 0.24 L/ac

PACKAGING

- 4X4 L jugs

WHEN TO APPLY

- European corn borer: Apply at the first signs of feeding damage. Direct application at the whorl for early season (first generation) infestations. Use the higher rate for heavy infestations, or larger crop canopies.
- Western bean cutworm: Applications should be timed at egg hatch or to small larvae.

INSECTICIDE TANK MIXES

- No registered tank mixes

Mixing instructions

Ground application only: apply in sufficient spray volume to ensure uniform coverage of the treated crop.

Pre-harvest interval

- The PHI for sweet corn 3 days.
- The PHI for dry beans is 7 days.
- The PHI for field corn and popcorn is 21 days.

Lannate™



Sweet Corn

INSECTICIDE

Use Lannate™ broad-spectrum insecticide for fast-acting control of aphids, corn earworm and European corn borer.

WHY USE LANNATE™ INSECTICIDE?

- Fast-acting control at all life stages, use Lannate to protect against adults, nymphs, larvae and eggs of many pest species

INSECTS CONTROLLED

Sweet Corn

- Aphids
- Corn earworm
- European corn borer



LANNATE™ APPLICATION GUIDELINES

CROPS

Sweet Corn

RATES AND ACRES TREATED

Aphids:

- 174-251 g/ac

Corn Earworm:

- 174-253 g/ac

European Corn Borer:

- 253 g/ac

PACKAGING

Case:

5.4kg water soluble,
pre-measured
Toss-N-Go bags
(225g/bag x 24 bags)

WHEN TO APPLY

Aphids: apply during hot weather.

Corn earworm: application to begin when 25% of the ears show silk. Direct sprays to the silks.

European corn borer: application to begin when egg masses begin to hatch, but no later than when the first feeding damage is seen on leaves. Sprays should be directed into the whorl of the plant. After tassels appear, direct spray at the ear zone.

INSECTICIDE TANK MIXES

- Do not mix with liquid fertilizers, substances that contain boron or could release free chlorine.

Application information

Ground application only: use sufficient water to obtain thorough uniform coverage.

Pre-harvest interval

The PHI for sweet corn is 3 days.

Protect & Enhance Your Nitrogen



biological & nitrogen stabilizer

BY CROP

Corn



Utrisha™ N.....	68
eNtrench NXTGEN™	70

Canola



Utrisha™ N.....	68
eNtrench NXTGEN™	70

Cereals



Utrisha™ N.....	68
eNtrench NXTGEN™	70

Soybeans



Utrisha™ N.....	68
eNtrench NXTGEN™	70

NEW

Utrisha™ N

NUTRIENT EFFICIENCY
BIOSTIMULANT

Utrisha™ N provides a unique way to enable plants to capture nitrogen throughout the season, helping plants reach their yield potential.

Corteva's NEW Biological Portfolio

biologicals

Biological products offer cutting-edge, complementary solutions to persistent challenges like resistance management and environmental impact, so you can leverage resources more effectively. By complementing existing practices, biologicals can help you enhance return on investment and profitability, and preserve your land for the future.

Corteva is focused on a biological portfolio that is designed to offer proven, predictable performance, work side by side with evolving farming practices, and meet changing market expectations.

Biological Products

Our pipeline is full of exciting new developments. Expect more biological crop protection solutions from Corteva Agriscience in these categories, coming soon.

Biostimulants

Biocontrol Products

Pheromones

WHY USE UTRISHA™ N NUTRIENT EFFICIENCY BIOSTIMULANT?

- Utrisha™ N **enhances plant growth and resilience** by improving the nitrogen availability in the plant throughout the growing season
- Maximizes crop potential through improved nitrogen management, offering **proven, predictable performance**
- **Works side by side with evolving farming practices** with simple, flexible storage and application
- Meets changing market expectations by providing a **sustainable source of nitrogen**

What is Utrisha N?

Utrisha N is a **nutrient efficiency biostimulant**. The natural bacteria, methylobacterium symbioticum, fixes nitrogen from the air and converts it into a usable form for the plant.

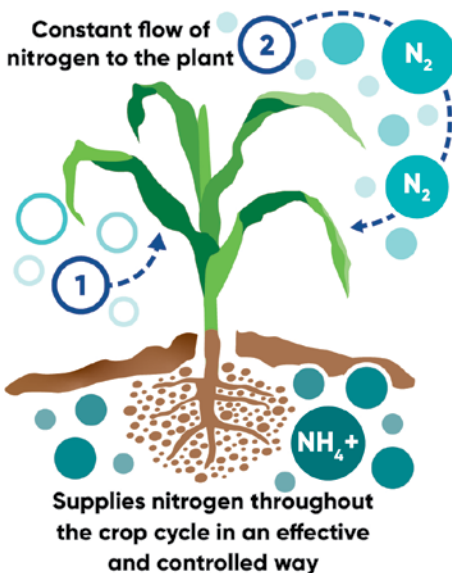
How Utrisha N works

1. Utrisha N enters the plant through the stomata and colonizes in the leaf cells.
2. It then converts N_2 from the air into ammonium, resulting in a constant supply of amino acids to the plant.

No plant energy is required for this process.

Enhances Nitrogen Use Efficiency

Utrisha N provides a sustainable, alternative source of nitrogen that reduces dependency of nitrogen uptake from the soil and ensures the **plant has access to nitrogen all season long**, without the risk of leaching into water tables or releasing additional greenhouse gases.



UTRISHA™ N APPLICATION GUIDELINES

CROPS

Canola

Cereals

Soybeans

Corn

RATES AND ACRES TREATED

Rates:

- 134 g/acre

Acres treated:

- 40 ac/bag

Water volume:

- Between 10-25 GPA

PACKAGING

Case:

- 2 x 5.39 KG bags

WHEN TO APPLY

Canola: 4 leaf-bolting (before stem elongation)

Cereals: 4 leaf-jointing (avoid winter dormancy in winter wheat)

Corn: V4-V8

Soybeans: V4-V8

Utrisha N is best applied in the early morning, when a greater number of stomata are open.

APPLICATION RECOMMENDATIONS

- Apply in healthy crops unaffected by poor nutrition or other biotic/abiotic stresses
- Apply with sufficient plant biomass, when the crop presents good soil coverage
- Use water with a total chlorine content <1 ppm
- Use water with a pH between 5 and 8

RAINFAST

- 1 hour



NEW

eNtrench NXTGEN™

Optinyte™ technology



Corn



Canola



Wheat

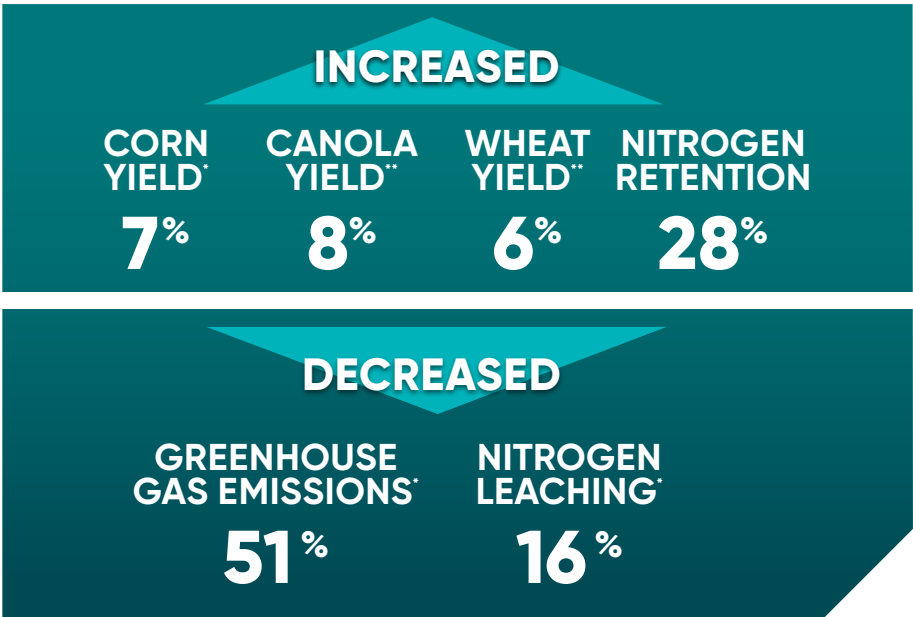
NITROGEN STABILIZER

Protect your nitrogen for better yields. Nitrogen fertilizer is critical to achieving healthy, high-yielding crops. Protect your fertilizer investment with eNtrench NXTGEN™ nitrogen stabilizer.

WHY USE ENTRENCH NXTGEN?

- **Optimize opportunity for yield and profit**
 - Corteva Agriscience research trials demonstrate an average yield increase of 7% in corn, 6% in wheat and 8% in canola
 - Keeps 28% more positive nitrogen available in the root zone
- **Expand your application options**
 - Apply up to two weeks earlier in fall before typical anhydrous applications
 - Take advantage of reduced cost of fertilizer in the fall
- **Manage time and efficiency**
 - Fall application saves time for seeding operations in the spring
- **Reduce environmental impacts**
 - Reduces greenhouse gas emissions by 51% on average
 - Reduces leaching of nitrates by 16% on average

BENEFITS OF USING NITROGEN STABILIZERS



* Wolt, J.D. 2004. A meta-analysis of nitrapyrin agronomic and environmental effectiveness with emphasis on corn production in the midwestern USA.

**Based on Corteva Agriscience Canada research trials.

Nitrogen stabilizers slow the conversion of ammonium to nitrates, reducing leaching and denitrification. They maximize yield potential by ensuring more of your applied nitrogen stays in the root zone in a stable, useable form until your canola, corn and wheat crops need it.

eNtrench NXTGEN™ APPLICATION GUIDELINES

CROPS

- Corn
- Wheat
- Canola

RATE AND PACKAGING

- 0.71 L/ac (1.75 L/ha)
- Available in 2x9.94 L case | 454.4 L Tote

WHEN TO APPLY

- Spring: Tank mixed with your UAN or liquid manure
- Fall: Tank mixed with your UAN or liquid manure, up to two weeks earlier than you would typically apply

APPLICATION METHOD

- Designed for use with liquid fertilizers, including UAN and liquid manure
- Impregnated on urea
- Can easily be added into the pit prior to liquid manure applications



The image shows a close-up, slightly high-angle view of a field of young green plants, likely soybeans, growing in neat rows. The plants have vibrant green, trifoliate leaves. The soil between the rows is a rich brown color. In the upper left corner, there is a yellow graphic element consisting of a diagonal line and a solid yellow shape. Overlaid on this is the text "Serious seed protection." in a bold, white, sans-serif font. A thin vertical orange line is positioned to the left of the text.

**Serious seed
protection.**

seed treatment

BY CROP

Other

LumiGEN™ 75

Soybeans



Lumiderm™ 76
Lumisena™ 78

Corn



Lumivia™ 80





A Mark of Assurance
in Seed Treatments



You choose a seed treatment package to help ensure a successful season. In turn, you should feel assured that those seed treatments perform as expected and work well with the genetics you're planting. LumiGEN® seed treatments are exclusive to the seed brands of Corteva Agriscience™, and represent the high performing, industry leading seed applied technologies that are available on Corteva seeds genetics.

Exclusive to Corteva Agriscience

LumiGEN seed treatments are designed, verified and proven to work with Corteva seeds genetics, helping farmers establish healthy, uniform crops and maximize productivity.



Designed for our genetics



Verified on our genetics



Proven in the field with our genetics

Soybeans

Lumisena™

FUNGICIDE SEED TREATMENT

Lumiderm™

INSECTICIDE SEED TREATMENT

Corn

Lumivia™

INSECTICIDE SEED TREATMENT

Canola

Lumiderm™

INSECTICIDE SEED TREATMENT

A Mark of Assurance in Seed Treatments

LumiGEN seed treatments are extensively tested across multiple years, geographies, and environments. LumiGEN® seed treatments are selected and verified through our rigorous testing process that evaluates in 6 key areas: Plantability, Application, Seed Safety, Stewardship, Efficacy, & Regulatory (PASSER). As a result, LumiGEN has become a trusted mark of assurance in seed treatments.

Look for the LumiGEN logo on your seed bag, and feel assured that you are using proven, industry-leading seed treatments that have been designed for your seed genetics.

Lumiderm™

Serious seed protection.

INSECTICIDE SEED TREATMENT

WHY USE LUMIDERM™ INSECTICIDE SEED TREATMENT?

- Broad spectrum protection from early season insect pests including bean leaf beetles and soybean aphids
- Excellent seedling protection delivers a uniform, healthy stand to maximize yield potential
- A new mode of action with a favourable environmental profile
- Simplifies your seed treatment decisions

INSECTS CONTROLLED **Bean leaf beetle and soybean aphid**

Lumiderm contains a unique Group 28 insecticide and provides soybean seedlings with extended protection against bean leaf beetles and soybean aphids. Lumiderm simplifies seed treatment decision-making considerably by reducing administrative paperwork.

Excellent seedling protection – uniform and healthy stands

Lumiderm delivers the latest technology for insect protection for soybean production. With Lumiderm, soybean growers can be confident that their vulnerable seedlings will be safe from bean leaf beetles and soybean aphids.

To maximize yield potential, insect and disease protection go hand in hand. Take a look at the powerful protection of Lumiderm and Lumisena™ working together.

**Lumiderm™ and Lumisena™ Strip Trial
Kelburn Farm, MB**



Standard IST + FST

Lumiderm + Lumisena™
+ FST

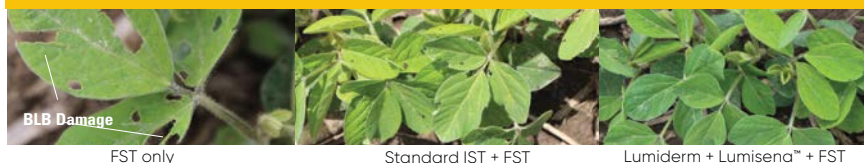
IST – Insecticide Seed Treatment
FST – Fungicide Seed Treatment



CROPS Soybeans

Lumiderm complements Lumisena fungicide seed treatment and results in healthier, more abundant soybean stands.

Lumiderm™ Soybean Plot Site: Target Pest, Bean Leaf Beetle

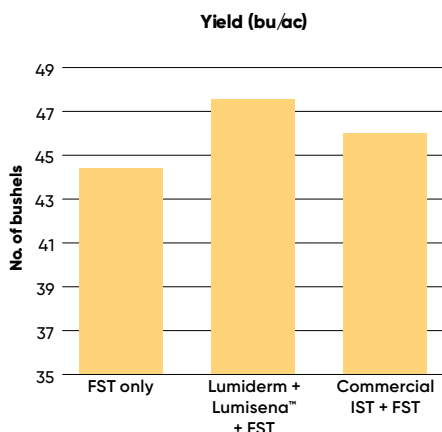


These pictures illustrate that Lumiderm is an improvement in bean leaf beetle control, compared to competitive products.

Favourable environmental profile

- Minimal impact on the environment
- Minimal impact on beneficial insects and pollinators when used in accordance with the label¹

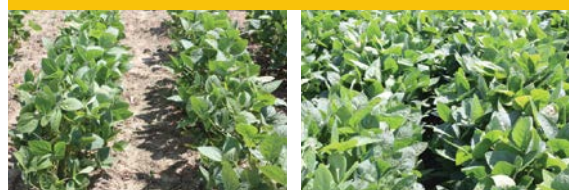
Lumiderm Research Authorization Results



Demo Strip Trials Data (Average of 8 locations, 2 Reps/location)

The issue of resistance is a growing concern. The registration of Lumiderm™ insecticide on soybeans will allow growers to protect their crops with industry-leading bean leaf beetle control and excellent protection against soybean aphids. With its unique Group 28 mode of action, it's also ideal for resistance management.

Lumiderm™ Soybean Seed Treatment Replicated Trial - Ridgely College



Fungicide Only

Lumiderm + FST

¹In line with Integrated Pest Management and Good Agricultural Practices, insecticide applications should be made when pollinators are not foraging to avoid unnecessary exposure.

Lumisena™

Serious seed protection.

FUNGICIDE SEED TREATMENT

WHY USE LUMISENA FUNGICIDE SEED TREATMENT?

- Most advanced seed-applied technology to protect against phytophthora.
- Enhances emergence and vigour to maximize yield potential.
- Improves soybean plant stands.
- New class of chemistry for improved above and below ground disease control.

DISEASES CONTROLLED Phytophthora

Phytophthora is the #1 disease in soybeans and can significantly reduce yields. Lumisena™ fungicide seed treatment provides the best protection against phytophthora for healthier, more vigorous soybean stands and higher yield potential.

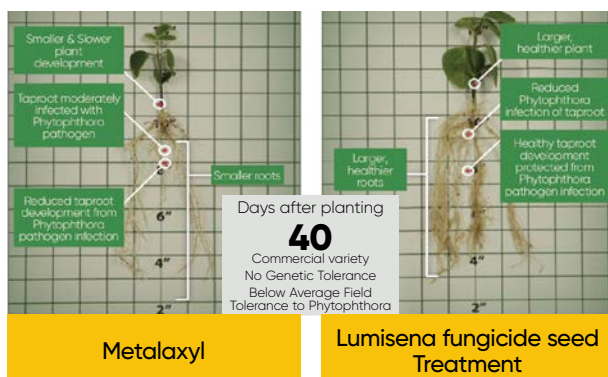
Look at the results

The first six weeks are important for a soybean crop's yield potential. Observe the difference in performance between two soybean plants, 40 days after planting, treated with the high rate of metalaxyl versus Lumisena when phytophthora is present.

Lumisena is the best choice for protection against phytophthora.

It is the only seed-applied technology that delivers residual protection across multiple stages of the phytophthora pathogen's life cycle:

- preventative
- curative
- eradicated
- antispore

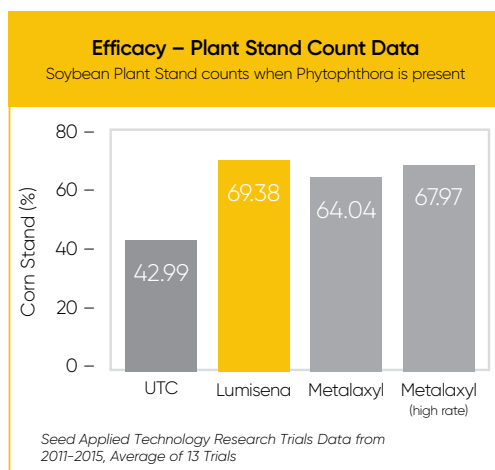
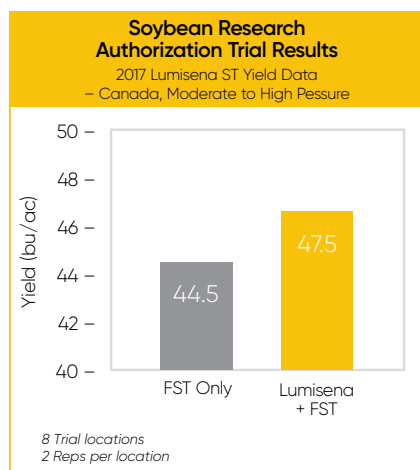


CROPS Soybeans

Lumisena provides the best protection against phytophthora for healthier, more vigorous soybean stands and higher yield potential.

Improves soybean yield potential and plant stands

Phytophthora is prevalent in North America and is shown to be wide spread in Eastern Canada. Growers with phytophthora pressure have suffered significant yield losses because of the limitations of existing seed treatments in soybeans. In areas with phytophthora pressure, Lumisena improves plant stands, crop vigour and yield results.

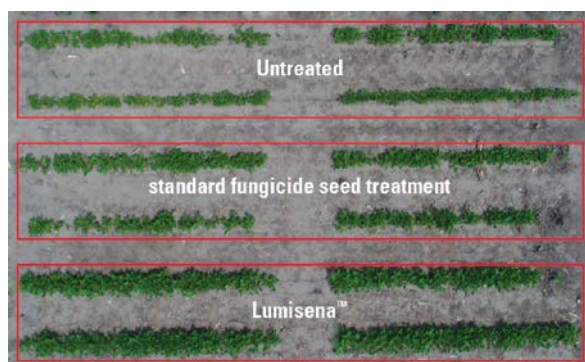


In multi-year, on-farm seed treatment research trials under phytophthora pressure, Lumisena improved plant stands by increasing the number of plants per acre versus the existing industry-standard seed treatment.

IST – Insecticide Seed Treatment
FST – Fungicide Seed Treatment

New class of chemistry for improved above and below ground

Lumisena offers a new mode of action that controls phytophthora far better than previous industry-standard seed treatments. When you use Lumisena fungicide seed treatment you significantly improve your soybean plant stand, enhancing early-season plant growth and increasing yield potential. Our seed treatment research has demonstrated that Lumisena will provide greater protection against phytophthora than existing seed treatments.



Lumivia™

INSECTICIDE SEED TREATMENT



Serious seed protection

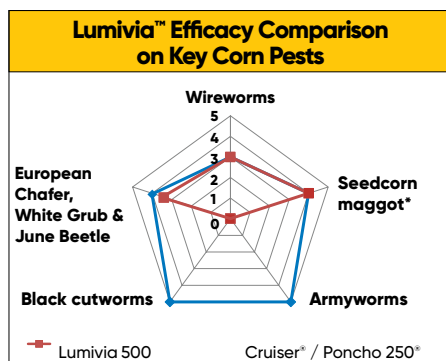
WHY USE LUMIVIA™ INSECTICIDE SEED TREATMENT?

- Outstanding protection against key early season insect pests
- Provides seedling protection to develop uniform and healthy stands that maximize yield potential
- Offers a favorable environmental profile
- Simplifies your seed treatment decisions

INSECT PROTECTION Wireworms, cutworms, white grubs, seedcorn maggots*

Lumivia® protects against early-season, below-ground insect pests, like wireworms and seedcorn maggots. It also protects the crop against insect pests that feed on foliage, such as cutworms. With Lumivia seed treatment protection in place, growers can more easily achieve a uniform, healthy stand – and be rewarded with more bushels at the end of the season.

Protection Against Key Early Season Insect Pests



*Suppression



CROPS Corn

Lumivia™ insecticide seed treatment delivers excellent broad-spectrum protection on key early season corn insect pests.

Favourable environmental profile

Lumivia's favourable environmental profile results in minimal impact on the environment and on beneficial insects and pollinators, when used in accordance with the label.¹

Long lasting protection - contributing to healthy stands that maximize yield potential

Lumivia provides immediate protection of seed and seedlings, resulting in uniform and healthy stand establishment. Lumivia contains a Group 28 anthranilic diamide insecticide that remains concentrated in key areas of the corn plant after planting and protects through germination to the V5 growth stage.

Additionally, Lumivia protects yield potential through improved early season vigour.

Look at the results

Multi-year trials have shown that Lumivia consistently provides a yield advantage compared to a fungicide only seedtreatment package.

Uniform, healthy stands & improved yield potential over fungicide only treated seed

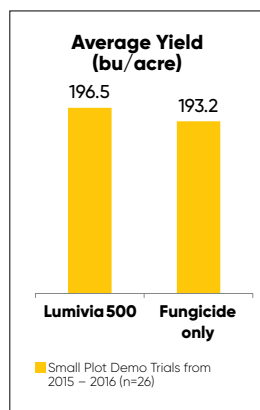


Lumivia™

Fungicide only

Source: Field trial, Shetland, ON 2016

Early Season Protection to Maximize Yield Potential¹



Lumivia™ Under High Wireworm Pressure



Fungicide only

Lumivia

Source: Field trial, Shetland, ON 2016

- In 2015 and 2016, Lumivia™ insecticide seed treatment was tested in field-scale trials across Eastern Canada.
- This picture is from a manure applied corn-on-corn field, exhibiting extremely high wireworm pressure.
- Lumivia™ treatment showed corn plants with superior size and vigour as compared to the fungicide only treatment.

¹ In line with Integrated Pest Management and Good Agricultural Practices, insecticide applications should be made when pollinators are not foraging to avoid unnecessary exposure.



**Protect the health
of your soil.**

nematicide

BY CROP

Carrots



Salibro™84

Cucurbits



Salibro™84

Potatoes



Salibro™84

Tomatoes



Salibro™84

Salibro™

Reklemel™ active



Carrots



Curcubits



Potatoes



Tomatoes

NEMATICIDE

Salibro™ nematicide with Reklemel™ active is a novel sulfonamide nematicide with a unique mode of action against plant-parasitic nematodes.

WHY USE SALIBRO™ NEMATICIDE?

- True nematicide with no insecticidal nor fungicidal activity, making it a highly effective and selective nematode control solution with a more favorable environmental profile compared to conventional treatments
- Protects crop roots without compromising beneficial insects that provide useful functions in the crop root zone
- Core component of an integrated nematode management program

NEMATODES CONTROLLED

- Root-knot nematode (*Melodogyne* spp.)



SALIBRO™ APPLICATION GUIDELINES

CROPS

Carrots

Cucurbits

Potatoes

Tomatoes

RATES AND ACRES TREATED

Rate:

- 0.90 – 1.81 L/ac

Water volume:

55 L/ac (15 US gal/ac)

PACKAGING

Case:

- 2 x 9.6 L jugs

WHEN TO APPLY

- Pre-plant incorporated or broadcast followed by soil incorporation
 - Uniformly apply over the field and incorporate mechanically or through irrigation to a depth of 10–15 cm with incorporation equipment to ensure even distribution
 - For maximum residual efficacy, pre-plant incorporate within 7 days prior to planting.
- In furrow (potatoes only)
 - Direct applications into the open furrow and cover with soil
- Chemigation
 - Apply the labeled rate in sufficient water and for sufficient duration to evenly cover the entire treated area

Soil Health

Salibro™ nematocide with Reklemel™ active is a selective, effective new generation nematocide that controls plant parasitic nematodes including root knot nematodes. It has a unique mode of action, Reklemel active, and has an excellent fit with precision application technology important to growers. Salibro™ helps support a healthy crop root system, by protecting against plant parasitic nematode damage, which is critical to maximizing water and nutrient utilization and providing the opportunity of realizing yield potential in the crop.

Crop rotation

Anytime: carrots

14 days: barley, wheat, oats, corn, soybeans, chickpeas, field peas, lentils, potatoes, sunflowers and flax

Pre-harvest interval

- The PHI for carrot is 65 days.
- The PHI for cucurbit and tomato is 1 day.
- The PHI for potato is 40 days.

Your crop protection partner



other information

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PRODUCT AND RESEARCH UPDATES

Innovation is at the heart of Corteva Agriscience, which is why we take pride in collaborating with scientists, industry leaders and growers. Innovation and collaboration allow us to continually progress and better serve our clients, consumers and society as a whole.

Product Update for the 2022 season.

Surpass™ herbicide

Surpass herbicide contains acetochlor, a new group 15 herbicide for Canadian corn growers. Surpass has shown excellent activity on annual grasses and small seeded broadleaf weeds including waterhemp. This will make Surpass a useful tool for corn growers to manage against herbicide resistant waterhemp biotypes. Large scale Research Authorization trials are planned for the 2022 season. THIS PRODUCT IS NOT REGISTERED FOR USE. IT IS A VIOLATION OF THE PEST CONTROL PRODUCTS ACT TO USE A PRODUCT IN A NON-REGISTERED APPLICATION.

Intrepid™ insecticide

Intrepid is now registered for the control of Western bean cutworm on dried beans.

PERFORMANCE COMMITMENT

When you purchase a Corteva Agriscience product, you're protected by our Performance Commitment Policy. We stand behind our crop protection products, our recommendations and all labeled uses. Your satisfaction is important to us; if you are not fully satisfied with a product's performance, we want to know.

The Corteva Agriscience performance commitment

Product labels and Corteva Agriscience recommendations have been developed with extensive research. Labels and our recommendations create the foundation for safe and responsible use of our products and we stand behind them. Products must be applied according to the label and Corteva Agriscience recommendations.

We know weather is a significant and powerful variable every season. Corteva Agriscience is not responsible for poor performance or crop injury resulting from adverse weather conditions, resistant weed biotypes or inadequate crop competition.

We're committed to ensuring all customer inquiries are investigated fully. We will provide the most appropriate level of assistance, whether it be advice to help you move forward or replacement product.

The maximum product allowance is limited to the value of the original Corteva Agriscience product purchased and used for the area in question. Application costs will not be covered.

Growers involved in a product inquiry resolution must sign a settlement and release form.

Product cannot be substituted or returned.

Corteva Agriscience reserves the right to verify purchases through product invoices from the retailer.

To ensure appropriate resolutions, we must be notified as soon as possible when you are unsatisfied with a Corteva Agriscience product. We must be notified no later than 21 days after application and prior to July 31st. After July 31st, it's too late to confidently determine cause or remedial action so no good-will product can be provided. Crops must be standing in the field to make an adequate evaluation. Regardless of timing, we will always answer and document your calls.

Impact Your Bottom Line

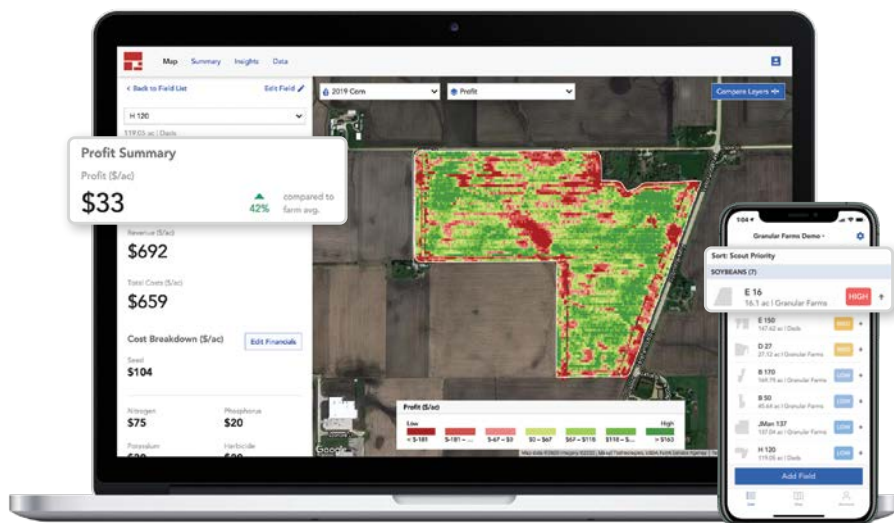
Drive profitability with the data you have.

See what works on your farm in minutes not hours, all in the palm of your hand. By automatically combining your planting and yield data with estimated revenue and costs, Granular Insights lets you see what's working and which acres are holding you back, so you can make decisions today that impact yield and profitability tomorrow. No more reconciling spreadsheets and multiple data sources, or missed opportunities to save. Just simple, straightforward analysis for better decision-making.



Is it right for your farm?

- ☐ Want yield and planting data in the field for faster decisions?
- ☐ Do you farm multiple fields that you would like to compare?
- ☐ Are you tired of finding issues in the field after it's too late?
- ☐ Do you scroll through texts to recall what happened on a field?



What to Expect from Granular Insights



Make More Profitable Decisions

See profit of each acre with agronomic and financial map layers.



See What Works

Pull up simple charts that show the impact of harvest moisture and planting date on your yield.



Make Use of Your Data

Upload data you already collect from 10+ manufacturers, including John Deere Operations Center.



Collaborate with Your Team

Snap and send geolocated photos and notes.



Catch & Correct Issues Faster

Add on Directed Scouting for high frequency, 3-metre resolution satellite imagery. With weekly email alerts, you know where to scout first based on in-field changes. GPS pinpoints your exact location in the field.



For more information, contact your local Corteva Agriscience representative.
support.ca@granular.ag | 844-744-8534 | ca.granular.ag

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HERBICIDE RESISTANCE MANAGEMENT

Herbicide resistance is spreading in Eastern Canada. Manage it in your fields by using multi-mode of action products and tank mixes.

The value of multi-mode of action

Managing the spread of herbicide resistance is important on all farms in Eastern Canada. Recent research shows that using multiple modes of action in one herbicide application is more effective at managing resistance than rotating between herbicide groups. Consider multi-mode of action products as an essential component of an integrated weed management strategy on your farm.

Multi-mode of action products contain two or more active ingredients with different modes of action. A multi-mode of action herbicide program can prevent and mitigate weed resistance.

It's preventative when used on weed species where no resistant weeds are present. These products deliver overlapping control on the same target weeds. To be truly multi-mode of action on a weed, it's important to ensure that the different modes of action target the same weed species. This is an effective foundation for reducing the development of weed resistance.

Using a multi-mode of action herbicide program can also help reduce the impact and spread of resistant weeds. When a weed species is already resistant to one of the two modes of action in a herbicide program, it will be controlled by the second mode of action. This reduces the likelihood that resistant weeds will survive and multiply, since they will be controlled before they go to seed and contribute to the weed seed bank. This prevents resistant plants from surviving and multiplying.

How weeds develop resistance

Weeds are strong plants that are constantly evolving. Herbicide resistance develops mainly through the consistent use of one herbicide group over time. Resistant weeds within the weed population continue to grow and produce seed. This development can occur over several applications, production seasons and even while growing different crops. Each season, a weed that has herbicide resistance increases its seed as a percentage of the population relative to the controlled weeds. The cycle continues until it overtakes the field.

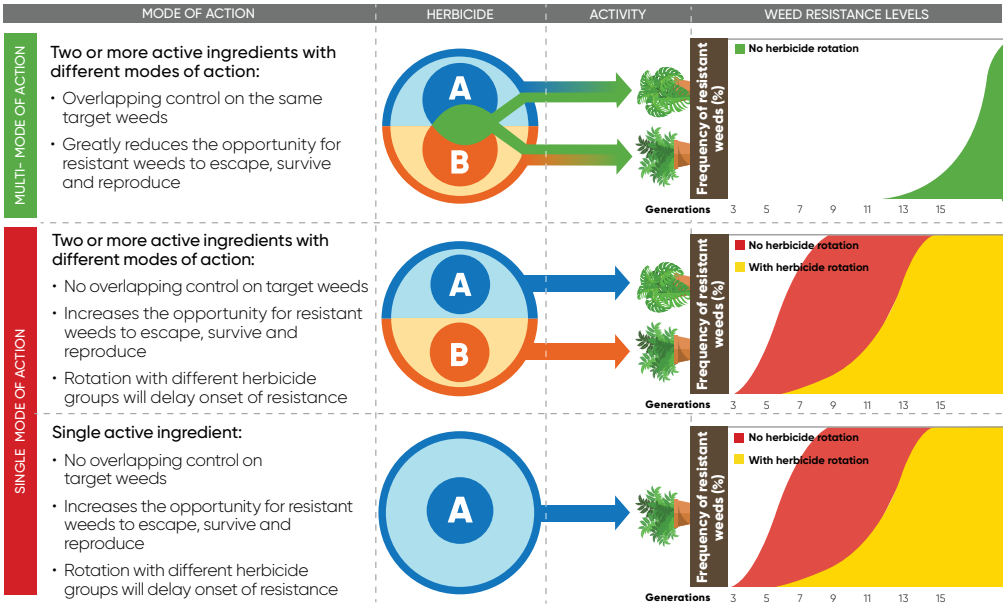
It's a growing problem

Herbicide resistance continues to spread across Eastern Canada. The rapid spread of glyphosate-resistant Canada fleabane and common waterhemp are the most recent examples.

Take action – use an integrated weed management approach

Follow these tips to help stop the spread of weed resistance and protect your farm.

- Scout your fields before and after spraying to identify individual weeds or plant patches not controlled by your herbicide program. Weed escapes can be caused by a spray application error or indicate developing resistance; monitor closely.
- Work with your retailer, crop consultant or extension service to test suspicious weeds.
- If you find resistant weed populations, manage them effectively so they do not spread.
- Remove patches or poorly or uncontrolled weeds by hand. Time spent now to remove problematic weeds can save you time in the future after the weed populations have spread.
- Use multi-mode of action herbicides.
- Rotate herbicide groups from one season to the next. Continuous use of the same active ingredient group will inevitably lead to herbicide resistance.
- Change your management strategy regularly to keep weed populations off balance.
- Some suggestions include: do a pre-plant burndown at a different time than usual, choose later or earlier maturing crops, switch to forages, grow a fall seeded crop, or use integrated practices to help crops get ahead of weeds.
- Applying a product or tank-mix with multiple modes of action helps prevent weed escapes, because any weed in a plant population that is tolerant to one mode of action will be controlled by the second mode. This reduces the likelihood that resistant plants will survive and multiply. If no resistant weeds are present, multi-mode of action herbicide use will further delay resistance development. If a weed species is already resistant to one of the two active ingredients in an herbicide mix, then multi-mode no longer applies as only one active ingredient is controlling the weed.



*Adapted from: Powles, S.B., Preston, C., Bryan, I.B., and Jutsum, A.R., (1997) Herbicide Resistance: Impact and Management. Advances in Agronomy, Vol. 58, pp.57-93

Herbicide rotation alone will delay the onset of resistance; however, incorporating Multi-Mode of Action products in conjunction with rotation is a more effective resistance management strategy.

The graphs depicting frequency of resistant weeds over generations is a hypothetical example valid only for the modeled parameters.

Actual rates of weed resistance development and increase are dependent on a variety of conditions, including the weed species, propensity for outcrossing, seed dormancy, mode of inheritance of the resistance trait, herbicide mode of action and herbicide efficacy.

DOWNLOAD THE 2022 CORTEVA AGRISCIENCE FIELD GUIDE APP

The Corteva Agriscience 2022 Field Guide app showcases our expanded portfolio of Canadian crop protection products and is designed to help you get the most out of every acre. It's a quick access, easy and user-friendly tool that assists in choosing the right high performing products as well as the right order to tank-mix them.



AT THE CLICK OF A BUTTON HAVE ACCESS TO:

- Crop protection options
- Herbicide product quick facts
- Key product use information
- Insects and disease control solutions
- V/V% Calculator
- Links to online guides and info on our digital tools
- New Enlist E3 Soybeans Program Approach Tool




Download our new Field Guide App. Scan the code with your mobile device camera to find out more and easily download:



Questions?

Visit your local crop protection retailer.

Contact us at Corteva.ca/contact

follow us  @CortevaCA

Refer to product label for complete use instructions.

Visit us at corteva.ca



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