EASTERN CANADA
FIELD GUIDE
2020
We come from generations of farmers, so we take pride in making agriculture better.

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

While we have a global network of resources, farmers like you expect us to know all about the specific challenges you face in your region.

To help farmers flourish, experts in our local research centres never stop creating solutions for the unique climate and soil in every community across Canada. So, we can always help customize an approach that’s just right for you.

Corteva Agriscience™ is the agricultural company dedicated to farmers.

KEEP GROWING.
Be in control with leading herbicide solutions
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Weeds don’t stand a chance
# HERBICIDE BY CROP

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## Cereals

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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.

Accent herbicide is a dry flowable granular formulation to be mixed in water and applied post-emergence to field corn for control of quackgrass and annual grasses.

When it comes to controlling grassy weeds, Accent herbicide is the go-to solution for corn growers.

**Excellent control**
Accent is a Group 2 product that controls barnyard grass, fall panicum, green foxtail, longspine sandbur, old witchgrass, quackgrass and yellow foxtail.

**Wide window of application**
Accent delivers excellent control when applied from the 1- to 8-leaf stage of corn.

**Crop safety and flexibility**
Accent is safe on low heat unit hybrids as well as many seed corn inbreds and sweet corn varieties. Enjoy excellent re-cropping flexibility the following year.

Accent herbicide quickly stops growth of target weeds. Typical symptoms usually appear within 5-7 days, but may not be noticeable for 2-3 weeks post-application, depending on growing conditions and weed susceptibility.

Warm, moist conditions following application promote the activity of Accent, while cool and/or dry conditions may reduce or delay activity. Weeds hardened off by cold weather or drought stress may not be controlled.

Accent is a foliar-applied herbicide that will not give residual control of grass or broadleaf weed seedlings that germinate after application.
**WEEDS CONTROLLED (OR SUPPRESSED)**

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

* Suppression only

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**APPLICATION INFORMATION**

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

**Corn (sweet):** 1- to 6-leaf stage

**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.

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**APPLICATION METHOD**

Apply with ground equipment only. Not registered for aerial application. Apply only once per growing season.

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**RATES**

Apply 13.5 g/ac (33.4 g/ha) of Accent herbicide as a broadcast spray, with a recommended surfactant to corn and weeds.
PACKAGING

Available in a 10 acre (4 ha) pouch, containing 4 x 2.5 acre (33.4 g) water soluble bags.

New for 2020: Accent™ now available in a 270 gram bottle. 1 bottle treats 20 acres.

TANK MIXES

Corn: Mix Accent herbicide with Distinct™ herbicide to control annual grasses, quackgrass and many broadleaf weeds. It must be applied at the 2- to 8-leaf stage of corn.

Mix Accent with Peak™ 75 WG herbicide plus either one of Banvel™ II herbicide or Banvel™ Dry herbicide to provide one-pass control of annual grasses and broadleaf weeds as indicated on label. It can be applied from the 2- to 7-leaf stage of corn.

Mix Accent with Marksman™ herbicide to control annual grasses, quackgrass and many broadleaf weeds. It must not be applied after the 5-leaf stage of corn.

Mix Accent with Banvel II herbicide to control annual grasses, quackgrass and many broadleaf weeds. It must not be applied after the 6-leaf stage (4 visible collars or 30 cm in height, leaf extended) of corn.

Mix Accent with Pardner™ herbicide to control annual grasses, quackgrass and many broadleaf weeds. It must not be applied prior to the 4-leaf (2 visible collars) or after the 8-leaf stage (6 visible collars) of corn.

Mix Accent with Callisto™ 480SC herbicide to control annual grasses, quackgrass and many broadleaf weeds. Apply post-emergence from the 3- to 8-leaf stage of corn and up to the 8-leaf stage of broadleaf weeds. For the control of additional broadleaf weeds, add Aatrex™ Liquid 480 at a rate of 0.58 L/ha to the tank mix.

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

CROP ROTATION

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

PRE-HARVEST INTERVAL (PHI)

The PHI for corn (silage, fodder or grain) treated with Accent is 30 days.
**ADJUVANTS**

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

- **NIS**\(^1\) plus 28% UAN\(^2\)
  Rate: 2 L/1,000 L of spray solution + 2 L/ac (5 L/ha)

- **NIS**\(^1\) plus 28% UAN\(^3\)
  Rate: 2 L/1,000 L of spray solution + 12.5 L/1,000 L

- **NIS**\(^1\)
  Rate: 2 L/1,000 L

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

- **Merge\(^\circledR\)**
  Rate: 5 L/1,000 L

- **Sure-Mix\(^\circledR\)**
  Rate: 5 L/1,000 L

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1. Recommended non-ionic surfactants include Sidekick\(^\circledR\), Citowett Plus, Agral90\(^\circledR\) and Ag-Surf\(^\circledR\).
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.

Agral\(^\circledR\) is a registered trademark of a Syngenta Group Company.

Refer to product label for complete use instructions.
Broadstrike™ RC herbicide is your broadleaf weed control solution for use in all field corn hybrids and all soybean varieties.

Broadstrike RC soil-applied herbicide provides exceptional control of a wide range of broadleaf weeds in conventional, conservation tillage or no-till corn, and soybean production systems.

Broadstrike RC can be tank mixed with glyphosate.

Broadstrike RC is absorbed by both the roots and foliage of target weeds. This stops growth so weeds either die or become non-competitive with the crop. Weed control performance is enhanced when there is adequate soil moisture to support uptake and translocation of Broadstrike RC.

**Soil-applied weed control solution**

Broadstrike RC offers a comprehensive soil-applied weed control solution for all field corn hybrids and all soybean varieties. It helps to manage hard-to-control, no-till weeds – Canada fleabane and wild carrot.

**Season-long control**

Early removal of broadleaf weeds, with residual for season-long control.

**Outstanding crop safety**

Outstanding crop safety in all soybean varieties and field corn hybrids.
WEEDS CONTROLLED (OR SUPPRESSED)

**Field corn (25 g/ac)**
- Canada Fleabane¹
- Chickweed, Common
- Lamb’s-quarters, Common⁴
- Mustard, Wild
- Mustard, Wormseed
- Nightshade, Eastern Black
- Pigweed, Redroot⁴
- Ragweed, Common²,³
- 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, Common²,³
- Velvetleaf

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¹ Populations resistant to Group 2 herbicides exist in certain areas of Eastern Canada. Broadstrike RCalone may not control all weed biotypes resistant to Group 2 herbicides.
² Suppression
³ Including triazine-tolerant biotypes
⁴ Including triazine-tolerant biotypes

**APPLICATION INFORMATION**

Broadstrike can be applied using different methods to control certain weeds in field corn and soybeans.

**FIELD CORN:** Surface pre-plant, Pre-emergence, Pre-plant incorporated; Early post up to 8-leaf corn; common lamb’s-quarters, common ragweed²,³, redroot pigweed, velvetleaf and wild mustard

**Surface pre-plant, Pre-emergence, Pre-plant incorporated;** Eastern black nightshade and wormseed mustard

**Surface pre-plant, Pre-emergence;** Canada fleabane and common chickweed

**SOYBEANS:** Surface pre-plant, Pre-emergence, Pre-plant incorporated; common lamb’s-quarters, common ragweed²,³; Eastern black nightshade, lady’s-thumb (suppression if pre-plant incorporated application), redroot pigweed, velvetleaf, wild carrot², wild mustard and wormseed mustard

**Surface pre-plant, Pre-emergence;** Canada fleabane and common chickweed

**Pre-emergence, Pre-plant incorporated;** green foxtail and cocklebur
APPLICATION METHOD

Apply Broadstrike RC™ in conventional, conservation tillage or no-till corn, and soybean production systems. Broadstrike RC is not registered for aerial application.

CORN APPLICATION METHODS

Surface Pre-plant Application (SPRE)

Broadstrike RC in a tank mix with Dual II Magnum® herbicide may be applied in minimum or no-tillage systems up to 15 days before planting. For optimal weed control, avoid moving treated soil out of the row or untreated soil to the surface during planting. Surface pre-plant applications will not control annual broadleaved weeds beyond the 2-leaf stage of growth.

Pre-plant Incorporated Application (PPI)

Apply Broadstrike RC in a tank mix with Dual II Magnum up to 15 days before planting. Incorporate Broadstrike RC in a uniform manner with equipment set to work at a depth of 5 to 8 cm. Use a C or S shank field cultivator equipped with a levelling device such as harrows or rolling basket. The cultivator must have a minimum of 4 rows of sweeps spaced at 18 cm, or less, intervals and staggered so no soil is left unturned. Tandem discs may also be used provided the blades are less than 50 cm in diameter and spaced 18 cm or less apart. Equipment design, including any drag attachments, must be adequate to avoid soil ridging which may result in streaked or reduced weed control. Operate disc implements at 6 to 10 km/h and cultivators at 10 to 13 km/h.

Pre-emergence Application (PRE)

Pre-emergence applications may be made in conventional tillage as well as reduced tillage, ridge tillage and no-tillage systems. Apply Broadstrike RC in a tank mix with Dual II Magnum during (behind the planter) or after planting, but prior to crop or weed emergence. Adequate soil moisture is required for optimal herbicide activity. Rainfall is necessary to move Broadstrike RC into the weed germination zone. Sufficient rainfall to moisten the soil to a depth of 5 cm is generally adequate. If sufficient rainfall is not received within 7 to 10 days after a surface application, a shallow cultivation or use of a rotary hoe is recommended to control established weeds and move the herbicide into the weed germination zone. When sufficient rainfall is received following dry conditions, activity on established weeds will depend on the weed species and the location of its root system in the soil.

Early Post-emergence Application (Early POST)

Apply Broadstrike RC as a broadcast application when corn is at the spike to 8-leaf stage of growth. Apply when broadleaved weeds are at the cotyledon to 2-leaf stage of growth. Application to larger weeds will result in reduced weed control. Adequate soil moisture is required for optimal herbicide activity.
Rainfall is necessary to move Broadstrike RC into the weed germination zone for control of weeds not emerged at the time of application. Sufficient rainfall to moisten the soil to a depth of 5 cm is generally adequate. If adequate rainfall is not received within 7 to 10 days after an early post-emergence application, a shallow cultivation is recommended to control established weeds and move the herbicide into the weed germination zone. When sufficient rainfall is received following dry conditions, activity on established weeds will depend on the weed species and the location of its root system in the soil. Do not apply Broadstrike RC in liquid fertilizer solutions for early post-emergence applications. Serious crop injury may occur.

SOYBEAN APPLICATION METHODS

Surface Pre-plant Application (SPRE)

Broadstrike RC in a tank mix with Dual II Magnum and/or a glyphosate product such as the Vantage™ Plus MAX II herbicide, Maverick™ III, Roundup or Touchdown brands may be applied in minimum or no tillage systems up to 21 days prior to planting. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished. Annual broadleafed weeds beyond the 2-leaf stage of growth will not be controlled by surface pre-plant applications.

Pre-plant Incorporated Application (PPI)

Apply Broadstrike RC in a tank mix with Dual II Magnum or Treflan™ E.C. up to 21 days prior to planting. Broadstrike RC tank mixed with Treflan E.C. must be incorporated within 24 hours of application. Incorporate Broadstrike RC in a uniform manner with equipment set to work at a depth of 5 to 8 cm. Use a C or S shank field cultivator equipped with a levelling device such as harrows or rolling basket. The cultivator must have a minimum of 4 rows of sweeps spaced at 18 cm, or less, intervals and staggered so that no soil is left unturned. Tandem discs may also be used provided the blades are less than 50 cm in diameter and spaced 18 cm or less apart. Equipment design including any drag attachments must be adequate to avoid soil ridging which may result in streaked or reduced weed control. Operate disc implements at 6 to 10 km/h and cultivators at 10 to 13 km/h.

Pre-emergence Application (PRE)

Pre-emergence applications may be made in conventional tillage as well as reduced tillage, ridge tillage and no-tillage systems. Apply Broadstrike RC in a tank mix with Dual II Magnum during (behind the planter) or after planting, but prior to crop or weed emergence. Adequate soil moisture is required for optimal herbicide activity. Rainfall is necessary to move Broadstrike RC into the weed germination zone. Sufficient rainfall to moisten the soil to a depth of 5 cm is generally adequate. If sufficient rainfall is not received within 7 to 10 days after a surface application, a shallow cultivation or use of a rotary hoe is recommended to control established weeds and move the herbicide into the weed germination zone. When sufficient rainfall is received following dry conditions, activity on established weeds will depend on the weed species and the location of its root system in the soil.
**RATES**

Field corn: 62.5 g/ha (25 g/ac); one jug treats 28 acres

Soybeans: 87.5 g/ha (35 g/ac); one jug treats 20 acres

**TANK MIXES**

Corn: Broadstrike RC can be applied from pre-plant incorporated to late-post. For crop timing, follow the most restrictive label. Options include:

Registered:
- Dual II Magnum®

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

**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

When tank mixing with other herbicides, follow the most restrictive crop rotation guidelines on the label of each product used. Rotational crops, except field corn and soybeans, may sustain herbicide injury if dry conditions, not favourable to herbicide breakdown, persist following application of Broadstrike RC.

**PACKAGING**

Broadstrike RC™ is packaged in a 0.715 kg bottle. Each case contains 10 bottles as well as five graduated sampling devices that identify use rates for either corn or soybeans.

Soybeans: For surface pre-plant and pre-emergent applications, Broadstrike RC can be tank mixed with many soybean herbicides such as:

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

Supported:
- Boundary®
- Elevore
- Enlist Duo
- VP480

**PRE-HARVEST INTERVAL (PHI)**

The PHI for Broadstrike RC is 90 days.

Refer to product label for complete use instructions.
The best thing you can do for the future is grow today
Canopy™ PRO pre-emergence herbicide delivers broad-spectrum and residual activity to help maximize early-season control of tough weeds.

Canopy PRO uses two modes of action to control tough early-emerging broadleaf weeds. It is a flexible pre-emergence herbicide combination of Classic™ and a 75% DF metribuzin.

Canopy PRO can be applied with glyphosate for powerful burndown with residual control. Canopy PRO delivers enhanced residual activity to help maximize early-season control of yield-robbing weeds such as dandelion and lamb’s-quarters.

**Production system flexibility**
Canopy PRO can be used pre-plant or pre-emergence in a variety of tillage situations, including no-till, conservation tillage or conventional tillage. Canopy PRO is also a solid agronomic choice because it will reduce weed populations through the critical 1st to 3rd trifoliate growth stages. This provides increased flexibility for in-crop herbicide timing.

Canopy PRO rapidly stops growth of target weeds. Its activity is enhanced when warm, moist growing conditions promote weed growth and result in active foliar uptake and contact activity. Spray coverage, weed sensitivity, weed size, crop competition and growing conditions impact level and duration of control.

**Powerful weed control performance**
Early pre-emergence weed removal keeps your fields clean through the critical early stages of growth. Managing weeds early helps your crop reach its maximum yield potential.

**Proactive weed resistance management**
Canopy PRO is an excellent stewardship choice for growers who want to introduce multiple modes of action into their weed management program. With its two modes of action (Group 2 and Group 5), Canopy PRO is a practical, effective tool to help manage weed resistance.
WEEDS CONTROLLED (OR SUPPRESSED)

**Broadleaf weeds**
- Buckwheat, Wild
- Canada Fleabane
- Carpetweed
- Chickweed, Common
- Cocklebur
- Corn Spurry
- Dandelion
- Hemp-nettle
- Jimsonweed
- Lady’s-thumb
- Lamb’s-quarters, Common

**Annual grasses**
- Barnyard Grass
- Cheatgrass
- Crabgrass
- Foxtail, Giant
- Foxtail, Green
- Foxtail, Yellow
- Johnsongrass
- Nutsedge, Yellow
- Panicum, Fall
- Witchgrass

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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
APPLICATION INFORMATION

Soybeans:

- Pre-emergence — apply after planting but prior to crop emergence.
- Pre-plant burndown — apply with a glyphosate of choice for burndown and residual control. Apply up to 14 days before planting.

APPLICATION METHOD

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

RATES

One case treats 20 acres
**PACKAGING**

One case of Canopy PRO contains one 288 g jug of Classic™ herbicide and two 2.2 kg jugs of TriCor® 75 DF metribuzin.

**TANK MIXES**

- 2,4-D Ester
- Dual II Magnum®
- Enlist Duo™
- Eragon®
- Eragon® LQ
- FeXapan™ herbicide Plus VaporGrip™ Technology®
- Frontier® MAX
- Glyphosate

1 Only for use in Enlist E3™ soybeans
2 Only for use in Roundup Ready 2 Xtend™ soybeans

**CROP ROTATION**

Rotational crop restrictions

Canopy PRO herbicide is degraded by natural soil processes and may injure rotational crops. Field tests have shown that following treatment of soybeans with Canopy PRO, the crops listed below can be planted at the intervals listed for soil pH ≤ 7.4. 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 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 (PHI)**

The PHI for Canopy PRO is 60 days.

Refer to product label for complete use instructions.
Classic™ herbicide offers exceptional control of hard to kill broadleaf weeds in soybeans.

Rely on Classic herbicide for exceptional control of tough perennial broadleaf weeds in Identity Preserved (IP), conventional and glyphosate-tolerant (GT) soybeans.

**Rapid knock-down of problem weeds**
Classic delivers rapid knock-down of weeds such as common ragweed and velvetleaf along with tough perennial weeds like nutsedge, dandelion and wild carrot.

**Convenience and flexibility**
Classic is compatible with other chemistries and can be tank mixed with registered grass herbicides for efficient, one-pass control of both grass and broadleaf weeds.

Classic herbicide rapidly stops growth of susceptible weeds. Its activity is enhanced when warm, moist growing conditions promote weed growth and result in active foliar uptake and contact activity. Spray coverage, weed sensitivity, weed size, crop competition and growing conditions impact level and duration of control.

**WEEDS CONTROLLED (OR SUPPRESSED)**
- Bean, Adzuki
- Carrot, Wild
- Dandelion
- Nutsedge, Yellow
- Pigweed, Redroot
- Ragweed, Common
- Velvetleaf

1 Top growth control
2 Suppression
APPLICATION INFORMATION

SOYBEANS: Apply pre-plant, pre-emergence or post-emergence to just before the initiation of flowering.

Post-emergence: Apply from soybean emergence up to the 3rd trifoliate stage of growth for best performance. Do not apply after flowering has started. Apply only once per year. For more consistent control of velvetleaf, add 28% UAN at 0.8 L/ac (2 L/ha).

WILD CARROT: 2- to 20-leaf stage of weed growth.

VOLUNTEER ADZUKI BEANS: 1st to 3rd trifoliate stage of weed growth.

DANDELION: Apply 14.4 g/ac pre-plant or post-plant pre-emergence for season-long control up to bolting.

APPLICATION METHOD

Classic herbicide is formulated as a dry flowable granule to be mixed in water and applied as a uniform broadcast spray. Classic is not registered for aerial application.

RATES

- 14.4 g/ac
- Water volume: 15-20 US gal/ac

CROP ROTATION

Crop rotation varies by crop and soil pH.

- 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.

PACKAGING

Classic is packaged in a 576 g bottle (40 acres) or a pouch containing water soluble bags (10 acres).

TANK MIXES

- Assure® II
- Glyphosate

PRE-HARVEST INTERVAL (PHI)

The PHI for Classic is 60 days.

ADJUVANTS

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).

Agral® is a registered trademark of a Syngenta Group Company.

Refer to product label for complete use instructions.
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 kill weeds.

Commenza herbicide provides exceptional pre-emergence control over a wide range of annual grass and broadleaf weeds. It can be applied with burndown herbicides in both conventional and herbicide tolerant systems.

**Soil-applied weed control solution**
Commenza is a pro-active broad-spectrum herbicide program to establish excellent control of most major annual weeds in soybeans. With 3 modes of action, Commenza delivers robust control of the important weeds such as foxtails, nightshade, lamb’s-quarters, ragweed, nutedge and many others in conventional, conservation tillage or no-till soybean production systems.

**Multi-mode of action**
With 3 proven active ingredients, Commenza delivers overlapping effective modes of action on key weeds such as Eastern black nightshade.

**Convenience and confidence**
Convenient 20 acre co-pack is easy to handle and measure. And a complete herbicide program from one manufacturer provides you confidence and assurance of performance.

Commenza herbicide is a soil residual herbicide. It works in the soil by controlling annual grass and broadleaf weeds as they germinate in the spring.
# WEEDS CONTROLLED (OR SUPPRESSED)

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

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\(^1\) 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
APPLICATION METHOD

Apply Commenza™ herbicide in conventional, conservation tillage or no-till soybean production systems. Commenza is not registered for aerial application.

SOYBEAN APPLICATION METHODS

Surface Pre-plant Application (SPRE)

Apply Commenza in minimum or no tillage systems up to 21 days prior to planting. Commenza may be tank mixed with glyphosate and/or other burndown products to ensure control of emerged weeds including herbicide resistant biotypes. To the extent possible, do not move treated soil out of the row or move untreated soil to the surface during planting, or weed control will be diminished. Annual broadleaved weeds beyond the 2-leaf stage of growth will not be controlled by surface pre-plant applications.

Pre-plant Incorporated Application (PPI)

Apply Commenza up to 21 days prior to planting. Incorporate Commenza in a uniform manner with equipment set to work at a depth of 5 to 8 cm. Use a C or S shank field cultivator equipped with a levelling device such as harrows or rolling basket. The cultivator must have a minimum of 4 rows of sweeps spaced at 18 cm, or less, intervals and staggered so that no soil is left unturned. Tandem discs may also be used provided the blades are less than 50 cm in diameter and spaced 18 cm or less apart. Equipment design including any drag attachments must be adequate to avoid soil ridging which may result in streaked or reduced weed control. Operate disc implements at 6 to 10 km/h and cultivators at 10 to 13 km/h.

Pre-emergence Application (PRE)

Pre-emergence applications may be made in conventional tillage as well as reduced tillage, ridge tillage and no-tillage systems. Apply Commenza during (behind the planter) or after planting, but prior to crop or weed emergence. Adequate soil moisture is required for optimal herbicide activity. Rainfall is necessary to move Commenza into the weed germination zone. Sufficient rainfall to moisten the soil to a depth of 5 cm is generally adequate. If sufficient rainfall is not received within 7 to 10 days after a surface application, a shallow cultivation or use of a rotary hoe is recommended to control established weeds and move the herbicide into the weed germination zone. When sufficient rainfall is received following dry conditions, activity on established weeds will depend on the weed species and the location of its root system in the soil.

RATES

One case treats 20 acres

PACKAGING

Commenza herbicide is packaged in a 20 acre case. Each case contains 10.5 L S-Metolachlor 960 herbicide + 4.54 kg TriCor 75 DF + 715 gram bottle of Broadstrike RC™ herbicide.
TANK MIXES

Soybeans: When applied as part of a pre-plant or pre-emergence burndown program, Commenza herbicide may be tank mixed with other herbicides. Always follow the label directions of the tank mix products including pre-plant intervals.

Registered:
- Glyphosate

Supported:
- Elevore™ herbicide
- Enlist Duo™ herbicide
- FeXapan™ herbicide Plus VaporGrip™ Technology

1 Only for use in Enlist E3™ soybeans
2 Only for use in Roundup Ready 2 Xtend soybeans

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: When tank mixing with other herbicides, follow the most restrictive crop rotation guidelines on the label of each product used. Rotational crops, except field corn and soybeans, may sustain herbicide injury if dry conditions, not favourable to herbicide breakdown, persist following application of Commenza.

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.

A field bioassay should be conducted before planting other crops not listed above. A successful bioassay means growing test strips of the crop(s) to maturity intended for production the following year.

PRE-HARVEST INTERVAL (PHI)

The PHI for Commenza is 90 days.

Refer to product label for complete use instructions.
Destra™ IS herbicide delivers convenient, one-pass, early post-emergence weed control in glyphosate-tolerant corn.

Destra IS herbicide offers both efficient weed control and a proactive approach to managing herbicide resistance.

Use Destra IS herbicide with two modes of action to keep weeds in check and herbicide resistance at bay.

**Easy to use**
The advanced dry formulation and low-use rate of Destra IS herbicide makes sprayer loading efficient and allows you to cover more acres. Destra IS can also be tank mixed with glyphosate.

**Wide application window**
With a wide application window, Destra IS can be applied post-emergence from the 3- to 8-leaf stage of corn.

**Excellent crop safety**
Destra IS contains isoxadifen, a built-in safener which increases the level of herbicide metabolism in the corn plant. This provides exceptional crop safety when applied up to the 8-leaf stage on a wide range of hybrids including short-season corn hybrids.

When applied post-emergence, Destra IS herbicide is absorbed through the leaves and is rapidly translocated to the plant’s growing points. It provides burndown and soil residual activity to selectively control or suppress annual broadleaf weeds and annual grass weeds in field corn through both knock-down and soil residual activity.

**WEEDS CONTROLLED (OR SUPPRESSED)**

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

* Suppression
† Excluding Clearfield canola
APPLICATION INFORMATION

Corn: 3- to 8-leaf stage

Destra IS herbicide can be applied post-emergence from the 3- to 8-leaf stage of corn (approx. 2-6 visible leaf collars). Ideal application timing is V2-V3 (3- to 5-leaf stage of corn) when weeds are small and the extended residual activity can help control later flushes of weeds.

APPLICATION METHOD

Destra IS herbicide is a wettable granule formulation to be mixed in water and applied as a uniform broadcast spray. Destra IS herbicide may only be applied using ground equipment and is not registered for aerial application.

RATES

110 g/ac; one jug treats 40 acres

PACKAGING

Destra IS is packaged in 4.4 kg jugs. Each case contains two jugs.

CROP ROTATION

• 4 months: winter wheat
• 10 months: field corn
• 11 months: soybeans and white beans

TANK MIXES

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

When Destra IS is tank mixed with glyphosate in GT corn, a surfactant is not required.

Supported:
Lontrel™ XC

PRE-HARVEST INTERVAL (PHI)

The PHI for Destra IS is 100 days.

ADJUVANTS

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.

Agral® is a registered trademark of a Syngenta Group Company.

Refer to product label for complete use instructions.
Diligent™ herbicide offers flexible defense against a range of tough and resistant broadleaf weeds in soybeans, including glyphosate-resistant waterhemp.

Diligent herbicide is your solution against glyphosate-resistant waterhemp and other annual broadleaf weeds in soybeans. It can be applied from early pre-plant to pre-emergence. With a multi-mode defense against Group 2, 5 and 9 resistant broadleaf weeds, Diligent provides a proactive approach to weed resistance management.

Rely on Diligent herbicide to protect your crop and maximize yield potential.

**Early control for a strong start**

Diligent must be applied pre-emergence to the main flush of actively growing weeds. Diligent is activated by moisture and provides early residual control of glyphosate resistant waterhemp. When tank mixed with a glyphosate herbicide as part of a pre-plant or post-plant burndown, emerged weeds will also be controlled.

**Two modes of action for flexible defense**

Diligent has two modes of action and offers flexible defense against a range of broadleaf weeds in soybeans, including glyphosate-resistant waterhemp. Diligent’s flexibility means it can be used in any production system, including Roundup Ready 2 Xtend™ and Enlist E3™ soybeans.

**WEEDS CONTROLLED**

- Amaranth, Palmer
- Chickweed, Common
- Dandelion*
- Foxtail, Green**
- Lamb’s-quarters, Common
- Nightshade, Eastern Black
- Nightshade, Hairy
- Panicum, Fall**
- Pigweed, Green
- Pigweed, Redroot
- Ragweed, Common
- Waterhemp***

* Early-season control on medium-textured soils  ** Suppression  *** Including biotypes resistant to herbicide Groups 2, 5 and 9
APPLICATION INFORMATION

Soybeans: Pre-plant up to 30 days before planting; pre-emergence up to 3 days after planting, prior to soybean emergence.

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.

Do not perform any tillage operations after application or weed control will be reduced. Apply only once during a growing season.

Do not apply PPI (pre-plant incorporated) or to emerged soybeans.

APPLICATION METHOD

Apply Diligent herbicide only using ground equipment. Diligent is not registered for aerial application.

RATES

70.4 g/acre; one jug treats 40 acres

PACKAGING

Diligent herbicide is packaged in two 2.816 jugs per case. Each case treats 80 acres.
**TANK MIXES**

Tank mix Diligent™ herbicide with compatible annual grass herbicides to provide a broader spectrum of annual weed control, including:

**Supported:**
- 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. Apply the tank mix pre-plant or post-plant pre-emergence to conventional or glyphosate-tolerant soybeans.

Apply 70.4 g/ac of Diligent herbicide, plus a glyphosate herbicide (present as the potassium, isopropylamine, or di-ammonium salt) at 900 g ae/ha, (e.g., 1 L/ac for herbicides containing 360 g ae/L glyphosate or .67 L/ac for herbicides containing 540 g ae/L glyphosate).

**CROP ROTATION**

Crop rotation varies by crop and soil pH.

- **4 months:** winter wheat
- **10 months:** field corn (soil pH ≤ 7.8 only) and soybeans (soil pH ≤ 7.8 only)
- **11 months:** alfalfa (soil pH ≤ 7.4 only)

**PRE-HARVEST INTERVAL (PHI)**

The PHI for Diligent is 60 days.

Refer to product label for complete use instructions.
Solutions that yield results
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.

Elevore herbicide is a non-selective Group 4 herbicide that minimizes regrowth when applied to emerged weeds.

**Weed control and resistance management**
Elevore delivers broad-spectrum control of broadleaf weeds, including Group 2 and 9 resistant Canada fleabane and common ragweed. It has flexible options for tank mixing, including glyphosate and/or soil residual herbicides.

**Flexibility**
Pre-plant applications suitable for conventional, Roundup Ready®, Enlist E3™ or Xtend™ production systems.

**WEEDS CONTROLLED (OR SUPPRESSED)**
- Canada Fleabane\(^1^2\)
- Cleavers
- Flax, Volunteer
- Hemp-nettle\(^3\)
- Lamb’s-quarters, Common
- Pigweed, Redroot\(^3\)
- Ragweed, Common\(^1\)

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\(^1\) Including Group 9 and Group 2 resistant biotypes
\(^2\) Light to moderate infestations
\(^3\) Suppression only
APPLICATION INFORMATION

Field corn: 5 days pre-plant
Soybeans: 7 days pre-plant

Apply to actively growing weeds at the 1- to 8-leaf stage, unless otherwise specified.

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

Apply when weeds are small and actively growing. Only weeds emerged at the time of treatment will be controlled. Apply Elevore using nozzles that deliver “coarse” (ASAE S572.1 classification) or larger droplets.

Seeding/planting depth: minimum 4 cm (1.6 inches).

APPLICATION METHOD

Mix Elevore herbicide with water and apply as a uniform broadcast spray by ground application. Elevore must be applied with a methylated seed oil adjuvant or crop oil concentrate at 0.5 to 1.0% v/v.

RATES

- 29.5 mL/ac (73 mL/ha) in 100-200 L water/ha. Add methylated seed oil (or an equivalent crop oil concentrate) at 0.5-1% v/v.

PACKAGING

Elevore™ herbicide is packaged in 1.18 L bottles. Each case includes 4 bottles. Each bottle treats 40 acres.
**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:**
- Residual herbicides such as Canopy™ PRO, Commenza™, Diligent™, Freestyle™ or Guardian™ MAX for soybeans

**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 (PHI)**

The PHI for field corn treated with Elevore is 100 days.
The PHI for soybeans treated with Elevore is 125 days.

**ADJUVANTS**

Add a methylated seed oil or crop oil concentrate such as Merge™, Sure-Mix™ or Turbocharge™ at 5-10 L/1,000 L of spray volume.

Refer to product label for complete use instructions.
Ready to protect your crops
Engarde™ herbicide gives you flexibility, convenience and performance against yield-robbing weeds in corn, for clean fields from start to finish.

Engarde herbicide is a dual mode of action herbicide that controls tough broadleaf and grass weeds with knockdown and residual action, from pre-emergence up to the 2-leaf stage of field corn in Eastern Canada.

**Early knockdown and residual control of weeds**
Engarde has superior application flexibility allowing it to be applied from pre-emergence to the 2-leaf stage. It delivers early post-emergence knockdown and powerful residual control of tough annual broadleaf and grass weeds. It offers an ideal early set-up program in glyphosate-tolerant corn or it can be tank mixed with a pre-emergence grass herbicide for a one-pass early weed control program.

**Two modes of action**
Engarde has two powerful modes of action that deliver enhanced broad spectrum early weed control and help guard against herbicide resistance.

**Easy to use**
Blend technology delivers a homogeneous, all-in-one dry formulation in a convenient 40 acre jug. Engarde offers unsurpassed flexibility and can be used in conventional, minimum or no-till corn production, as well as conventional or herbicide-tolerant corn hybrids.

Engarde has residual activity which provides selective control or suppression of annual broadleaf weeds and annual grass weeds. When applied early-post, Engarde herbicide is rapidly absorbed through the leaves and moved to the plant’s growing points, stopping weeds in their tracks.
WEEDS CONTROLLED (OR SUPPRESSED)

**Broadleaf**
- Canola, Volunteer
- Lamb’s-quarters, Common
- Mustard, Wild
- Pigweed, Redroot (including triazine resistant)

**Grass**
- Barnyard Grass
- Foxtail, Green

**Crabgrass, Hairy/Large**
- Foxtail, Yellow
- Panicum, Fall
- Quackgrass
- Witchgrass

1 Suppression only

APPLICATION INFORMATION

**Corn:** Pre-emergence up to 2-leaf stage

For additional residual weed control, tank mix Engarde herbicide with a soil-applied grass herbicide. 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 (NIS) is not required.

APPLICATION METHOD

Engarde herbicide is mixed with water and applied as a uniform broadcast spray by ground application.

Engarde delivers enhanced broad-spectrum early weed control

[Images of untreated and Engarde-treated corn]
**RATES**
1392 g/ac; one jug treats 40 acres

*Water volume: 56.7–809 L/ac (140–200 L/ha)*

**TANK MIXES**
For additional residual weed control, tank mix Engarde with a registered, soil-applied grass herbicide.

**PRE-HARVEST INTERVAL (PHI)**
The PHI for Engarde is 100 days.

**ADJUVANTS**
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.

*Agral® is a registered trademark of a Syngenta Group Company.*

Refer to product label for complete use instructions.

**PACKAGING**
Engarde™ herbicide is packaged in a 5.568 kg jug. Each case contains two jugs.
One case of Engarde herbicide treats 80 acres (32 ha). Each jug treats 40 acres.

**CROP ROTATION**
- 4 months: winter wheat
- 10 months: field corn
- 11 months: soybeans and white beans
Solutions to help your farm business succeed
Enlist Duo™ herbicide with Colex-D™ technology delivers broad-spectrum knockdown of hard-to-control and resistant weeds.

Enlist Duo herbicide with Colex-D technology is a new co-formulation of glyphosate and 2,4-D choline for broad-spectrum weed control in Enlist™ corn, Enlist E3™ soybeans or as a burndown ahead of cereal and corn crops.

Enlist Duo is suitable for emerged annual and perennial weed control in Enlist field corn, Enlist E3 soybeans, summerfallow, and prior to planting or after planting (but before crop emergence) in spring and winter varieties of wheat (including durum), barley, rye and field corn.

Enlist Duo herbicide combines two modes of action for superior control of emerged annual and perennial weeds.

**Dual modes of action deliver superior control**

The combination of Group 4 and Group 9 modes of action deliver unmatched control of more than 70 grass and broadleaf weeds in a variety of weather conditions and application timings. Enlist Duo will control weeds that glyphosate alone may miss and help you proactively manage herbicide resistance.

**Flexible tank mix options**

It is available as an easy-to-use low odour pre-mix. Tank mix options with select products are available for burndown or pre-plant use.

Enlist Duo is a systemic herbicide and is intended for control of emerged annual and perennial weeds. Enlist Duo is selective to Enlist E3 soybeans, which contain a patented gene that provides tolerance to 2,4-D choline, glyphosate and glufosinate herbicides.
**WEEDS CONTROLLED**
(See label for complete recommendations by crop/use pattern and rates of application)

<table>
<thead>
<tr>
<th>Enlist E3™ soybeans (1.74 L/ac)</th>
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<tbody>
<tr>
<td>• Barley, Volunteer</td>
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<tr>
<td>• Barnyard Grass</td>
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<td>• Biennial Wormwood²</td>
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<td>• Bindweed, Field³</td>
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<tr>
<td>• Bindweed, Hedge</td>
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<td>• Blue Lettuce²</td>
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<td>• Bluebur</td>
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<td>• Buckwheat, Tartary</td>
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<td>• Buckwheat, Wild</td>
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<tr>
<td>• Burdock (before 4-leaf)</td>
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<td>• Burdock²</td>
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<td>• Canola, Volunteer¹</td>
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<td>• Chickweed, Common</td>
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<td>• Chickweed, Mouse-eared²</td>
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<td>• Cleavers, Common</td>
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<td>• Cocklebur</td>
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<td>• Corn Spurry</td>
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<td>• Cow Cockle</td>
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<td>• Crabgrass, Large</td>
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<td>• Crabgrass, Smooth</td>
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<td>• Dandelion</td>
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<td>• Fall Panicum</td>
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<td>• False Flax</td>
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<td>• Field Peppergrass</td>
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<td>• Fleabane, Canada</td>
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<td>• Fleabane, Daisy</td>
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<td>• Flixweed</td>
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<td>• Foxtail (giant, green)</td>
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<td>• Goat’s-beard</td>
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<td>• Hairy Galinsoga</td>
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<td>• Hawk’s-beard, Narrow-leaf</td>
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<td>• Hemp-nettle</td>
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<td>• Hoary Cress</td>
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<td>• Horsetail, Field</td>
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<tr>
<td>• Knotweed (before 4-leaf)</td>
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<td>• Kochia</td>
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<tr>
<td>• Lady’s-thumb</td>
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<td>• Lamb’s-quarters</td>
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<td>• Leafy Spurge²</td>
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<td>• Mallow, Roundleaf³</td>
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<td>• Milkweed, Common³</td>
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<td>• Mustard, Dog</td>
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<td>• Mustards (except dog and green tansy)</td>
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<tr>
<td>• Night flowering Catchfly</td>
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<td>• Nightshade, Eastern Black Flowering</td>
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<td>• Nutsedge, Yellow³</td>
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<tr>
<td>• Oak Leaf Goosefoot</td>
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<td>• Palmer Amaranth³</td>
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<td>• Pigweed, Redroot</td>
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<td>• Pigweed, Russian</td>
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<td>• Pigweed, Smooth</td>
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<td>• Pineappleweed</td>
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<td>• Plantain, Common</td>
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<td>• Proso Millet, Wild</td>
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<td>• Purslane, Common</td>
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<td>• Quackgrass</td>
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<td>• Ragweed, Common</td>
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<td>• Ragweed, Giant</td>
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<td>• Russian Thistle</td>
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<td>• Shepherd’s Purse</td>
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<td>• Smartweed, Green</td>
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<td>• Smartweed, Pennsylvania</td>
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<td>• Sow-thistle, Annual</td>
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<td>• Sow-thistle, Perennial³</td>
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<td>• Stinkweed</td>
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<td>• Sunflower, Annual</td>
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<td>• Sweet Clover</td>
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<td>• Tansy, Common</td>
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<td>• Thistle, Canada³</td>
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<td>• Velvetleaf</td>
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<td>• Vetch</td>
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<td>• Waterhemp, Common</td>
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<td>• Wheat, Volunteer</td>
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<td>• Wild Oats</td>
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<td>• Wild Radish</td>
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<tr>
<td>• Wild Tomato</td>
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</tbody>
</table>

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.
APPLICATION INFORMATION

Enlist Duo™ has a wide application window.

**Enlist™ corn:**
Pre-emergence up to the V8 growth stage or 120 cm (48”) height. Make 1 to 2 applications with a minimum of 12 days between applications before the V8 growth stage.

**Enlist E3 soybeans:**
Pre-plant burndown up to no later than R2 or full flowering stage. Make 1 to 2 applications with a minimum of 12 days between applications. Apply up to R2 stage.

**Burndown ahead of field corn and cereal crops:**
Prior to planting, or after planting but before crop emergence

APPLICATION METHOD

**Ground Application - Cropland**
Apply 5 to 20 US gal/ac (50 to 200 L/ha) of spray solution depending on the type of application equipment. Use sufficient water for even distribution. Spray at low pressures (200 to 275 kPa) when the weeds are actively growing.

**Droplet Size**
Use drift-reducing nozzle tips in accordance with manufacturer directions that produce a droplet classification of coarse to extremely coarse (ASAE S-572 Standard) to greatly reduce drift potential.

**Spot Treatment**
For knapsack application of Enlist Duo for spot treatment of weeds such as thistles. Mix 0.2 L of product in 10 L of water and wet all foliage thoroughly. Maximum 2 applications per year. Maximum amount of product applied per day per person with handheld equipment is 14.5L.
Powerful weed control in soybeans
**RATES**

The application rate of Enlist Duo™ depends on the weeds to be controlled.

**Enlist™ field corn and Enlist E3™ soybeans:**

- **4.3 L/ha (1.74 L/ac)**
  
  For larger weeds and broadest spectrum of control, 10 ac/case or 320 ac/tote.

  All weeds controlled with 2.9 L/ha (1.18 L/ac) plus:

  **Broadleaf weeds:** bluebur, buckwheat (tartary and wild), Canada fleabane*, Canada thistle, chickweed, cocklebur, common ragweed, corn spurry, dandelion, Eastern black nightshade, field horsetail, flixweed, giant ragweed*, hemp–nettle, kochia*, lady's-thumb, lamb's-quarters, Palmer amaranth, redroot pigweed, smartweed, sow-thistle, vetch, volunteer canola and waterhemp*

  **Grass weeds:** barnyard grass, crabgrass, fall panicum, green foxtail, quackgrass, volunteer wheat, wild oats, wild proso millet and volunteer barley

**Ahead of corn and cereal crops:**

Apply at a rate range up to 1.74 L/ac (4.3 L/ha) in a water volume of 50 to 100 L/ha of clean water as a broadcast spray for control of weeds up to 15 cm in height.

- **2.2 L/ha (0.89 L/ac)**
  
  **Broadleaf weeds:** Russian thistle, cocklebur, Canada fleabane*, common ragweed*, flixweed, goat's-beard, lady's-thumb, narrow-leaf hawk's-beard, wild radish and wild buckwheat

  **Grass weeds:** foxtail (giant and green), wild oats and volunteer cereals

- **3.3 L/ha (1.34 L/ac)**
  
  All weeds controlled with 0.89 L/ac plus:

  **Broadleaf weeds:** chickweed, smartweed, sow-thistle, velvetleaf and volunteer canola

  **Grass weeds:** peppergrass

- **4.3 L/ha (1.74 L/ac) will control red clover**

*Including biotypes resistant to glyphosate and ALS modes of action (Groups 2 and 9)*

**PACKAGING**

Enlist Duo comes in a 2 x 8.7 L case or a 556.8 L tote.
**TANK MIXES**

Tank mix options with key products are available for burndown or pre-seed use.

Registered (on label for control of volunteer Enlist corn in Enlist E3 soybeans):

- Select™
- Centurion®
- Poast® Ultra

Consult the Product Use Guide available at EnlistCanada.ca for more information on compatible products for use with Enlist Duo.

**PRE-HARVEST INTERVAL (PHI)**

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

**Enlist corn:** Do not harvest forage or cut hay within 30 days after application.

**ADJUVANTS**

**Drift control additives**

Enlist Duo contains drift control technology. If desired, use only a Corteva-approved drift control additive. When a drift control additive is used, read and carefully observe the precautionary statements and all other information appearing on the additive label.

Refer to product label for complete use instructions.
FeXapan™ herbicide Plus VaporGrip™ Technology is a key component in a Roundup Ready 2 Xtend™ soybean system, offering growers a new option to manage weed resistance.

FeXapan herbicide Plus VaporGrip Technology is a Group 4 herbicide that delivers superior control of broadleaf weeds in Roundup Ready 2 Xtend™ soybeans.

Effective control of glyphosate-resistant weed biotypes
FeXapan provides exceptional control of key broadleafs weeds, including perennials. This herbicide delivers both contact and systemic weed control to kill the toughest weeds, including glyphosate-resistant biotypes.

Excellent crop safety
FeXapan herbicide Plus VaporGrip proprietary technology helps prevent the formation of dicamba acid, significantly reducing the volatility potential compared to other commercially available dicamba formulations, which means lower potential for volatility and excellent crop safety. When any dicamba formulation is dissolved in a tank, there is potential for dicamba acid to form. FeXapan works by reducing the association of a hydrogen molecule with dicamba, maximizing its stability.

FeXapan is readily absorbed by plants through shoot and root uptake and circulates throughout the plant’s system while it accumulates in areas of active growth. It interferes with the plant’s growth hormones (auxins) to kill a wide-range of broadleaf weeds.
**WEEDS CONTROLLED**

- Bindweed, Field\(^2\)
- Buckwheat, Tartary
- Buckwheat, Wild
- Canada Fleabane\(^1\)
- Cleaver
- Cowcockle
- Lady's-thumb
- Lamb's-quarters, Common
- Mustard, Hare's-ear
- Mustard, Indian
- Mustard, Tumble
- Mustard, Wild
- Mustard, Wormseed
- Pigweed, Redroot
- Pigweed, Russian
- Pigweed, Smooth
- Ragweed, Common
- Ragweed, False
- Ragweed, Giant
- Smartweed, Green
- Sow-thistle, Perennial\(^2\)
- Spurry, Corn
- Thistle, Canada\(^2\)
- Velvetleaf

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1 Control of emerged plants only.
2 Apply FeXapan herbicide Plus VaporGrip\(^\text{TM}\) Technology annually for three years at the flowering stage of bindweed and the budding stage of thistles.
APPLICATION INFORMATION

**Soybeans (Roundup Ready 2 Xtend™ varieties):** Pre-plant, pre-emergence or post-emergence up to early flower stage (R1); Use the 0.7 L/ac rate of FeXapan™ once per growing season.

1.36 L/ac of FeXapan is the maximum total to be applied to Roundup Ready 2 Xtend soybeans in a single growing season.

A third application of FeXapan should only be made for the control of glyphosate-resistant weed populations.

Apply only to weeds less than 10 cm. The minimum water recommendation volume is 10.7 US gal/acre.

For a broader spectrum of weeds controlled, FeXapan may be tank mixed with a high load 540 g/l glyphosate at 0.67 L/ac. In addition to providing post-emergence burndown activity on weeds, FeXapan applications also provide short-term residual activity on common lamb’s-quarters, redroot pigweed, common ragweed, wild buckwheat and velvetleaf*.

The 0.7 L/ac (1.71 L/ha) rate provides short-term residual control and the 0.33 L/ac (823 mL/ha) rate provides suppression.

* Suppression only for both rates.

APPLICATION METHOD

**Wind:** Spray when the wind is between 5–15 km/h. Do not apply during a temperature inversion. Temperature inversions commonly occur when winds are below 5 km/h and begin to form as the sun sets and often continue until the next morning.

**Nozzle Type:** Use nozzles designed to provide extremely coarse to ultra coarse spray droplet size.

**Spray Boom Height:** Set boom height to no more than 50 cm above the target pest or crop canopy.

**Ground Speed:** Select a ground speed under 25 km/h.

**Temperature:** Apply when air temperature is between 10°C and 25°C. Do not spray when the temperature is expected to exceed 30°C.

**Spray System Equipment Cleanout:** Follow the triple rinse sprayer cleanout procedure on the FeXapan label. Always use a commercial detergent, sprayer cleaner or ammonia, according to the manufacturer’s directions.

**Field Sprayer Application:** Do not apply during periods of dead calm. Avoid application of this product when winds are gusty. Boom height must be 50 cm or less above the crop or ground.
**RATES**

Apply at 0.33–0.7 L/ac.

When applying, the water volume rate should be 10–20 US gal/ac (100–220 L/ha).

**PACKAGING**

One case of FeXapan contains 20 litres (2 X 10 L jugs).

**TANK MIXES**

For a broader spectrum of weeds controlled, FeXapan may be tank mixed with a high load 540 g/l glyphosate at 0.67 L/ac.

Registered:
- Glyphosate
- Roundup WeatherMAX® with Transorb 2 Technology Liquid Herbicide

**CROP ROTATION**

Any crop not on the product label may be planted at 120 days after the final application of FeXapan. Do not count days when the ground is frozen. Moisture is essential for the degradation of this herbicide in soil. If dry weather persists after application, crop injury may occur the following spring.

**PRE-HARVEST INTERVAL (PHI)**

The PHI for FeXapan herbicide Plus VaporGrip™ Technology is 7–10 days for soybean forage and 13–15 days for soybean hay.

**ADJUVANTS**

A quality non-ionic surfactant (NIS) of at least 70% active may be added to the spray solution at 0.25 % v/v. Read and carefully observe all caution statements and other information on the surfactant label.

Do not add acidifying buffering agents, acidic pH adjusting agents or adjuvants other than agriculturally approved NIS to the spray solution. Do not add ammonium sulfate (AMS), AMS-containing adjuvants, water conditioners or sprayable fluid fertilizers.

Do not use Crop Oil Concentrates (COC) and Methylated Seed Oils (MSO) as adjuvants when this product is applied with glyphosate-based agricultural herbicides. When FeXapan herbicide is used with another herbicide that requires the use of a COC or MSO adjuvant, follow the label instructions of that product.

Refer to product label for complete use instructions.
FirstRate™ herbicide is your solution for effective, economical pre- and post-emergence control of the most troublesome broadleaf weeds in soybeans.

With excellent flexibility, FirstRate herbicide controls certain broadleaf weeds in soybeans.

FirstRate herbicide offers superior control of both giant ragweed and Canada fleabane when compared to other soil-applied or post-emergence programs.

**Crop rotation options and wide application window**
FirstRate provides flexible crop rotation options and offers a wide window of application timing.

**Tank mix flexibility**
FirstRate works well in all tillage practices (conventional, conservation or no-till) and features excellent crop tolerance. FirstRate is a dynamic weed management tool that can be tank mixed with many pre-plant/pre-emergence and post-emergent grass and broadleaf products.

**WEEDS CONTROLLED (OR SUPPRESSED)**
- Canada Fleabane*
- Cocklebur
- Horsenettle**
- Jimsonweed
- Lamb's-quarters, Common
- Ragweed, Common
- Ragweed, Giant
- Velvetleaf

*Note: Group 2 resistant fleabane is known to exist and these populations would not be controlled
** Suppression
APPLICATION INFORMATION

Pre-emergence applications may be made in both conventional and conservation tillage systems. Apply after planting, but prior to crop or weed emergence.

When applied in tank mix combination, follow applicable use instructions, including rates, precautions and restrictions of each product used in the tank mixture.

Post-emergence application may be any time prior to soybean flowering stage. Application prior to full emergence of the 1st trifoliate leaf may cause temporary yellowing of soybeans. This effect is transient and has no effect on yields. Application timing restrictions of tank mix partners should be followed.

Adequate soil moisture is necessary for optimum herbicidal efficacy. Rainfall is necessary to move FirstRate into the weed germination zone. Sufficient rainfall to moisten the soil to a depth of 5 cm is generally sufficient. If sufficient rainfall is not received within 7 to 10 days after application, a shallow cultivation or use of a rotary hoe is recommended to control established weeds and move the herbicide into the weed germination zone. When sufficient rainfall is received following dry conditions, activity on established weeds will depend on the weed species and the location of its root system in the soil.

APPLICATION METHOD

Do not apply by air.

Do not apply when weather conditions favour drift to non-target sites.

In order to minimize spray drift to non-target sites, do not use nozzles that produce a fine spray droplet and keep ground-driven spray boom as low as possible above the target surface. Minimize drift by using sufficient spray volume to ensure adequate coverage with large droplets. Only spray when conditions are calm or wind speed is less than 10 km/h.
RATES

Pre-plant/Pre-emergent:
For control of heavy infestations of lamb’s-quarters, common ragweed, velvetleaf and cocklebur, apply FirstRate™ herbicide at a rate of 17 g/ac (one water soluble packet treats one acre).

Post-emergent:
For control of common ragweed, velvetleaf, cocklebur, giant ragweed and Canada fleabane as well as suppression of horsenettle, apply FirstRate herbicide at a rate of 8.5 g/ac (20.8 g/ha) (one water soluble packet treats two acres).

 Registered:
• Broadstrike™ Dual
• Pursuit®
• Roundup®
• Vantage®
• Vantage Plus

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

PACKAGING

FirstRate comes in 17 gram water soluble packets (wsp). There are 10 x 17 gram wsp per package of FirstRate.

New for 2020: FirstRate is now available in a 340 gram bottle, with 4 bottles/case. One bottle treats 40 acres or 160 acres/case.

TANK MIXES

FirstRate can be used alone or tank mixed with other registered products for enhanced pre-emergent or post-emergent broadleaf weed control.

FirstRate works well within IP-soybean weed control programs.

Follow label guidelines on FirstRate and tank mix partner labels.
CROP ROTATION

When tank mixing with other herbicides, follow the crop rotation on the label of each product used.

- 0 months: soybeans
- 4 months: wheat
- 9 months: corn

A field bioassay should be conducted before planting other crops not listed above. A successful field bioassay involves growing to maturity test strips of the crop(s) intended for production the following year.

PRE-HARVEST INTERVAL (PHI)

The PHI for FirstRate is 65 days.

ADJUVANTS

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.

Refer to product label for complete use instructions.
Freestyle™ herbicide combines the knockdown power of Classic™ with the flexible application window of Imazethapyr 240 SL. With a wide window of application from pre-plant to early post-emergence, it provides enhanced residual control of grass and broadleaf weeds in glyphosate-tolerant soybeans.

Freestyle herbicide makes early-season weed control in soybeans simple and effective.

A long-term approach for weed resistance in GT soybeans
By contributing a second mode of action to your glyphosate-tolerant soybean production system, Freestyle is a proactive approach to managing weed resistance. Freestyle also helps to defend against weed shifts in minimum- or no-till systems.

Fits any soybean production system
Freestyle fits any soybean production system. In glyphosate-tolerant (GT) soybeans, Freestyle helps you time your in-crop glyphosate application for maximum effectiveness.

By keeping your crop clean during the pre-emergence to 3rd trifoliate stages, you gain more timing flexibility for your in-crop glyphosate application. This helps minimize competition from yield-robbing weeds, helping you to achieve higher crop yields.

Broad-spectrum and residual season-long weed control
In Identity Preserved (IP) soybeans, Freestyle brings added performance, delivering a broader spectrum of weeds controlled, including many annual grasses and tough broadleaf weeds such as velvetleaf and Eastern black nightshade.

Freestyle herbicide is a selective herbicide that can be applied as an early pre-plant, pre-plant incorporated, pre-emergent or post-emergent treatment in soybeans.
WEEDS CONTROLLED

**Broadleaf weeds**
- Dandelion
- Lady’s-thumb
- Lamb’s-quarters, Common
- Lettuce, Prickly
- Mustard, Wild
- Nightshade, Eastern Black
- Pigweed, Redroot

**Grass weeds**
- Smartweed
- Velvetleaf
- Barnyard Grass
- Foxtail, Green
- Foxtail, Yellow
- Old Witchgrass
- Nutsedge, Yellow

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1 Pre-plant burndown applications
APPLICATION INFORMATION

Freestyle™ herbicide is recommended for both glyphosate-tolerant soybeans as well as conventional or Identity Preserved (IP) soybeans.

Glyphosate-tolerant soybeans: Early pre-plant or pre-emergence, apply as a pre-plant burndown up to 14 days before planting.

- 20 acres per case
- Pre-emergent applications can be made in any tillage system
- Pre-emergent applications require moisture for activation
- Removes early-season weed pressure
- For burndown applications tank mix with glyphosate
- Follow up early post-emergence with glyphosate and other registered herbicides

Glyphosate-tolerant soybeans: Early post, apply post up to the 3rd trifoliate and before soybeans begin to flower.

- 30 acres per case
- Adds residual weed control
- Tank mix with 0.67–1 L/ac of a 540 g/L glyphosate (No additional surfactant required)
- Post applications of Freestyle may shorten the internodes and stunt soybeans but will not result in yield reduction

Non-GM soybeans: Early pre-plant, pre-emergence, tank mix with a grass herbicide which will provide additional weed spectrum and modes of action, such as Boundary™ LQD

- 20 acres per case

APPLICATION METHOD

Freestyle herbicide is formulated to be mixed in water and applied as a uniform broadcast spray. Only apply using ground equipment. Do not apply by air.
CROP ROTATION
Freestyle herbicide is degraded by natural soil processes, and field tests have shown that the following crops may safely be planted at the prescribed interval following soybeans that have been treated with Freestyle. Recropping intervals are dependent on the pH of the soil, as well as the sensitivity of the specific rotational crop. The following crop rotation intervals are based on soil pH of ≤ 7.4:

- 3 months: winter wheat
- 10 months: field corn, soybeans and white beans

PRE-HARVEST INTERVAL (PHI)
The PHI for Freestyle is 100 days.

ADJUVANTS
For post-emergent application, a nonionic surfactant containing at least 80% active ingredient (e.g. Agral® 90, Ag-Surf®) at the rate of 0.2% v/v must be added to the spray solution (2.0 L of surfactant per 1,000 L of spray solution).

Agral® is a registered trademark of a Syngenta Group Company.

Refer to product label for complete use instructions.
Guardian™ MAX herbicide delivers superior convenience and protection against tough weeds. Early and residual weed control provide dependable protection for your crop's yield.

Guardian MAX herbicide is a co-pack of Classic™ and Polaris™ MAX herbicides. It delivers residual early-season control of tough perennials using a powerful, high-load glyphosate formulation. Guardian MAX has two modes of action that proactively manage resistance and can be applied as a burndown for any type of soybean.

Use Guardian MAX herbicide for crop protection you can count on.

**Long lasting burndown and residual control**
Guardian MAX herbicide delivers residual control of tough weeds such as dandelion, yellow nutsedge and annual sow-thistle. It provides a systemic and lasting burndown for hard-to-kill perennials such as dandelion, prickly lettuce and wild carrot. Powerful, broad-spectrum activity allows you to keep a clean field during the critical weed-free period.

**Two modes of action for proactive resistance management**
With its dynamic chemistry, Guardian MAX works well with other herbicide trait systems. Guardian MAX protects against weed shifts and weed resistance from its two modes of action. An excellent first pass across the field for Identity Preserved (IP) and conventional, or in-crop on glyphosate-tolerant (GT) soybeans, including Roundup Ready 2 Xtend™ and Enlist E3™, Guardian MAX features early and residual weed removal to increase your crop's potential.

**Convenient**
Guardian MAX comes with a high-load K-salt glyphosate formulation and treats 30 acres per case. One Guardian MAX MEGA tote treats 600 acres.
WEEDS CONTROLLED (OR SUPPRESSED)

All of the weeds that glyphosate controls, plus:

- Bean, Adzuki
- Carrot, Wild
- Dandelion
- Lamb’s-quarters, Common
- Lettuce, Prickly
- Nutsedge, Yellow
- Pigweed, Redroot
- Ragweed
- Sow-thistle, Annual
- Velvetleaf

1 Suppression
APPLICATION INFORMATION

GT soybeans including Roundup Ready 2 Xtend™ and Enlist E3™ soybeans: pre-plant burndown or post-emergence, apply before flowering begins.

WEEDS:
- Wild carrot: 2- to 20-leaf stage
- Volunteer adzuki beans: 1st to 3rd trifoliate stage of growth
- Dandelion: pre-plant or post-plant pre-emergence
- Yellow nutsedge: post-emergence

APPLICATION METHOD

Do not apply by air.

PRE-HARVEST INTERVAL (PHI)

The PHI for Guardian MAX herbicide is 60 days.

ADJUVANTS

Since Guardian MAX contains a fully loaded glyphosate, additional surfactants are not required.

Refer to product label for complete use instructions.

RATES

One case treats 30 acres
One tote treats 600 acres

CROP ROTATION

Crop rotation depends on crop and soil pH. The following recrop intervals are based on a soil pH of <= 7.4:
- 3 months: winter wheat
- 10 months: field corn, white beans, soybeans and alfalfa
- 12 months: tomatoes

PACKAGING

Guardian™ MAX: 2 x 216 g + 2 x 10 L case.
Guardian MAX MEGA: 15 x 576 g + 400 L.
Crop protection you know and trust
Rely on Lontrel™ XC herbicide for fail-safe control of Canada thistle and multiple other broadleaf weeds in field corn and other crops.

Lontrel XC herbicide is a liquid concentrate to be diluted in water and applied for control of yield-robbing broadleaf weeds. It is effective on a range of crops including field corn, canola, sugar beets, winter wheat, rutabagas, spring wheat and spring barley.

Lontrel XC is a high-performing, selective herbicide you can rely on to knock down target weeds.

**Performance**
This Group 4 herbicide provides superior control against tough broadleaf weeds such as Canada thistle and sow thistle by moving throughout the entire plant system. The following year after a Lontrel XC application, thistle stands are shown to be reduced by 73%.

**Reliable protection**
Lontrel has an all-new XC formulation for unmatched protection in even the toughest and most challenging conditions.

**Choice**
You choose the rate to match the size and scope of your thistle issues. Customized rates allow for complete control of target weeds while being safe for grass and other non-target vegetation.

Lontrel XC herbicide is readily absorbed by both foliage and roots, allowing it to move throughout the plant for superior control. Use it against Canada thistle, wild buckwheat, scentless chamomile, common groundsel and volunteer alfalfa. It suppresses growth of perennial sow-thistle through control of top growth.
WEEDS CONTROLLED

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

APPLICATION INFORMATION

Treat target weed species in a young, growth life cycle, when the Canada thistle is in the rosette to pre-bud stage but prior to purple bud stage and volunteer alfalfa is 5–50 cm in height.

- **Field corn:** spike to 8-leaf
- **Cereal:** 3-leaf to flag leaf
- **Canada thistle:** rosette to pre-bud

Apply to target weed species when they are young and actively growing. Only weeds present during application will be controlled.
**RATES**

Lontrel™ XC has a wide range of rates from 69 mL to 202 mL/acre. Use rates vary by crop.

**Field Corn:**
- Apply Lontrel XC alone or in a tank mix with glyphosate. Apply when field corn is at the spike to 8-leaf stage of growth.
- 69 mL/acre: Tank mix with glyphosate for enhanced control of Canada thistle, dandelions, perennial sow-thistle and wild buckwheat.
- 101 mL/acre: Canada thistle (top growth), vetch and alsike clover

**Cereals (spring wheat, winter wheat, durum wheat, barley):**
- 101 mL/acre: Canada thistle (top growth), vetch and alsike clover
- 69-101 mL/acre: Tank mix with 2,4-D Ester or Amine, MCPA Ester or Amine for enhanced control of Canada thistle as well as weeds listed on the tank mix label.

**Canola (Ontario only):**
- 101 mL/acre: For top growth control of Canada thistle
- Make one application per season; post emergent. Apply at the 2–6 leaf stage of canola, when weeds are actively growing. Apply to Canada thistle at the rosette to pre-bud stage.

**Sugar Beets:**
- 138–202 mL/acre: For control of Canada thistle and other labelled broadleaf weeds, apply either broadcast or as a band over the row. When applied in the band, the amount of Lontrel XC herbicide should be reduced proportional to the bandwidth. Lontrel XC herbicide should be applied when sugar beets are in the cotyledon to 8-leaf stage. For the most effective control of Canada thistle, apply Lontrel XC herbicide as a broadcast treatment to the entire infested area.

**Rutabaga:**
- 138 mL/acre: For control of common ragweed, apply Lontrel XC in approximately 200 to 300 L/ha of water. Apply as a post-emergent spray when ragweed plants are 5 to 10 cm tall. Application to larger ragweed plants will result in reduced weed control. Make only one application per season.
**PACKAGING**

Each case of Lontrel XC herbicide contains 4 x 2.67 L jugs.

**TANK MIXES**

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

**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 or can be summer fallowed.

*Fields previously treated with Lontrel XC up to 101 ml/acre can be seeded after a minimum of 10 months to soybeans and field peas. Very dry soil conditions following application can result in a risk of injury to soybeans or field peas grown in rotation. If severe drought conditions (less than 38 cm rainfall in the 10 months following application) are experienced in the year of application, delay seeding soybeans and field peas an additional 12 months (total of 22 months following application).

Do not seed to crops other than those listed above in the calendar year following treatment.

**PRE-HARVEST INTERVAL (PHI)**

- The PHI for sugar beets treated with Lontrel XC is 90 days.
- The PHI for rutabaga is 83 days.
- The PHI for durum wheat (Eastern Canada) is 60 days.
- For 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.

**ADJUVANTS**

Lontrel XC does not require additional adjuvants or surfactants.

Refer to product label for complete use instructions.
Pixxaro™ herbicide is a high-performing broadleaf weed control solution for wheat and barley, containing Arylex™ active, a powerful Group 4 active ingredient.

Pixxaro herbicide with Arylex™ active is a selective herbicide for post-emergent control of annual broadleaf weeds including Canada fleabane, chickweed, cleavers, hemp-nettle, kochia, lamb’s-quarters, redroot pigweed and wild buckwheat in spring wheat (including durum), winter wheat and spring barley that are not underseeded to legumes. Pixxaro offers the ability to spray when you want in any conditions – early or late, on big or small weeds, in hot or cool conditions.

Rely on Pixxaro herbicide to deliver uncompromising performance in a variety of weather, crop and weed staging conditions.

**Exceptional control of broadleaf weeds**

Pixxaro provides exceptional control of the toughest broadleaf weeds, including cleavers, chickweed, hemp-nettle and Canada fleabane. You can depend on Pixxaro to deliver reliable weed control from the 1- to 8-leaf stage.

**Tank mix options**

Pixxaro is an excellent tank mix partner for grassy weeds in tandem with products registered for wheat and barley as well as with fungicides. It will deliver uncompromising performance in a variety of weather, crop and weed staging.

**Convenient packaging**

Pixxaro comes in a convenient 40 acre case.

Pixxaro herbicide is a systemic auxin-type herbicide that moves within the plant to control exposed and underground plant tissues. The product knocks weeds down by disrupting normal plant growth patterns. Symptoms of weeds include epinasty (twisting of the stems) and swollen nodes.
WEEDS CONTROLLED (OR SUPPRESSED)

- 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 Fleabane
- 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.
APPLICATION INFORMATION

- **Barley, wheat (durum, spring, winter):** Apply from 3-leaf stage to just prior to flag leaf emergence
- **Weed stage:** 1- to 8-leaf (or larger; see label)

Apply Pixxaro™ herbicide at the 40 acres/case rate of application. If Plus M Ester 600 (provided in the Pixxaro co-pack) is used with Pixxaro as intended, no surfactant is required.

APPLICATION METHOD

Mix Pixxaro herbicide with water and apply as a uniform broadcast spray either by ground or aerial application. It is non-corrosive, non-flammable and non-volatile.

Pixxaro must be applied early post-emergence, to the main flush of growing broadleaf weeds. Warm, moist growing conditions promote active weed growth and enhance the activity of Pixxaro by allowing maximum foliar uptake and activity. Weeds hardened off by cold weather or drought stress may not be adequately controlled or suppressed and re-growth may occur. For best results, ensure thorough spray coverage of target weeds.

**Ground Application**

Using ground equipment, apply Pixxaro as a broadcast treatment at the recommended rate.

**Aerial application**

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

RATES

One case of Pixxaro herbicide treats 40 acres.

123 mL/acre Pixxaro A
236 mL/acre Plus M Ester 600

PACKAGING

Pixxaro herbicide comes in a convenient 40 acre co-pack.

**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™

- **Supported fungicides:**
  - Acapela™ fungicide
  - Cerefit™ fungicide

**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 (PHI)**

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

**ADJUVANTS**

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

Refer to product label for complete use instructions.
**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.

Simplicity GoDRI is a selective post-emergence herbicide for the control of wild oats (including Group 1 resistant wild oats) and certain broadleaf weeds in spring wheat, durum wheat and winter wheat that are not underseeded with legumes. GoDRI is a highly concentrated, high-performing, low dose formulation with Rapid Dispersion Technology™ (RDT). This new technology disperses quickly and unlike old, dry formulations, it is easy to mix and will not plug nozzles, screens or filters. It also requires less packaging and won’t freeze. The product disperses rapidly and completely for the duration of spraying, ensuring worry-free application with no interruptions.

Count on Simplicity GoDRI herbicide for superior grass and broadleaf weed control.

**Effective resistance management**

Simplicity GoDRI has a wide application window, making it the only Group 2 wild oat product that can be applied up to the emergence or flag leaf stage. You can proactively manage Group 1 resistant wild oats with Simplicity GoDRI.

**Exceptional flexibility**

Exceptional flexibility allows you to tank mix Simplicity GoDRI with any Corteva Agriscience™ broadleaf product and rotate to any crop the following year without restriction.

**Convenient formulation**

GoDRI Rapid Dispersion Technology is a highly concentrated, easy-to-use formulation and mixes quickly in the tank. It requires less packaging and handling so you can fill a sprayer tank and cover more acres in less time.

Simplicity GoDRI inhibits the production of the acetolactate synthase (ALS) enzyme in plants. This enzyme is essential for the production of certain amino acids which are essential for plant growth.

Simplicity GoDRI must be applied early post-emergence, to the main flush of growing wild oats and broadleaf weeds. Conditions favouring active weed growth enhance the activity of Simplicity GoDRI by allowing maximum foliar uptake and contact activity.
WEEDS CONTROLLED (OR SUPPRESSED)

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

Grass
- Barnyard Grass
- Brome, Downy
- Brome, Japanese
- Foxtail, Green*
- Foxtail, Yellow
- Oat, Wild

Broadleaf
- Buckwheat, Wild*
- Canola, Volunteer (excluding Clearfield™)
- Chickweed, Common
- Cleavers
- Cowcocket
- Dandelion*
- Flixweed
- Hemp-nettle
- Lady’s-thumb
- Mallow, Roundleaf
- Pennycress, Field
- Pigweed, Redroot
- Shepherd’s-purse
- Smartweed*
- 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.

APPLICATION INFORMATION

Crop stage: 3-leaf stage, prior to flag leaf emergence

Wild oats: 1- to 6-leaf stage. For control of low wild oat populations (<75 plants/m2) only, use 52 g/ha. Water volume 2-40 L/ac (3-10 US gal/ac)

Broadleaf weeds: 1- to 5-leaf stage

Downy brome: fall application will provide control, spring application will provide suppression

Apply at 28 g/ac for control of grass and broadleaf weeds.

APPLICATION METHOD

Simplicity™ GoDRI™ herbicide is mixed with water and applied as a uniform broadcast spray. For full application details please refer to label.
### CROP ROTATION

Seed to all major crops the year following application: field peas, chickpeas, lentils, soybeans, sunflowers and potatoes

- **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

### ADJUVANTS

Simplicity GoDRI always requires the addition of Agral® 90 or another Corteva Agriscience™ recommended non-ionic surfactant (NIS):

- Agral 90 at 0.25% v/v
- Sentry™ at 0.25% v/v
- Ag-Surf® Original at 0.25% v/v

Agral® is a registered trademark of a Syngenta Group Company.

Refer to product label for complete use instructions.
Helping you improve yields and increase profits
Steadfast™ IS herbicide rapidly stops growth of target weeds. Typical symptoms usually appear within 5 to 7 days, but may not be noticeable for 2 to 3 weeks post-application, depending on growing conditions and weed susceptibility. Warm, moist conditions post-application will enhance performance, while cool and/or dry conditions may reduce or delay activity. Weeds hardened off by cold weather or drought stress may not be controlled. Weed control may be reduced if the corn canopy has closed in over the weeds, intercepting the spray.

Steadfast™ IS herbicide is your go-to solution for control of grasses and volunteer canola in field corn. It comes in a low use rate extruded WG formulation for easy measuring and mixing. Steadfast IS comes with a built-in crop safener allowing for a wide window of application and use on low heat unit corn hybrids.

Depend on Steadfast IS herbicide to remove yield robbing grasses from your conventional field corn.

Proven control of annual grasses
Steadfast IS provides dependable post-emergence control of key annual grasses such as green foxtail and wild oat. It also provides control of volunteer canola including glyphosate-resistant types.

Crop safety under a wide range of conditions
Steadfast IS contains isoxadifen, a crop safener allowing for use on short season field corn hybrids and in regions with low heat units. It also provides for a wide application window up to the 8-leaf stage of corn.

WEEDS CONTROLLED
- Foxtail, Green
- Canola, Volunteer
- Oat, Wild
- Wheat, Volunteer
APPLICATION INFORMATION

Apply 27 g/ac of Steadfast IS herbicide as a broadcast spray.

Conventional field corn: Steadfast IS must be tank mixed with a non-ionic surfactant at 2L/1,000L (0.2% v/v).

Glyphosate-tolerant field corn: Steadfast IS can be tank mixed with glyphosate at 900 US gal/ha. When tank mixed with glyphosate, the addition of a non-ionic surfactant is not required.

Corn: spike to 8-leaf

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

Volunteer canola: Cotyledon to 5-leaf

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.

APPLICATION METHOD

Apply with ground equipment only.

Do not apply during periods of dead calm. Avoid application of this product when winds are gusty.

Do not apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm or less above the crop or ground.
**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 (PHI)**

The PHI for Steadfast IS is 30 days for corn (silage, fodder or grain).

**ADJUVANTS**

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

Refer to product label for complete use instructions.
Helping you overcome today's challenges
Disease Control
For Healthier Crops
## FUNGICIDE BY CROP

<table>
<thead>
<tr>
<th>Crop</th>
<th>Page</th>
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<tbody>
<tr>
<td><strong>Corn</strong></td>
<td>82</td>
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<tr>
<td>Acapela™</td>
<td>82</td>
</tr>
<tr>
<td><strong>Soybeans</strong></td>
<td></td>
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<tr>
<td>Acapela™</td>
<td>82</td>
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<tr>
<td><strong>Cereals</strong></td>
<td></td>
</tr>
<tr>
<td>Acapela™</td>
<td>82</td>
</tr>
</tbody>
</table>

### Other crops

| Acapela™ | 82 |

- Dry Legumes
- Potatoes
- Oilseed (flax)
Acapela fungicide has one-of-a-kind movement properties that help provide complete coverage and superior protection to deliver healthier crops and higher yield potential. It is a broad-spectrum fungicide designed to provide reliable disease control for corn and soybean crops.

Acapela is an innovative tool and proven solution for the management of white mould (Sclerotina), a devastating disease of soybeans and dry legumes.

**Unique mode of action**
It is the only Group 11 fungicide to control white mould and provides broad-spectrum control of important foliar diseases such as northern leaf blight, Septoria, Cercospora, rust and powdery mildew.

**Superior plant coverage and translocation**
Acapela has superior coverage to deliver more consistent protection and outstanding disease control. Rapid absorption and movement throughout the plant allows you to spray even during challenging conditions.

**Strengthens crops for higher yields**
Acapela supports enhanced crop performance. It increases chlorophyll content and plant productivity for greener, healthier crops and higher yield potential even in stressful conditions.

**Unique movement properties**
Dynamic movement properties provide superior coverage for reliable disease control under a variety of conditions. Four innovative movement characteristics quickly and efficiently surround, penetrate and protect the leaf and stem to prevent infection on the entire plant, leading to more consistent performance and higher yield potential.

- Systemic movement through the plant xylem distributes Acapela throughout the leaf
- Protective gas-like barrier allows for movement over the leaf surface, providing complete coverage
- Wax diffusion provides consistent coverage across the leaf or stem surface
- Rapid absorption protects quickly and gives you flexibility to spray even in challenging field conditions
DISEASES CONTROLLED (OR SUPPRESSED)

**Soybeans**
- Brown Spot
- Frogeye Leaf Spot
- Rust, Soybean
- White Mould

**Corn (field, sweet, seed, popcorn)**
- Northern Corn Leaf Blight

**Cereals (barley, oats, rye, triticale, wheat)**
- Barley Scald (barley and rye)
- Crown Rust (oats)
- Leaf Blotch (wheat, rye, barley and triticale)
- Leaf Rust (various) (wheat, rye and triticale)
- Net Blotch (barley)
- Powdery Mildew
- Stripe Rust (various) (cereal grains)
- Tan Spot (wheat)

**Dry legumes**
- Anthracnose (various) (dry beans)
- Mycosphaerella Blight (field peas)
- Rust, Soybean
- White Mould

**Potatoes**
- Early Blight
- Late Blight
- White Mould

**Oilseed (flax)**
- Pasmo

---

1 Suppression
APPLICATION INFORMATION

Soybeans:

For white mould (Sclerotinia)

For white mould, make initial preventative application at R1 to R2 (beginning to full bloom) and follow up with second application 7 to 10 days later.

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.

Cereals (barley, oats, rye, triticale, wheat) and Oilseed (flax):

For crown rust (oats), leaf rust (wheat, rye and triticale), net blotch (barley), powdery mildew scald (barley and rye), Septoria leaf blotch (wheat, rye, barley and triticale), stripe rust (cereal grains), tan spot (wheat) and pasmo (flax)

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.

To optimize yields in cereals, it is important to protect the flag leaf from foliar diseases. For optimizing yield and flag leaf disease control, apply Acapela™ at Feekes 9 ‘flag leaf out’.

Do not apply after flowering (Feekes 10.5).

Dry legumes (includes the following:)

- Adzuki bean
- Blackeyed pea
- Broad bean (dry), fava/faba
- Catjang
- Chickpea
- Cowpea
- Crowder pea
- Field bean
- Field pea
- Grain lupin
- Guar
- Kidney bean
- Lablab bean
- Lentil
- Lima bean
- Moth bean
- Mung bean
- Navy bean
- Pigeon pea
- Pinto bean
- Rice bean
- Southern pea
- Sweet lupin
- Tepary bean
- Urd bean
- White lupin
- White sweet lupin

For Mycosphaerella blight (field peas), Asian soybean rust, Anthracnose (lentils and dry beans) and Ascochyta blight (lentils)

Begin applications prior to disease development. Use higher rate and shorter interval when disease pressure is high.

For white mould (Sclerotinia)

For white mould, make initial preventive application at beginning bloom and follow with 2nd application 7 to 10 days later at full bloom.
**APPLICATION METHOD**

Acapela fungicide is registered for ground sprayer and aerial application.

Use sufficient water to obtain thorough coverage of plants. Minimum aerial application volume is 50 L/ha and minimum ground application volume is 110 L/ha.

**Field sprayer application**

Do not apply during periods of dead calm. Avoid application of this product when winds are gusty. Do not apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

**RATES**

**Water volume**

- **Ground:** 110 L/ha (10 US gal/ac) minimum
- **Air:** 50 L/ha (4.5 US gal/ac) minimum

**Soybeans:**

- For white mould (Sclerotinia)
  - 0.35 L/ac (0.88 L/ha)
- For Asian soybean rust, brown spot (Septoria) and frogeye leaf spot (Cercospora sojina)
  - 0.18 to 0.35 L/ac (0.44 to 0.88 L/ha)

**Corn (field, sweet, seed, popcorn):**

- For northern corn leaf blight
  - 0.21 to 0.32 L/ac (0.53 to 0.8 L/ha)

**Cereals (barley, oats, rye, triticale, wheat) and Oilseed (flax):**

- For crown rust (oats), leaf rust (wheat, rye and triticale), net blotch (barley), powdery mildew scald (barley and rye), Septoria leaf blotch (wheat, rye, barley and triticale), stripe rust (cereal grains), tan spot (wheat) and pasmo (flax)
  - 0.18 to 0.35 L/ac (0.44 to 0.88 L/ha)

**Dry legumes:**

- For Mycosphaerella blight (field peas), Asian soybean rust, Anthracnose (lentils and dry beans) and Ascochyta blight (lentils)
  - 0.24 to 0.35 L/ac (0.6 to 0.88 L/ha)

- For white mould (Sclerotinia)
  - 0.35 L/ac (0.88 L/ha)

**Potatoes:**

- 0.24 L to 0.40 L/ac for early blight and white mould (Sclerotinia sclerotiorum)
- 0.18 L to 0.40 L/ac for late blight
PACKAGING

One case of Acapela™ contains 2 x 9.6 L jugs, or a 115.2 L drum.

CROP ROTATION

Any crop the following year.

PRE-HARVEST INTERVAL (PHI)

- The PHI in dry legumes is 14 days; vines and hay is 0 days.
- The PHI in cereals is 45 days, forage is 7 days and hay is 14 days.
- The PHI in corn is 7 days, grazing, forage is 0 days.
- The PHI in forage is 7 days.
- The PHI in hay is 14 days.
- The PHI in soybeans is 14 days.
- The PHI in potatoes is 3 days.
- The PHI in flax is 28 days.

Refer to product label for complete use instructions.
Broad spectrum disease control you can count on
Powerful control in one portfolio
INSECTICIDE BY CROP

Corn
Delegate™ ........................................... 90
Intrepid™ ............................................. 94
Lannate™ ............................................. 96

Soybeans
Delegate™ ............................................. 90

Wheat
Delegate™ ............................................. 90
Delegate insecticide has a novel Group 5 mode of action offering quick knockdown and residual control. With its favourable environmental and toxicological profiles and minimal effects on beneficials, Delegate is ideal for most integrated pest management programs.

Use Delegate insecticide for rapid knockdown and long-lasting control of yield-robbing pests.

**Unique mode of action**
No other class of products affects the insect’s nervous system with the same mode of action as spinetoram, the active ingredient in Delegate. For this reason, Delegate is an excellent rotational product for use in an integrated pest management program. Its translaminar activity also provides extra protection against insects that feed on the underside of leaves.

**Easy-to-use formulation**
Delegate offers low use rates delivered through a convenient dry formulation and features long-lasting residual control across multiple growth stages.

**Exceptional performance**
Delegate works within minutes to hours of application to effectively control foliage-feeding pests. It delivers quick knockdown and residual control of Western bean cutworm and European corn borer in field corn. Because it is circulated throughout the leaf, Delegate protects against pests that feed on the underside or untreated leaf surface. It is resistant to wash-off by rain when dry (two hours).

Delegate insecticide is a powerful product for rotational use in your integrated pest management program. Apply it when scouting indicates that target pest densities have reached the economic threshold.

Delegate has a low environmental impact. Industry field trials have shown that it has minimal effects on beneficial populations such as ladybugs.
Delegate insecticide’s active ingredient, Spinetoram, is the only Group 5 insecticide registered for Western bean cutworm control in corn. It affects the insect’s nervous system with a mode of action unique to this class of products.

**PESTS CONTROLLED**

<table>
<thead>
<tr>
<th>Corn</th>
<th>Wheat</th>
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<tbody>
<tr>
<td>• European Corn Borer</td>
<td>• Armyworm</td>
</tr>
<tr>
<td>• Western Bean Cutworm</td>
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</tbody>
</table>

**APPLICATION INFORMATION**

Application timing is based on crop and pest.

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

Field corn, sweet corn, seed corn, popcorn:
Western bean cutworm and European corn borer

Applications should be timed at egg hatch or to small larvae. Use the higher rate for heavy infestations, large larvae and for longer residual control. Repeat applications based on monitoring of insect populations. Apply a maximum of 3 applications per year with a minimum of 5 days between applications.

Wheat:
European corn borer

Scout for the pest with enough regularity to monitor egg laying and egg hatch and treat when thresholds are reached. Applications perform best when timed to coincide with peak egg hatch and/or small larval stage of growth of each generation.

Soybeans:
European corn borer

Time the initial application to target small larvae and use sufficient spray volume to ensure good coverage. Use the higher rate for heavy infestation and/or difficult spray coverage situations.

Use Delegate insecticide as a tool in your overall Integrated Pest Management (IPM) strategy that includes monitoring, scouting and thresholds. Alternate Delegate’s unique Group 5 chemistry with insecticides from other groups for effective management of European corn borer.

Delegate residues that have dried on the vegetation are non-toxic to bees. Do not spray when bees are active in the area.

The re-entry interval for Delegate is 12 hours.

Ensure sufficient water volume for complete coverage of the plant foliage.
APPLICATION METHOD

Ground application

Use spray equipment capable of thorough coverage of the crop, ensuring uniform coverage of the target pest.

Aerial application (potatoes and corn (field, sweet, seed and popcorn) only)

Apply in a solution of at least 30 litres per hectare.

Delegate™ insecticide is classified as a Class 3 pesticide by Ontario Pesticide Action Committee. Aerial applications do not require a permit.

Do not apply during periods of dead calm. Avoid application of this product when winds are gusty. Do not apply when wind speed is greater than 16 km/h at flying height at the site of application. Do not apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) fine classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length must not exceed 65% of the wing- or rotor-span.

Apply only by fixed-wing or rotary aircraft equipment that has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.
**RATES**

Rates are based on crop and pest.

**Field corn, sweet corn, seed corn and popcorn:**
Western bean cutworm and European corn borer
- 120 to 210 g/ha (50 to 85 g/ac)

**Wheat:**
European corn borer
- 100 to 200 g/ha (40 to 80 g/ac)

**Soybeans:**
European corn borer
- 100 to 200 g/ha (40 to 80 g/ac)

**PACKAGING**

One case of Delegate contains 6 x 840 g bottles.

**TANK MIXES**

There are no registered tank mixes for Delegate insecticide, but it can be mixed with fungicides like Acapela™ and micro-nutrients, provided:
- The tank mix partner is registered on the crop.
- The application timing of all tank mix partners are compatible with crop and pest staging.
- The most restrictive label directions of the tank mix are followed.

**CROP ROTATION**

Treated field may only be rotated to labeled crops.

**PRE-HARVEST INTERVAL (PHI)**

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

Refer to product label for complete use instructions.
Intrepid initiates a lethal premature molt in specific lepidopterous pests (caterpillars) while not adversely affecting beneficial insects such as bees, predatory mites, beetles, wasps and spiders, making it ideal for integrated pest management systems. It has an excellent environmental profile in terms of safety to humans, mammals, birds, aquatic organisms and groundwater.

Intrepid has both ovicidal and larvicidal activity. Ingestion is the main source of activity on pests, causing the larvae to stop feeding within 24 hours and providing long residual control for 10 to 14 days after application.

**PESTS CONTROLLED**

**Corn**
- European Corn Borer
APPLICATION INFORMATION

Apply at the first signs of feeding damage. Monitoring of insect populations is key to controlling this pest. Direct application at the whorl for early season (first generation) infestations. Repeat applications after 5-10 days if required based on population monitoring. Use the higher rate for heavy infestations, or larger crop canopies.

APPLICATION METHOD

Ground application: Make applications of Intrepid by conventional ground application equipment.

Not registered for aerial application.

RATES

Corn:
European corn borer
• 0.12 – 0.24 L/ac

TANK MIXES

• No registered tank mixes

PACKAGING

4 x 4 L jugs

PRE-HARVEST INTERVAL (PHI)

Do not apply within 3 days of harvest for sweet corn and 21 days of harvest for field corn and popcorn.

Refer to product label for complete use instructions.
Lannate insecticide provides rapid knockdown and control at all life stages of many pest species, including aphids, corn earworm and European corn borer.

Lannate, a Group 1A (carbamate) insecticide provides excellent control of adults, nymphs, larvae and eggs of multiple pests that threaten crops.

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

PESTS CONTROLLED

Sweet Corn
- Aphids
- Corn Earworm
- European Corn Borer
Lannate insecticide is a dry powder contained within a water soluble bag, to be dissolved in water for application by ground or air equipment in a commercial farm setting. Always wear chemical-resistant gloves when handling Lannate. Do not allow water soluble bags to become wet prior to adding to the spray tank. Never puncture bags for any reason or store below 10°C. Allow the product to warm above 10°C prior to handling. Do not mix with liquid fertilizers, substances that contain boron or could release free chlorine. Mixing the water soluble film with any of these compounds will result in an insoluble substance in the tank.

The Restricted Entry Interval (REI) for Lannate insecticide is 12 hours after application.

Apply Lannate insecticide by ground or aerial application.

Rates for effective Lannate insecticide control are based on crop and pest.

**Sweet Corn:**
- Aphids
  - 174-251 g/ac
- Corn Earworm
  - 174-253 g/ac
- European Corn Borer
  - 253 g/ac

One case of Lannate insecticide contains 5.4 kg of product packaged in convenient water soluble, pre-measured Toss-N-Go® bags (225 g/bag x 24 bags).

The PHI for corn treated with Lannate is 3 days

Refer to product label for complete use instructions.
Protect your nitrogen
# NITROGEN STABILIZER BY CROP

<table>
<thead>
<tr>
<th>Crop</th>
<th>NITROGEN STABILIZER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corn</td>
<td>eNtrench™ 100</td>
</tr>
<tr>
<td>Canola</td>
<td>eNtrench™ 100</td>
</tr>
<tr>
<td>Wheat</td>
<td>eNtrench™ 100</td>
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</tbody>
</table>
It has been shown to increase corn yields by 7%, wheat yields by 6% and canola yields by 8% on average while providing a 21% increase in soil nitrogen retention.

Improved efficiency and reduced costs
Applying nitrogen in the fall allows you to take advantage of typically lower fertilizer costs and save time during spring seeding.

Reduced environmental impacts
eNtrench uses Optinyte™ technology, which reduces greenhouse gases by 51% and reduces leaching of nitrates by 16%.

More nitrogen available for your crop
eNtrench slows the conversion of ammonium nitrogen to nitrates, stabilizing nitrogen in the soil and making it less prone to loss through leaching and denitrification.

eNtrench is a nitrification inhibitor for use with nitrogen based fertilizers. eNtrench stabilizes nitrogen in the soil, keeping it in the root zone in a stable, usable form until your crops need it.
eNtrench is effective when used with dry or liquid fertilizers, including UAN, urea and liquid manure.

Keep nitrogen in the root zone longer with eNtrench™ and maximize the yield and profit potential of your corn, wheat and canola crops.

BENEFITS OF USING NITROGEN STABILIZERS

INCREASED

<table>
<thead>
<tr>
<th>CORN YIELD(^1)</th>
<th>CANOLA YIELD(^2)</th>
<th>WHEAT YIELD(^2)</th>
<th>NITROGEN RETENTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>7%</td>
<td>8%</td>
<td>6%</td>
<td>21%</td>
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</tbody>
</table>

DECREASED

<table>
<thead>
<tr>
<th>GREENHOUSE GAS EMISSIONS(^3)</th>
<th>NITROGEN LEACHING(^3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>51%</td>
<td>16%</td>
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</tbody>
</table>

\(^1\) Based on combined meta-analysis data.  
\(^2\) Based on Dow AgroSciences Canada research trials.  
\(^3\) Source: J.D. Wolt. 2004. A meta-evaluation of nitrapyrin agronomic and environmental effectiveness with emphasis on corn production in the Midwestern USA. Nutrient Cycling in AgroEcosystems.
APPLICATION INFORMATION

Apply in the fall or spring with liquid manure
Apply pre-plant with dry or liquid fertilizers
Apply in crop with side-dressed UAN in corn

APPLICATION METHOD

Liquid fertilizers

eNtrench can be mixed with liquid fertilizers, such as urea-ammonium nitrate (UAN). When applying with liquid fertilizer, a stable emulsion of eNtrench in liquid fertilizer must be formed, uniformly mixing the eNtrench throughout the fertilizer. Add the required amount of eNtrench to the fertilizer, continuously agitating as the product is added to the fertilizer.

Liquid manure

eNtrench can be added directly to the manure pit when emptying it. Calculate the number of acres that will be covered by the content of the pit then add 1.1 L/ac (2.7 L/ha) of eNtrench to the pit prior to completing the pit agitation and mixing.

Dry fertilizers

eNtrench may be applied on urea and most dry ammonia-based fertilizers.

RATES

• 1.1 L/ac (2.7 L/ha)

eNtrench is designed for use with dry and liquid fertilizers, including UAN, urea and liquid manure.

PACKAGING

eNtrench comes in a case of two 10 L jugs. Also available in 990 L tote.

Refer to product label for complete use instructions.
Serious seed protection.
SEED TREATMENT BY CROP

Soybeans

Lumisena™ ......................................... 104

Corn

Lumivia™ .............................................. 108
**Lumisena™ fungicide seed treatment** delivers the strongest protection against Phytophthora to give you healthier stands and higher yield potential.

Lumisena fungicide seed treatment is the most advanced seed-applied technology available to protect against Phytophthora. It is the only seed-applied technology to provide protection from Phytophthora across multiple stages of the pathogen’s life cycle. Count on Lumisena to boost stand establishment, crop vigour and yield.

- 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

Lumisena fungicide seed treatment offers a unique mode of action that controls Phytophthora far better than previous industry-standard seed treatments. When you use Lumisena 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 other seed treatments.

**DISEASES CONTROLLED**

Phytophthora diseases

- Soybeans
  - Phytophthora seed rot
  - Pre-emergence damping off
  - Post-emergence damping off
Lumisena protection against Phytophthora

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 new, best choice for protection against Phytophthora. It is the only seed-applied technology that delivers protection across multiple stages of the Phytophthora pathogen’s life cycle:

- preventative
- eradicative
- curative
- antisporulant

DISEASE - PHYTOPHTHORA
40 DAYS AFTER PLANTING

Commercial Variety • No Genetic Tolerance • Below Average Field Tolerance to Phytophthora

Smaller & Slower plant development

Smaller, healthier plant

Taproot moderately infected with Phytophthora pathogen

Larger healthier plant

Reduced Phytophthora infection of taproot

Healthy taproot development protected from Phytophthora pathogen infection

Lumisena Soybean Research Authorization Trial Results

2017 Lumisena™ ST Yield Data - Canada, Moderate to High Pressure

8 Trial locations
2 Reps per location
FST Only
Lumisena™ + FST

Yield (bu/acre)

Lumisena Efficacy – Plant Stand Count Data

Soybean Plant Stand Counts when Phytophthora is present

Uninoculated check
Lumisena™
Metalaxyl
Metalaxyl (high rate)

Seed Applied Technology Research Trials Data from 2011 - 2015,
Average of 13 Trials

Refer to product label for complete use instructions.
Advanced seed applied technology for soybeans and corn
Lumivia insecticide seed treatment protects against feeding damage from early-season, below-ground insect pests, like wireworms and seedcorn maggots. It also protects the crop against insect pests that feed on foliage.

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

Lumivia insecticide seed treatment coats the seed and remains concentrated in key areas of the plant protecting your corn crop from germination to the V5 growth stage.

**Simplify your seed treatment decision**
- Valuable tool for Integrated Pest Management (IPM) strategy
- Saves you time by reducing administrative record-keeping

**Favourable environmental profile**
- Minimal impact on the environment
- Minimal impact on beneficial insects and pollinators when used in accordance with the label

**Excellent seedling protection**
- Immediate protection of seed and seedlings
- Uniform and healthy stand establishment
- Protects yield potential through improved early-season vigour

Refer to product label for complete use instructions.

**PESTS CONTROLLED (OR SUPPRESSED)**

- Cutworm
- Seedcorn Maggot*
- Wireworm
- White grubs *(including: Larvae of Asiatic Garden Beetle, Masked Chafers, European Chafer, Japanese Beetle, and May/June Beetles (junebugs))*

* Suppression
Consistent yield performance through outstanding protection
Your crop protection partner
OTHER INFORMATION

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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.

New Products for the 2020 season.

**Commenza™ herbicide**
Commenza™ is a new three-mode of action herbicide solution for pre-emergence cross-spectrum annual broadleaf and grass control. With overlapping modes of action on key broadleaf species such as Eastern black nightshade, Commenza is the foundation for a robust weed management strategy. Commenza containing metribuzin can be tank mixed with a burndown herbicide such as Elevore™ for solid multi-mode performance on glyphosate-resistant Canada fleabane.

**Lontrel™ XC herbicide**
Lontrel™ XC is now registered in field corn. This group 4 herbicide can be applied from spike to 8-leaf corn for improved control of perennial weeds like vetch and thistles.

**Steadfast™ IS herbicide**
Steadfast™ IS herbicide for field corn is now available for the 2020 season. Steadfast IS provides a safened post-emergence grass solution for non-GM conventional field corn. With a built-in safener, Steadfast IS is suitable for low CHU hybrids and growing areas, and has a wide application window up to the 8-leaf stage.

**Cerefit™ fungicide**
Cerefit™ is a new dual mode of action fungicide developed to be applied in a tank mix with Pixxaro™, at herbicide timing to protect your high yielding winter wheat from serious leaf diseases. Cerefit provides broad-spectrum control of leaf diseases in winter wheat, such as Stripe Rust, Septoria Leaf Spot, Septoria Glume Blotch, Septoria Complex and Powdery Mildew. The multiple modes of action in Cerefit provide a unique combination of 2 active ingredients (Group 11 and 3) for 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.
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.
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.


Herbicide rotation alone will delay the onset of resistance; however, incorporating Multi-Made 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.

<table>
<thead>
<tr>
<th>MODE OF ACTION</th>
<th>HERBICIDE ACTIVITY</th>
<th>WEED RESISTANCE LEVELS</th>
</tr>
</thead>
<tbody>
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MODE OF ACTION HERBICIDE ACTIVITY WEED RESISTANCE LEVELS

MULTI-MODE OF ACTION

| Two or more active ingredients with different modes of action: | Overlapping control on the same target weeds | Greatly reduces the opportunity for resistant weeds to escape, survive and reproduce |
| Two or more active ingredients with different modes of action: | No overlapping control on target weeds | Increases the opportunity for resistant weeds to escape, survive and reproduce |
| Rotation with different herbicide groups will delay onset of resistance | | |

SINGLE MODE OF ACTION

| Single active ingredient: | No overlapping control on target weeds | Increases the opportunity for resistant weeds to escape, survive and reproduce |
| Rotation with different herbicide groups will delay onset of resistance | | |