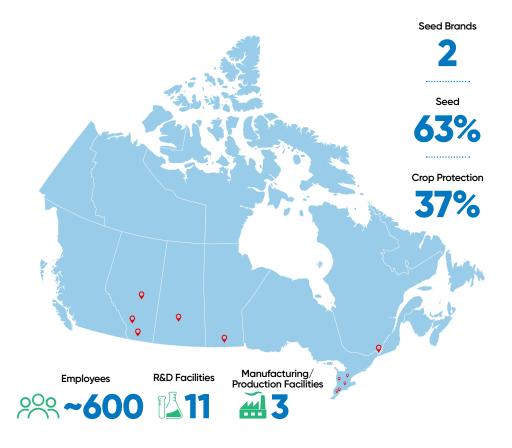


# 2025 WESTERN CANADA FIELD GUIDE



# Corteva Agriscience in Canada







Learn more at corteva.ca

# DOWNLOAD THE 2025 CORTEVA AGRISCIENCE FIELD GUIDE APP

The Corteva Agriscience 2025 Field Guide app showcases our expanded portfolio of Canadian crop protection products and is designed to help you get the most out of every acre. It's a quick access, easy and user-friendly tool that assists in choosing the right high performing products, as well as the right order to tank-mix them.

# AT THE CLICK OF A BUTTON HAVE ACCESS TO:

- Crop protection options
- Herbicide product quick facts
- Key product use information
- Insects and disease control solutions
- Tank-mix order tool
- V/V% Calculator
- Enlist E3™ soybeans
   Program Approach Tool
- Information about the
- Corteva Flex+ Rewards program
   Links to online guides and info on our digital tools

Download our new 2025 Field Guide App. Scan the code with your mobile device camera to find out more and easily download:







# CORTEVA AGRISCIENCE IS A LEADER IN SEED INNOVATION, YIELD AND AGRONOMIC TRAITS.

Corteva Agriscience is the leader in developing seed genetics with high yield potential and solid agronomics that anticipate the needs of Western Canadian growers.

Headquartered in Calgary, Alberta, Corteva has eleven state-of-the-art research facilities focused on breeding and testing. Through these breeding programs, Corteva canola and corn hybrids, and soybean varieties go through extensive multi-year trials and local field testing prior to commercialization.

Once commercialized, Corteva advances these seed innovations and products through our multi-brand, multi-channel approach, offering growers their choice in seed brand and channel.



# COLLABORATING WITH YOUR RETAILER TO DELIVER SOLUTIONS THAT DELIVER PROFIT ON YOUR FARM

Brevant® seeds is a high-performing, locally tested seed brand with portfolios and programs designed to enhance the grower's retail experience. Brevant seeds integrates Corteva Agriscience™ crop protection solutions for a holistic approach serving the needs of the whole farm and is for farmers who prefer to access their technology (seed and crop protection) from one service provider.

For more information on Brevant® seeds, visit brevant.ca



#### INDUSTRY-LEADING PRODUCTS TO MEET LOCAL NEEDS

Pioneer® brand seed delivers unparalleled choice of seed products for today and tomorrow, with innovative "extras" like financial services, agronomy, and promotion of Corteva Agriscience crop protection products and is for growers who prefer product and seed focused expertise delivered through a trusted advisor.

For more information on Pioneer® brand seed, visit Pioneer.com/Canada





# Grow with Corteva Agriscience.

Choose from a portfolio of high-performing, world-class products, and earn rewards without compromising agronomics.



#### **INNOVATION BONUS (Min. 300 gcres)**

When you purchase a combined 300 acres or more of any products that fall within the Innovation category, you save 3% on all products purchased.





#### **EARLY BOOK**

Book by **March 15**, **2025** (Early book starting Sept 1, 2024. All products, priority and classic, qualify for early book.)



# PROGRAM TIERS

**3** CATEGORIES

4 OR MORE CATEGORIES

# CORE

\$25,000 - \$49,999 MSRP or 320 acres of seed



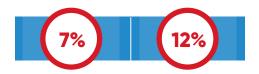
# **CORE PLUS**

\$50,000 - \$119,999 MSRP or 640 acres of seed

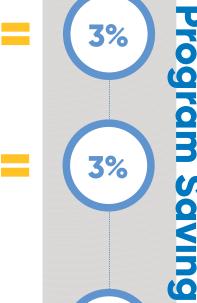


# **CORE MAX**

> \$120,000 MSRP or 1,500 acres of seed



Payment on priority and innovation products only.



12%

Max Savings



To calculate your savings, scan here:



Eligible program period: September 1, 2024 - August 31, 2025



# Grow with Corteva Agriscience.

Choose from a portfolio of high-performing, world-class products, and earn rewards without compromising agronomics.

#### **PRIORITY BRANDS**

Up to 18% savings paid on these products. (Minimum 300 acres per category)

PRE-SEED HERBICIDES	GRASS HERBICIDES	BROADLEAF HERBICIDES	
Korrex™ II Paradigm™ PRE Prospect™	Simplicity™ Simplicity™ GoDRI	Cirpreme™ XC Enlist™ 1 Exhilarate™ Extinguish™ XL OcTTain™ XL OnDeck™ Pixxaro™ A/ Pixxaro™ Flexx Prominex™ Stellar™ XL	
	CROSS SPECTRUM <sup>1</sup> HERBICIDES (Counts as 2 categories)		
	Rexade™ Rezuvant™ XL Tandem™ Tridem™		

INNOV	<b>ATION</b>	BOI	NUS
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#### **INNOVATION PRODUCTS**

Extinguish™ XL OnDeck™ Straxan™ Viatude™ Zetigo™ PRM

FUNGICIDES	SEED	SEED TREATMENTS
Viatude™ Zetigo™ PRM	Brevant® seeds² Pioneer® brand seed²	Lumivia™ CPL insecticide seed treatment  Straxan™ fungicide seed treatment
	CLASSIC BRANDS	
Acapela™ fungicide Accent™ herbicide Amity™ WDG herbicide Ares™ SN herbicide Avenza™ herbicide Enlist Duo™ herbicide	Liquid Achieve™ SC herbicide  Lontrel™ XC herbicide  Lumiderm™ insecticide seed  treatment³ for soybeans  Lumisena™ fungicide  seed treatment³	Prestige™ XL herbicide Prism™ SG herbicide Sortan™ IS herbicide

- · Classic brands do not count as a category
- Brevant® and Pioneer® brand seed products do not qualify for the Early Book bonus.

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• Eligible crop types that count towards Seed Category: canola, corn and soybean.

<sup>&</sup>lt;sup>1</sup> Cross Spectrum counts as two (²) categories, but maximum three (³) categories when purchasing cross spectrum, grass and broadleaf.

<sup>&</sup>lt;sup>2</sup> Seed purchases, both Brevant\* and Pioneer\* brand, build your tier \$ but are not eligible for savings in this program.

 $<sup>^{\</sup>rm 3}$  Lumisena and Lumiderm qualify as classic brands when applied as soybean downstream treatments only.

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#### **SEED APPLIED TECHNOLOGY**

#### **CANOLA**

**NEW** LumiGEN® fungicide

#### CEREALS, PEAS, LENTILS

**NEW** Straxan<sup>™</sup>

#### CORN

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#### **HERBICIDES**

PRE-SEED

Korrex™ II Paradigm™ PRE PrePass™ FLEX Prospect™

IN-CROP **NEW** Accent™ IS Amity™ WDG Ares™ SN Avenza™ Cirpreme™ XC Enlist™ Weed Control System Enlist™ 1 Enlist Duo™ Extinguish™ XL Liquid Achieve™ SC Lontrel™ XC OcTTain™ XL **NEW** OnDeck™ Pixxaro™ A Pixxaro™ Flexx Prestige™ XL Prism™ SG Prominex™ Rezuvant™ XL

Simplicity™

Tridem™

Wild Oat Rate Simplicity™ GoDRI™ Simplicity™ GoDRI™ Wild Oat Rate Sortan™ IS Stellar™ XL Steadfast™ IS

108

#### **RANGE & PASTURE HERBICIDES**

Grazon™ XC Reclaim™ II **NEW** Restore™ NXT Restore™ II

120

#### **FUNGICIDES**

Acapela™ **NEW** Zetigo™ PRM 128

#### **INSECTICIDES**

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#### **NITROGEN STABILIZERS**

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Phenoxy chart Sprayer clean-out Weed guide

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**CONTENTS** 

# SEED APPLIED TECHNOLOGY



# SEED APPLIED TECHNOLOGY

# BY CROP

## **CANOLA** Lumiderm<sup>™</sup> insecticide seed treatment... LumiGEN® fungicide seed **CEREALS, PULSES & LENTILS** Lumivia™ CPL insecticide seed treatment **NEW** Straxan<sup>™</sup> fungicide seed treatment **SOYBEANS** Lumiderm™ Lumisena™ fungicide seed treatment. **NEW** LumiGEN soybean fungicide seed treatment 20 CORN



Lumialza™ nematicide

LumiGEN fungicide seed

treatment with Lumiscend™ PRO ... 31

seed treatment

LumiGEN° seed treatments are exclusive to the seed brands of Corteva Agriscience, and represent the high performing, industry leading seed applied technologies that are available on Pioneer° seed brand genetics, and Brevant° seeds genetics.

Designed for our genetics. Verified on our genetics. Proven in the field with our genetics.

Win the SEED APPLIED TECHNOLOGIES

#### Win the Start with the NEW Corteva Agriscience Seed Applied Technologies Portfolio.

Corteva is committed to discovering, developing, and delivering the industry's highest-quality seed treatments to help protect seed from the start, so it can develop to its full potential. With over 95 years in the seed business, no one understands the need to win the start better than us.

#### What Makes Our Portfolio Unique?

- We are discovering novel actives
- We develop products to solve on farm challenges
- Industry leading support & PASSER evaluation process.



**P**lantability

**A**pplication

**S**tewardship

**S**eed Safety

**E**fficacy

Regulatory

Maximizing seed flow and planting precision

Refining processes to work across seed properties and environmental conditions

Minimizing adverse effects on people and the environment

Ensuring seed treatments don't adversely affect seed germination

Evaluating protection and vigor to confirm seed treatment performs as expected

Meeting regulations and guidelines

Corteva works to discover new actives for seed protection, drawing on the world class Corteva research pipeline, resources, and Centres for Seed Applied Technologies (CSAT). Every product formulation is thoroughly tested in the lab and in the field, ensuring the highest level of performance.

To learn more about Corteva Agriscience Seed Applied Technologies, speak to your local Corteva representative.



# **Lumiderm**

#### **INSECTICIDE SEED TREATMENT**

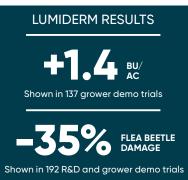
Win the Start with the most complete canola seed protection against flea beetle and cutworm.

#### LUMIDERM™ INSECTICIDE SEED TREATMENT ADVANTAGES

- Enhanced **crucifer and striped flea beetle** protection.
- · Excellent control of early season cutworms.
- Excellent early season seedling stand establishment, vigour and biomass.
- $\cdot$  Up to  ${\bf 35}$  days of protection through the critical stages of seedling growth.
- Group 28 chemistry provides an additional mode of effective action for flea beetle and cutworm control.

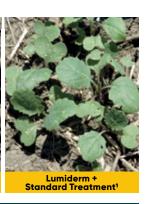
#### LUMIDERM™ PROVIDES EXCELLENT FLEA BEETLE PROTECTION

- Lumiderm provides enhanced protection against both striped and crucifer flea beetles.
   Striped flea beetles usually appear earlier in the crop year and are harder to control with the base neonic seed treatments.
- Because Lumiderm works on the muscle system of the flea beetle instead of the nervous system, feeding stops quicker than when you use Group 4 products on their own.
- 192 grower demo strip trials showed that where Lumiderm was used on canola, the damage from flea beetle feeding was 35% less than those canola acres treated with a standard neonic seed treatment.



2 Source: Lumsden, SK. 22 Days After Seeding.





Your Corteva canola genetics are protected with Lumiderm and Lumiscend fungicide seed treatment as part of the LumiGEN seed treatment package

## 1 Source: Lumsden, SK. 22 Days After Seeding.

3 Source: Vimy, AB

# LUMIDERM™ INSECTICIDE SEED TREATMENT CONTROLS ALL TYPES OF CUTWORMS

Cutworms are a real problem in canola production. Cutworms are very difficult to detect since they typically live underground during the day and feed at night, this makes it very challenging to control them with a foliar insecticide application.

During the first 35 days of seedling growth, Lumiderm™ protects your canola from cutworm feeding which helps enhance early season stand establishment and crop vigour.

# LUMIDERM INCREASES PLANT VIGOUR & BIOMASS

Not only does Lumiderm reduce risk from both flea beetle and cutworm damage, it also delivers substantial increases in plant vigour and biomass. This means a larger canola plant and more uniformity in crop staging versus an untreated canola field.

- Lumiderm treated canola grows bigger, faster and more even thar the untreated canola.
- A more even canola stand at the start results in more even flowering, and harvest, resulting in an easier crop to manage.























4 Source: Sperling, MB 5 Source: Bow Island, AB 6 Source: Vimy, AB







Win the Start with industry-leading disease protection in canola.

#### **LumiGEN® SEED TREATMENT FUNGICIDE PACKAGE ADVANTAGES**

- Provides **proven**, **industry-leading protection** from critical diseases.
- Contains four effective active ingredients (Groups 3. 4. 7 and 11) for industry leading, broad spectrum disease protection.
- · Delivers outstanding protection of airborne blackleg, Rhizoctonia, Pythium, and seedling disease complex.

## **Lumiscend**



Lumiscend™ fungicide seed treatment provides powerful airborne blackleg protection

#### **FUNGICIDE SEED TREATMENT**

A COMPONENT OF THE LUMIGEN® SEED TREATMENT CANOLA DISEASE PACKAGE IS LUMISCEND™ FUNGICIDE SEED TREATMENT, A UNIQUE ACTIVE INGREDIENT FOR POWERFUL AIRBORNE BLACKLEG PROTECTION.

- · Lumiscend™ is a unique new active for seedling blackleg protection. Paired with Corteva Agriscience's industry-leading adult blackleg seed genetics, it sets a new standard in blackleg protection.
- Lumiscend translocates through the young plant to inhibit the growth of the blackleg fungus and protects your crop from emergence through the critical infection period, reducing the risk of severe canker development and yield loss.

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#### WHAT IS BLACKLEG?

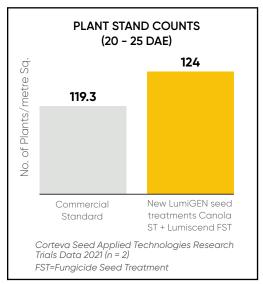
- · Blackleg is a disease that affects canola in all growing regions, and can result in yield loss.
- · Young canola seedlings are infected from soil and/or airborne spores, and seedlings infected early in the growing season are usually the most affected (infection) before the two-leaf stage is often associated with serious vield loss.
- · Once infection from blackleg spores occurs, the infection moves into the stem, often resulting in cankering of the stem that affects moisture and nutrient movement within the plant. This is how yield loss occurs.



#### MANAGING BLACKLEG

- Use canola hybrids that are rated as moderately-resistant or resistant to blackleg, in conjunction with Lumiscend™ fungicide seed treatment seed treatment that provides protection during the critical infection window.
- · Rotate crops to increase years between canola crops.
- · Scout and identify blackleg to manage risk in future canola crops.

#### Powerful Blackleg Protection from Lumiscend™





#### **LUMIDERM™ INSECTICIDE SEED TREATMENT AND LUMISCEND** PROVIDE IMPROVED STAND ESTABLISHMENT, VIGOUR AND BIOMASS.





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Win the Start with the most advanced protection against Phytophthora.

#### WHY USE LumiGEN® SOYBEAN FUNGICIDE SEED TREATMENT?

- A complete solution to all early season disease complexes including Pythium, Rhizoctonia, and Fusarium, with **industry leading protection against Phytophthora root rot.**
- Developed for Corteva Agriscience seed brand genetics for a complete Corteva soybean acre, helping to ensure soybeans reach their full genetic potential.
- A unique combination of 4 highly effective modes of action, including Oxathiapiprolin, which provides unmatched control of Phytophthora root rot and improves overall soybean crop health.
- LumiGEN soybean fungicide seed treatment **translocates through the seed, root system, and aerial portions of the soybean plant,** providing above- and below-ground seedling disease protection.

# **LumiTreo**<sup>™</sup>

#### **FUNGICIDE SEED TREATMENT**

LumiGEN soybean fungicide seed treatment provides unmatched protection of Phytophthora root rot and improves overall soybean crop health.

# LumiGEN soybean fungicide seed treatment provides excellent disease protection

- Damping off, seedling blight, seed rot, and root rot caused by Fusarium spp.
- Rhizoctonia solani
- Phytopthora soljae
- Pythium
- Seed-borne Phomopsis
- Seed rot fungi such as Aspergillus and Penicillium



LumiTreo<sup>®</sup> contains Oxathiapiprolin (Group 49), a unique active exclusive to Corteva Seed Applied Technology products, providing best-in-class protection against Phytophthora.





# **Lumisena**

#### **FUNGICIDE SEED TREATMENT**

Win the Start with the best Phytophthora protection.

#### LUMISENA™ FUNGICIDE SEED TREATMENT ADVANTAGES

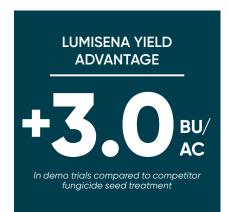
- Most advanced seed applied technology to protect against **Phytophthora**.
- Improves soybean **emergence**, **vigour and root growth** to help maximize stand and yield potential.
- The only seed applied technology that delivers **residual protection** across multiple stages of the Phytophthora pathogen's life cycle.
- · Lumisena™ is a Group 49, a **new class of chemistry** for superior disease protection.

#### MOST ADVANCED CONTROL OF PHYTOPHTHORA FOR SOYBEANS

- Phytophthora is the #1 disease in soybeans and can significantly reduce yields.
- Lumisena offers an entirely new mode of action to provide the best protection against Phytophthora.
- Research has demonstrated that Lumisena will provide greater protection against Phytophthora than existing seed treatments.

#### **IMPROVES SOYBEAN YIELDS & PLANT STANDS**

- Phytophthora is prevalent in North America.
   Growers with Phytophthora pressure have suffered yield losses because of the limitations of existing seed treatments for soybeans.
- In areas with Phytophthora pressure, Lumisena improves plant stands, crop vigour and yield results.
- Lumisena offers a new mode of action that controls Phytophthora far better than previous industry-standard seed treatments.
- When you use Lumisena fungicide seed treatment you significantly improve your soybean plant stand, enhancing early-season plant growth and increasing yield potential.



#### LOOK AT THE RESULTS

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

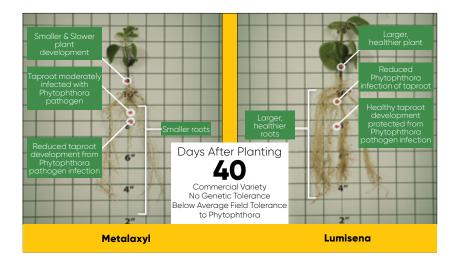
Lumisena™ is the best choice for protection against Phytophthora. It is the only seed-applied technology that delivers residual protection across multiple stages of the Phytophthora pathogen's life cycle:

Preventative

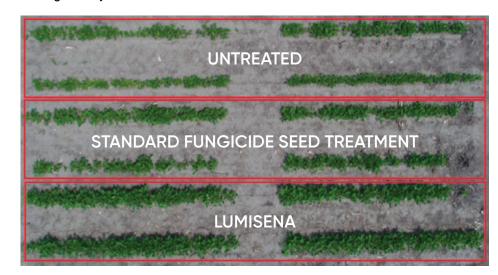
Eradicative

Curative

Antisporulant



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





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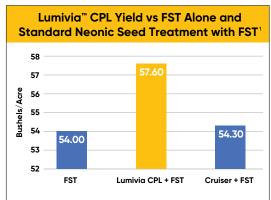
# **Lumivia** CPL

#### **INSECTICIDE SEED TREATMENT**

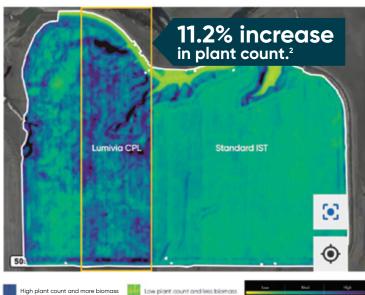
Win the Start with the broadest insect protection against key pests including wireworms, grasshoppers, cutworms, armyworms, and pea leaf weevils.

#### LUMIVIA™ CPL INSECTICIDE SEED TREATMENT ADVANTAGES

- Outstanding early season insect protection for **cereals, peas and lentils** to help maximize plant stand count and yield potential.
- · Reduces the build-up of pest populations.
- Highly systemic movement from the seed coat to roots, mesocotyl, stem and leaves, providing seedling **protection up to 35 days** after seeding.
- Improves vigour, biomass and stand establishment for more even crop staging and harvest establishment.
- Unique mode of action (Group 28), with a favourable environmental profile.



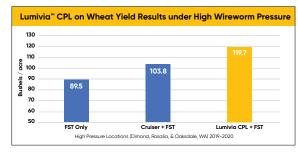




1 Corteva Seed Applied Technologies Research Trials Data - 12 Replicated Trials Targeting Wireworms 2017-2019 FST = Fungicide Seed Treatment

2 Vegetation Index Satellite image, side by side plot. 80 acres of spring wheat in Spring Coulee, AB. Both treatments received the same fungicide seed treatment. Lumivia\* CPL had greater NDVI rating over the neonic standard and 11.2% increase in plant count.

# LUMIVIA" CPL INSECTICIDE SEED TREATMENT IS THE ONLY SEED TREATMENT THAT PROTECTS AGAINST GRASSHOPPERS AND CUTWORMS.





#### LUMIVIA CPL EFFICACY ON CUTWORMS ON WHEAT



Greenhouse trial conducted on wheat at Stine-Haskell Research Center, USA

#### LUMIVIA CPL CONTROLS WIREWORMS & IMPROVES STAND ESTABLISHMENT



#### LUMIVIA CPL MIXES WITH ALL FUNGICIDE SEED TREATMENTS

RATES					
Crop	Lbs/Bu	Rate (per 100kg Seed)	Rate (mL/bu)	Bushels per 3.5L Jug	
Wheat/Durum	60	40	10.9	320	
Barley	48	40	8.7	400	
Oat	32	40	5.8	600	

The number of bushels treated will vary depending on the test weight of the seed. Always calculate seed density before treating.









# **Straxan**<sup>™</sup>

No one protects your cereal crop like Corteva Agriscience.

#### **FUNGICIDE SEED TREATMENT**

#### STRAXAN™ FUNGICIDE SEED TREATMENT ADVANTAGES

- · Provides excellent seedling protection against early season seed and seedling diseases to maximize crop stand establishment and yield potential.
- Ready-to-use and easy-to-apply formulation for complete seed coverage and treating flexibility.
- · Excellent partner for Lumivia™ CPL insecticide seed treatment, which provides the broadest cereal insect protection, including wireworm and cutworm.
- · Straxan extends Corteva's industry leading cereal solutions portfolio, delivering cereal protection you can trust throughout the season.

Straxan provides powerful protection from yield robbing diseases like Fusarium graminearum and true loose smut.





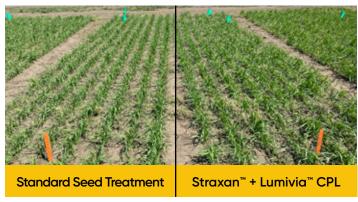


St. Albert, June 2023

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Straxan increases plant count and stand establishment, maximizing the potential of your cereal crop.

Straxan<sup>™</sup> fungicide seed treatment delivers powerful protection against early season seed and soil-borne diseases in a ready-to-use and easy-toapply formulation. Pair with Lumivia™ CPL insecticide seed treatment for the broadest insect control and Win the Start.



Osler, SK June 2023



Portage La Prairie, MB June, 2023

RATES					
Crop	Lbs/Bu	Rate (per 100kg Seed)	Rate (mL/bu)	Bushels / 9.5L jug	Bushels /113.5L drum
Wheat/Durum	60	325	88.5	107	1280
Barley	48	325	70.8	133	1600
Oat	32	325	47.2	200	2400

The number of bushels treated will vary depending on the test weight of the seed. Always calculate seed density before treating.

#### **PACKAGING**

- 2 x 9.5 L Case
- 113.5 L Drum





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# **Lumiderm**

#### **INSECTICIDE SEED TREATMENT**

Win the Start with early season insect protection in soybeans.

#### LUMIDERM™ INSECTICIDE SEED TREATMENT ADVANTAGES

- **Broad spectrum protection** from early season insect pests in soybeans including soybean aphid, bean leaf beetle, and cutworms.
- Excellent seedling protection delivers a **uniform, healthy stand** to help maximize yield potential.
- · A **new mode of action** with a favourable environmental profile
- · Simplifies your seed treatment decisions.

#### INDUSTRY LEADING PROTECTION AGAINST EARLY SEASON INSECT PESTS

- Lumiderm<sup>™</sup> provides soybean seedlings with extended protection against key early season insects: soybean aphid, bean leaf beetle, seed corn maggot, European chafer, Japanese beetle, white grub, wireworm, and cutworms.
- · Lumiderm is now registered for control of cutworms in soybeans.

#### **FAVOURABLE ENVIRONMENTAL PROFILE & RESISTANCE MANAGEMENT**

· Lumiderm contains a unique Group 28 insecticide, a non-neonic seed treatment option.

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- · Minimal impact on the environment.
- Minimal impact on beneficial insects and pollinators when used in accordance with the label.<sup>1</sup>





Source: Ridgetown, ON

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



#### **APPLICATION GUIDELINES**

DODC.

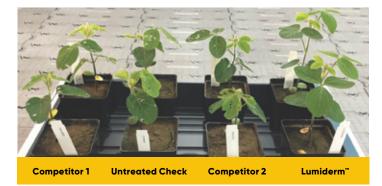
Soybeans

CUTWORM RATE

0.0375-0.075 mg ai/seed Cutworms, Seedcorn maggot, Japanese beetle, European chafer, Masked chafers, Wireworms

FULL-SPECTRUM RATE

0.075-0.200 mg ai/seed Soybean aphid, Bean leaf beetle, Cutworms, Seedcorn maggot, Japanese beetle, European chafer, Masked chafers, Wireworms

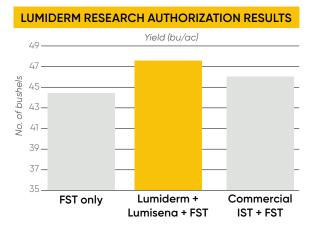


Lumiderm™
insecticide seed
treatment is now
registered for
industry-leading
control of cutworms
in soybeans

# EXCELLENT SEEDLING PROTECTION DELIVERS MORE UNIFORM, HEALTHY SOYBEAN STANDS

- · Lumiderm delivers the latest technology for insect protection for soybean production.
- With Lumiderm, soybean growers can be confident that their vulnerable seedlings will be safe from cutworms, bean leaf beetle, soybean aphid, bean leaf beetle, seed corn maggot, European chafer, Japanese beetle, white grub, wireworm, and cutworms.

To help maximize yield potential, insect and disease protection go hand in hand. Take a look at the powerful protection of Lumiderm and Lumisena fungicide seed treatment combined.





Demo Strip Trials Data (Average of 8 locations, 2 Reps/location)
FST = Fungicide Seed Treatment
IST = Insecticide Seed Treatment



Lumiderm insecticide seed treatment complements Lumisena fungicide seed treatment and completes the soybean protection package. Add Lumiderm to maximize your soybean protection.

# Lumialza™

#### **NEMATICIDE SEED TREATMENT**

Win the Start with powerful protection from nematodes.

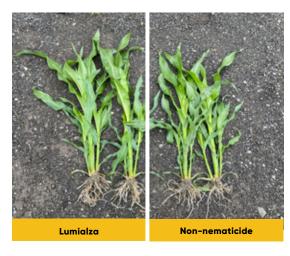
#### **NEW** LUMIALZA™ NEMATICIDE SEED TREATMENT ADVANTAGES

- Provides protection from key yield-robbing nematodes.
- · Lumialza™ provides over 80 days of protection by creating a large zone of protection of the root zone.
- · Enhances plant vigour and yield potential.



#### WHAT IS LUMIALZA?

- · Lumialza contains a naturally occurring rhizobacteria, Bacillus amyloiquefaciens, that aggressively colonizes roots near the seed and soil surface, and throughout the soil profile, resulting in an extensive barrier of biological root protection from nematode attack, and causes paralysis of juvenile nematodes.
- · Lumialza provides over 80 days of protection by creating a large zone of protection, encompassing the entire area of root growth including lower, mid and upper root zones.







Corteva corn genetics are protected with NEW Lumiscend™ Pro and Lumialza. These products are exclusive to the LumiGEN® seed treatment package.

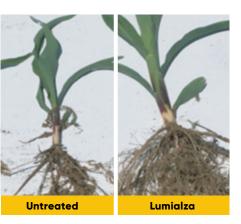
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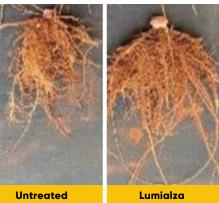
#### **LUMIALZA™ NEMATICIDE SEED** TREATMENT PROVIDES EARLY SEASON PROTECTION AGAINST PLANT PARASITIC NEMATODES, RESULTING IN REDUCED FEEDING DAMAGE AND INCREASED ROOT BIOMASS.

- Lumialza™ grows with the roots to provide protection deep into the soil profile.
- This not only provides an extended zone of protection, but also allows prolonged growth benefits extending late into the corn growing cycle.
- · Lumialza increases root biomass, plant vigour and crop uniformity resulting in improved plant performance.



\*Based on 238 trials in the U.S.





# **Lumiscend**<sup>™</sup>**Pro**

#### **FUNGICIDE SEED TREATMENT**

GROUP GROUP GROUP

Win the Start with early season disease protection.

#### LUMISCEND™ PRO FUNGICIDE SEED TREATMENT ADVANTAGES

• The LumiGEN® seed treatments corn fungicide, including new Lumiscend™ Pro, is a unique combination of four active ingredients to deliver multiple modes of action protection from early season seed-and soil-borne diseases, adding a new level of protection against rhizoctonia and pythium species.

#### **DISEASES**

- Pythium
- Phytophthora
- Fusarium
- · Corn head smut





# HERBICIDES

# HERBICIDES BY CROP

WHEAT HERBICIDES	#
Avenza™	50
Cirpreme™ XC	52
Exhilarate™	60
Extinguish™ XL	62
Korrex <sup>™</sup> II	36
Liquid Achieve™ SC	64
Lontrel™ XC	66
OcTTain™ XL	68
OnDeck™	70
Paradigm™ PRE	38
Pixxaro™	72
Pixxaro™ A	74
Pixxaro™ FLEXX	76
PrePass™ FLEX	40
Prestige <sup>™</sup> XL	78
Prominex™	82
Rexade™	84
Rezuvant™ XL	86
Simplicity™	88
Simplicity™	
Wild Oat Rate	90
Simplicity™ GoDRI™	92
Simplicity™ GoDRI™	
Wild Oat Rate	
Stellar XL™	98
Tandem™	102
Tridem™	104
SOYBEAN HERBICIDES	<b>P</b>
Fnlist™ 1	56

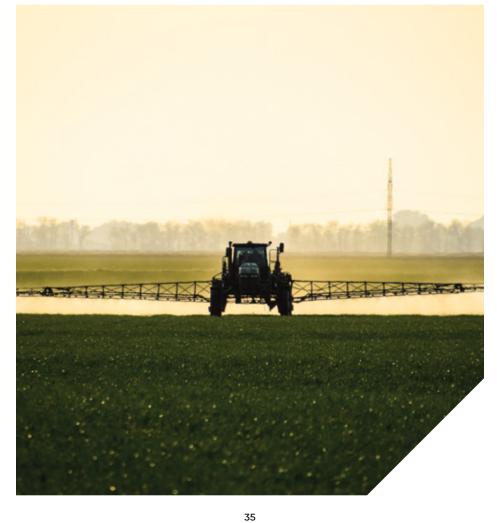
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BARLEY HERBICIDES
Avenza <sup>™</sup>
Cirpreme <sup>™</sup> XC
<b>Exhilarate</b> <sup>™</sup> 60
Extinguish™ XL
<b>Korrex</b> ™ <b>II</b>
Liquid Achieve™ SC
Lontrel™ XC
OcTTain™ XL
<b>OnDeck</b> ™
Paradigm <sup>™</sup> PRE
Pixxaro <sup>™</sup>
Pixxaro <sup>™</sup> A
Pixxaro <sup>™</sup> Flexx
PrePass™ FLEX
Prestige <sup>™</sup> XL
Prominex <sup>™</sup> 82
Rezuvant™ XL 86
Stellar™ XL 98
CANOLA HERBICIDES
Amity <sup>™</sup> WDG
Ares <sup>™</sup> SN
Lontrel <sup>™</sup> XC
Prospect <sup>™</sup>
CORN HERBICIDES
NEW Accent <sup>™</sup> IS
<b>Enlist™ 1</b>
Enlist™ Duo
Lontrel™ XC
Prospect <sup>™</sup>
Sortan™ IS96
Steadfast™ IS

OAT HERBICIDES	
Korrex™ II	36
Paradigm™ PRE	38
PrePass™ FLEX	40
Prestige™ XL	78
Stellar™ XL	98
	_
POTATO HERBICIDES	
Prism™ SG	80

HERBICIDES	
Grazon™ XC	108
Reclaim™ II	110
<b>NEW</b> Restore™ NXT	112
Restore™ II	114

**RANGE & PASTURE** 





**HERBICIDE** 

Korrex™ II herbicide delivers superior pre-seed control of kochia, including Group 2 and 9 resistant biotypes, as well as 21 other tough broadleaf weeds.

#### WHY USE KORREX™ II?

- · Superior pre-seed control of kochia, including Group 2 and Group 9 resistant biotypes.
- · Easy to tank-mix with any form of glyphosate.
- · Broad-spectrum broadleaf weed control, including dandelion, narrowleaved hawk's beard, wild buckwheat, flixweed and stinkweed.
- · Extended control of volunteer canola flushes.
- · Effective solution for herbicide resistance management.
- · Excellent solution for Canada thistle control with a fall application.

#### KORREX II + GLYPHOSATE AT 0.5 REL/AC

#### **BROADLEAF** WEEDS

#### CONTROLLED

- · Canada fleabane\*2
- · Chickweed\*
- · Cleavers\*
- · Common ragweed\* · Stinkweed\*
- · Cow cockle\*
- · Flixweed\*
- · Hemp-nettle\*
- · Kochia\*

- · Narrow-leaved hawk's beard
- Redroot pigweed\*
- · Russian thistle
- Shepherd's purse\* · Smartweed\*

- · Volunteer canola\*1
- Volunteer flax
- · Wild buckwheat\*
- · Wild mustard\*

#### **GRASS WEEDS** CONTROLLED

- · Downy brome
- Giant foxtail
- Green foxtail
- Persian darnel
- Volunteer barlev
- Volunteer wheat
- · Wild oats

#### PERENNIAL WEEDS CONTROLLED

- · Dandelion\* (seedling, overwintered rosettes, mature plants up to 30 cm diameter)
- · Perennial sow thistle3

#### **WEEDS SUPRESSED**

- · Annual sow thistle
- Scentless chamomile

#### SPRING AND FALL SOILACTIVE™ EXTENDED CONTROL

· Canada fleabane

· Lamb's-quarters\*

- · Chickweed4
- · Cleavers<sup>4</sup>
- Common ragweed Dandelion seedling
- Flixweed
- · Hemp-nettle<sup>4</sup>
- · Lamb's-quarters4
- Narrow-leaved hawk's beard<sup>4</sup>
- · Redroot pigweed Scentless
- chamomile · Shepherd's purse<sup>4</sup>
- Smartweed<sup>4</sup>
- Stinkweed<sup>4</sup>
- · Volunteer Canola (except Clearfield®)
- · Wild buckwheat
- · Wild mustard

#### KORREX II + GLYPHOSATE AT 1 - 2.8 REL/AC

\*Weed controlled by multiple effective modes of

1 Including all herbicide-tolerant canola varieties.

Annual sow thistle

2 Less than 8 cm in height.

action.

- · Canada thistle (rosette stage)
- Quackgrass

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- 3 Applications made at advanced stages will reduce effectiveness.
- 4 Will not provide extended control of Group 2 resistant biotypes.

#### **APPLICATION GUIDELINES**

		PACKAGING	Korrex™ II A herbicide: 1 x 0.45 kg jug Korrex™ II B herbicide: 1 x 7.76 L jug
CROPS  Prior to	RATES	Spring Rate:  · Korrex™ II A herbicide: 5.7 g/ac  · Korrex™ II B herbicide: 97 mL/ac  Fall Rate:  · Korrex II A: 8.1 g/ac  · Korrex II B: 139 mL/ac	
cereal crops (spring or fall application):		ACRES TREATED	Spring: 80 ac/case Fall: 56 ac/case
Barley		WATER VOLUME	Ground 20-40 L/ac (5-10 US gal/ac)
Oats Spring wheat		TIMING	Spring application: Prior to seeding (no later than 48 hours after seeding) Fall application: From after harvest to freeze up
Winter wheat		RAINFAST	30 minutes
		TANK-MIX HERBICIDES	Compatible with all forms of glyphosate



Chickpeas

Corn

#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

The year following a spring Korrex™ II herbicide application, fields can be seeded to:

- Barley Flax Canola
- Field beans

Mustard

Lentils

- Peas
- · Potatoes (except seed potatoes)
  - Sunflower Wheat

Summerfallow

- Soybeans

#### APPLICATION TIMING AND SEEDING

initial treatment in summerfallow.

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- · Korrex II applied in the fall (after August 1), can be seeded to winter wheat that fall. Spring wheat, durum, barley and oats can be seeded the following spring.
- Spring rate used in the fall will cover more acres without compromising control.



#### **GRAZING AND HARVEST**

- · Livestock may be grazed on treated crops 7 days following application.
- Do not harvest treated crop within 60 days after application.



#### ARYLEX™ ACTIVE: 1.5 g/ac (Fall Rate: 2 g/ac) FLORASULAM: 1.5 g/ac (Fall Rate: 2 g/ac)

# **Paradigm**<sup>™</sup>PRE

Arylex<sup>™</sup>active

#### **HERBICIDE**

Invest in your crop's yield with advanced, early weed control and sustainable herbicide resistance management. Shift your pre-seed Paradigm.



#### WHY USE PARADIGM™ PRE HERBICIDE WITH ARYLEX™ ACTIVE?

- Controls your toughest weeds, including Group 2 resistant cleavers and hemp-nettle.
- · Controls small or large weeds in cool spring or fall conditions.
- · Herbicide resistance management.
- · Tank-mix with any form of glyphosate for your pre-seed burndown.
- · Paradigm™ PRE's innovative GoDRI™ formulation comes in **convenient** packaging, making it easy to mix and handle.
- · Provides extended control of volunteer canola flushes.

#### PARADIGM PRE AT 7.5 G/AC + GLYPHOSATE AT 0.5 REL/AC

SPRING RATE

#### **BROADLEAF WEEDS**

#### CONTROLLED

- · Canada fleabane\*2
- · Cleavers\* (up to 9 whorls)
- Common chickweed\* (up to 8 leaves)
- · Common raaweed\*2
- · Flixweed\*
- · Hemp-nettle\*
- · Lamb's-quarters\* (up to 8 leaves)

- · Narrow-leaved hawk's beard
- · Russian thistle
- · Shepherd's purse\*
- · Smartweed\* (up to 8 leaves)
- Stinkweed\*
- Volunteer canola<sup>1</sup>
- Volunteer flax (up to 15 cm)
- · Wild buckwheat\* (1-2 leaves)
- · Wild mustard\*

#### **GRASS WEEDS** CONTROLLED

- · Barnyard grass
- Downy brome
- · Giant foxtail
- · Green foxtail
- · Persian darnel
- Volunteer barley
- · Volunteer wheat
- Wild oats

#### **PERENNIAL WEEDS** CONTROLLED

 Dandelion\* (spring rosettes up to 15 cm in diameter)

#### **WEEDS SUPPRESSED**

Kochia

#### SPRING AND FALL SOILACTIVE™ EXTENDED CONTROL:

- · Chickweed<sup>3</sup>
- · Cleavers<sup>3</sup>
- · Common ragweed · Narrow-leaved

resistant biotypes.

Dandelion seedling

2 Less than 8 cm in height and including Group 2

- · Canada fleabane · Flixweed
  - · Hemp-nettle<sup>3</sup>
  - Lamb's-quarters<sup>3</sup>
- - hawk's beard<sup>3</sup>
- · Redroot pigweed
- Scentless chamomile
- · Shepherd's purse<sup>3</sup>
- Smartweed<sup>3</sup>
- Stinkweed<sup>3</sup>
- Volunteer canola (except Clearfield®)
- · Wild buckwheat
- Wild mustard

#### \*Controlled by multiple effective modes of action. 1 Including all herbicide-tolerant canola varieties. resistant biotypes.

# **APPLICATION GUIDELINES**

(	PACKAGING	4 x 0.6 kg jugs
CROPS	RATES	Spring Rate: 7.5 g/ac Fall Rate: 10 g/ac
Prior to cereal crops (spring or fall	ACRES TREATED	Spring Rate: 80 ac/jug (320 ac/case) Fall Rate: 60 ac/jug (240 ac/case)
application):  Barley	WATER VOLUME	Ground 20-40 L/ac (5-10 US gal/ac)
Durum wheat Oats	TIMING	Spring Application: Prior to seeding (no later than 48 hours after seeding) Fall Application: From after harvest to
Spring wheat Winter wheat		freeze up
Willer Wileat	RAINFAST	1 hour
	TANK-MIX HERBICIDES	Compatible with all forms of glyphosate



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

10 months: all major crops, except lentils and chickpeas 22 months: all major crops, including lentils and chickpeas

#### APPLICATION TIMING AND SEEDING

- · Paradigm™ PRE herbicide can be applied in the spring prior to seeding wheat, barley
- · Paradigm™ PRE applied after August 1 can be seeded to winter wheat that fall or spring wheat, durum, oats and barley the following spring.
- · Using spring rate in the fall will cover more acres with Paradigm PRE without compromising control, spray early and save.

#### **GRAZING AND HARVEST**

- · Livestock may be grazed on treated crops 7 days following application.
- Do not harvest the treated crop within 60 days after application.
- Do not cut the treated crop for hay or silage within 21 days after application.

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<sup>3</sup> Will not provide extended control of Group 2

# **PrePass** FLEX

Transform your glyphosate.

#### **HERBICIDE**

#### WHY USE PREPASS™ FLEX HERBICIDE?

- · Flexibility to tank-mix with any glyphosate formulation.
- · Advanced dry formulation that disperses quickly and completely for easy mixing.
- Convenient packaging 640 acre case, no heated storage required.
- · SoilActive™ technology for extended broadleaf weed control.
- · Application flexibility gets the work done earlier, spring or fall.

#### PREPASS™ FLEX + GLYPHOSATE AT 0.5 REL/AC

#### **BROADLEAF WEEDS** CONTROLLED

- Annual sow thistle<sup>1</sup>
- · Canada fleabane
- Chickweed
- Cleavers
- Common ragweed
- Cow cockle
- Flixweed
- · Hemp-nettle
- Kochia
- · Lamb's-quarters
- · Narrow-leaved hawk's beard

#### · Redroot pigweed • Russian thistle

- Scentless chamomile
- · Shepherd's purse
- Smartweed
- Stinkweed
- · Volunteer canola<sup>3</sup>
- · Volunteer flax
- Wild buckwheat
- · Wild mustard

#### **GRASS WEEDS** CONTROLLED

- · Downy brome
- · Foxtail barley1
- Giant foxtail
- · Green foxtail
- · Persian darnel
- Volunteer barley
- · Volunteer wheat
- · Wild oats

#### PERENNIAL WEEDS **CONTROLLED**

- · Canada thistle<sup>1</sup>
- · Dandelion<sup>2</sup>
- Perennial sow thistle1
- Quackgrass<sup>1</sup>

#### SPRING AND FALL SOILACTIVE™ EXTENDED CONTROL:

- Canada fleabane
- · Chickweed4
- Cleavers<sup>4</sup>

- Common ragweed
- · Dandelion seedling
- Flixweed
- · Hemp-nettle4
- · Lady's-thumb
- · Lamb's-quarters4
- Narrow-leaved hawk's beard4
- · Redroot piaweed
- Scentless
- chamomile · Shepherd's purse<sup>4</sup>
- · Smartweed<sup>4</sup>
- Stinkweed<sup>4</sup>
- · Volunteer canola (except Clearfield®)
- Wild buckwheat
- Wild mustard

3 All herbicide-tolerant varieties

#### **APPLICATION GUIDELINES**

	PACKAGING	8 x 0.648 kg jugs
CROPS  Prior to cereal crops	RATES	8.1 g/ac
	ACRES TREATED	80 ac/jug (640 ac/case)
(spring or fall application):	WATER VOLUME	Ground 20-40 L/ac (5-10 US gal/ac)
Barley  Durum wheat		Spring application: Prior to seeding (no later than 48 hours after seeding)
Oats Spring wheat	TIMING	Chemfallow: When weeds are actively growing, 1 to 4-leaf stage Fall application: From after harvest to
Winter wheat		freeze up
_	RAINFAST	30 minutes
	TANK-MIX HERBICIDES	Compatible with all forms     of glyphosate



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### MIXING INSTRUCTIONS

- 1. Fill sprayer tank ½ full of water
- 2. Start sprayer tank agitation
- 3. Add the required amount of PrePass™ Flex herbicide continue agitation
- 4. Add the required amount of glyphosate, continue agitation
- 5. Fill the sprayer tank with sufficient water to spray 20-40 L/ac (5-10 US gal/ac)

#### APPLICATION TIMING AND SEEDING

- PrePass™ FLEX can be applied in the spring prior to planting wheat, barley or oats.
- PrePass FLEX applied after August 1 can be seeded to winter wheat that fall or spring wheat, durum, barley and oats the following spring.

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#### **GRAZING AND HARVEST**

- · Livestock may be grazed on treated crops 7 days following application.
- Do not harvest the treated crop within 60 days after application.

<sup>1</sup> Requires elevated rate of glyphosate; refer to

glyphosate label 2 Seedling, overwintered rosettes, mature plants up to 30 cm in diameter.

<sup>4</sup> Will not provide extended control of Group 2 resistant biotypes

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ARYLEX™ ACTIVE: 2 g/ac CARFENTRAZONE: 4 g/ac

# **Prospect**<sup>™</sup>

Arylex<sup>™</sup>active

Give your canola the best start possible.

#### **HERBICIDE**

#### WHY USE PROSPECT™ HERBICIDE WITH ARYLEX™ ACTIVE?

- · Controls a wide range of broadleaf weeds, including cleavers. (overwintered and Group 2 resistant biotypes), hemp-nettle, flixweed, wild buckwheat, and many more.
- · More consistent and complete pre-seed control than glyphosate alone.
- Flexibility to spray at 5 gal/ac: low spray water volume without giving up weed control performance.\*
- · Tank-mixed with alyphosate, provides 3 actives for multiple effective modes of action control of competitive weeds.

#### PROSPECT™ + GLYPHOSATE AT 0.5 REL/AC:

#### **BROADLEAF WEEDS** CONTROLLED

- American dragonhead
- · Canada fleabane<sup>1</sup>
- Chickweed
- · Cleavers1
- · Common raqweed1
- · Cow cockle
- · Eastern black nightshade
- Flixweed
- · Hemp-nettle<sup>1</sup>
- Henbit
- Kochia²
- · Lamb's-quarters Morning glory
- **WEEDS** CONTROLLED THROUGH
- MULTIPLE **EFFECTIVE MODES** OF ACTION

- · Narrow-leaved hawk's beard<sup>3</sup>
- · Redroot pigweed
- · Round-leaved mallow
- Russian thistle
- · Shepherd's purse
- Smartweed
- Stinkweed
- · Stork's-bill
- Velvetleaf
- · Volunteer canola (all herbicide tolerant varieties)4
- Volunteer flax
- Waterhemp

## · Downy brome

CONTROLLED · Barnyard grass

**GRASS WEEDS** 

- Giant foxtail
- · Green foxtail
- Persian darnel
- Volunteer barlev
- · Volunteer wheat
- Wild oats

Flixweed

· Hemp-nettle

· Lamb's-quarters

· Redroot pigweed

· Shepherd's-purse

· Russian thistle

#### **PERENNIAL WEEDS** CONTROLLED

- Dandelion
- Volunteer alfalfa

#### **WEEDS SUPPRESSED**

· Annual sow thistle

- Wild buckwheat

· Barnyard grass

Chickweed

· Eastern black

nightshade

Cleavers

· Canada fleabane

Wild mustard

- Smartweed
- Stinkweed
- Wild buckwheat
- Wild mustard

- \* Higher water volumes promote better coverage for heavy infestation or hard to control weeds.
- 1 Including Group 2 resistant biotypes.
- 2 Control of light to moderate infestation ≤150plants/m², ≤15cm in height), suppression of Group 9 resistant kochia biotypes.
- 3 Up to 8cm in height; for larger stages use
- density or larger stages control may be reduced. 5 Seeding/planting depth: minimum 4 cm (1.6 inches) or injury may occur.

#### **APPLICATION GUIDELINES**

CROPS  Prior to seeding:  Canola  Corn <sup>5</sup>	PACKAGING	2 x 10.8 L jugs
	RATES	135 mL/ac
	ACRES TREATED	80 ac/jug (160 ac/case)
	WATER VOLUME	Ground 20-40 L/ac (5-10 US gal/ac)
	TIMING	Prior to seeding
	RAINFAST	1 hour
	TANK-MIX HERBICIDES	Compatible with all forms of glyphosate



DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

10 months: All major crops, except lentils or chickpeas 22 months: Lentils, chickpeas or any other crops not listed

#### APPLICATION TIMING

Prospect can be applied in the spring, prior to seeding canola or corn.

#### **GRAZING AND HARVEST**

Livestock may be grazed on treated crops 7 days following application.

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#### PRE-HARVEST INTERVAL

60 days



additional glyphosate top-up rates (see label). 4 Group 9 resistant varieties: under conditions of high

NEW **A** 

# **Accent**<sup>™</sup>IS

#### **HERBICIDE**

Accent<sup>™</sup> IS herbicide delivers outstanding control of annual and perennial grass weeds in field corn, seed corn<sup>2</sup> and sweet corn<sup>3</sup>. With a built-in crop safener, Accent<sup>™</sup> IS can be applied with confidence under a wide range of weather and growth stages.

#### WHY USE ACCENT IS?

- With a built-in crop safener, Accent IS delivers even better crop safety on low heat unit hybrids, seed corn inbreds and sweet corn varieties.
- · Contact and systemic post-emergence control providing consistent grass control.
- · Wide window of application and re-cropping flexibility.

# GRASS WEEDS CONTROLLED

- Barnyard Grass
- · Green foxtail
- · Long-spined Sandbur
- · Old Witchgrass
- · Panicum, Fall
- Quackgrass
- Wild Oats
- Yellow foxtail

# APPLICATION GUIDELINES

	PACKAGING	6 x 370 g bottles
	RATES	18.5 g/ac
	ACRES TREATED	20 ac/bottle (120 ac/case)
	WATER VOLUME	10-20 US gal/ac
CROPS		Hybrid field corn: 1-8 leaves
Grain corn	TIMING	(6 visible collars = V6)  Seed corn: 1-7 leaves
Seed corn		(5 visible collars = V5)  Sweet corn: 1-6 leaves
Sweet corn		(4 visible collars = V4)
	RAINFAST	2 hours
	TANK-MIX HERBICIDES	Accent™ IS herbicide may be tank- mixed with a registered broadleaf herbicide. Consult the label of the tank-mix partner and follow both labels to ensure compliance with all use precautions.



# DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **ADJUVANTS**

Accent™ IS must be applied with one of the following adjuvants:

- Non-ionic surfactant: 2 L/1000 L (0.2% v/v)
- · Adapt Oil Concentrate: 10 L/1000 L (1% v/v)
- Merge or Sure-Mix: 5 L/1000 L (0.5% v/v)
- Non-ionic surfactant + UAN: 2 L/1000L + 2 L/ac

#### **CROP ROTATION (10 MONTHS AFTER APPLICATION)**

- Alfalfa
   Canola (including Clearfield<sup>®</sup> canola)
- Dry BeansField Pea
- PotatoesSunflower

- Barley
- · Corn
- Flax

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• Wheat

#### PRE-HARVEST INTERVAL

- · Corn (silage, fodder or grain): 30 days.
- · Sweet corn: 40 days.

3 Use only on labelled sweet corn varieties.

<sup>1</sup> Suppression only. For improved control, apply Accent IS with Merge (0.5% v/v) or NIS + UAN (0.2% v/v + 2 L/ac).

<sup>2</sup> Use only on seed corn inbreds approved by the seed corn company.

# **Amity**<sup>™</sup>wdg

**HERBICIDE** 

Superior control of grass and broadleaf weeds in Clearfield® canola

#### WHY USE AMITY™ WDG HERBICIDE?

- · Provides broad spectrum weed control for Clearfield canola.
- · Provides rotational flexibility.
- · Reliable control of tough grasses and broadleaf weeds.
- Tank mix with Lontrel™ XC herbicide for improved wild buckwheat and Canada thistle control.

#### BROADLEAF WEEDS CONTROLLED

- Cow cockle
- · Lamb's-quarters
- Redroot pigweed
- Russian thistle
- · Shepherd's purse
- Smartweed
- Stinkweed
- Wild mustard
- Volunteer canola (excluding Clearfield\* varieties)

# GRASS WEEDS CONTROLLED

- · Barnyard grass
- Green foxtail
- · Persian darnel
- Volunteer barley Volunteer canaryseed
- Volunteer durum wheat
- Volunteer spring wheat (excluding Clearfield® varieties)
- · Volunteer tame
- Wild oats
- Yellow foxtail

#### WEEDS SUPPRESSED

- Cleavers
- Japanese brome
- Round-leaved mallow
- Wild buckwheat



**ADJUVANT** 

Surjet<sup>™</sup> adjuvant is a blend of surfactant and petroleum hydrocarbons designed for use with Ares™ SN or Amity WDG herbicides.

**Rate:** 0.5% v/v

Water volume: 40 L/ac (10 US gal/ac) Surjet adjuvant sold separately from

Amity™ WDG herbicide.

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#### **APPLICATION GUIDELINES**

CROPS Clearfield® Canola	PACKAGING	4 x cartons with 4 x pouches of 117.5g wettable dry granule	
		RATES & ACRES TREATED	<ul><li>10 ac/pouch</li><li>40 ac/carton</li><li>160 ac/case</li></ul>
		WATER VOLUME	<ul> <li>Ground 40 L/ac (10 US gal/ac)</li> <li>Add Surjet™ adjuvant at 0.5% v/v</li> <li>Aerial NOT registered</li> </ul>
	TIMING	Crop stage: 2 to 6-leaf stage Weed stage: 1 to 4-leaf stage for grassy weeds and cotyledon to 4-leaf stage for broadleaf weeds	
		RAINFAST	3 hours
		TANK-MIX HERBICIDES	Lontrel™ XC herbicide



DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- · Winter wheat can be planted 3 months after treatment as a rotational crop.
- · Initial crop injury to non Clearfield® canola may be observed.
- · Avoid spray overlap as yield reduction may result.

# The following crops may be grown safely the year following an application:

- Canaryseed
- Non-Clearfield®
- Chickpeas
- canola • Oats
- · Clearfield® Canola
- · Spring barley
- Clearfield®
   Sunflowers
- Spring wheat
- Durum wheat
- Sunflower
- Field cornField peas
- If drought conditions exist in the first season after application, do not grow non Clearfield
- FlaxLentils
- canola, durum, flax or sunflowers.

#### **GRAZING AND HARVEST**

Do not harvest treated crop within 60 days after application.





The performance standard in weed control for Clearfield® canola.

#### **HERBICIDE**

#### WHY USE ARES™ SN HERBICIDE?

- · Consistent and reliable post-emergent weed control, including subsequent flushes.
- Flexible application timing with a wide window of application on both crop and weeds.
- · Superior control of lamb's quarters, wild buckwheat, cleavers and volunteer canola.

#### **BROADLEAF WEEDS** CONTROLLED

- Chickweed
- · Cleavers<sup>2,3</sup>
- · Cow cockle
- · Hemp-nettle²
- · Lamb's-quarters<sup>2</sup>
- · Redroot piaweed
- Round-leaved mallow

- · Russian thistle · Shepherd's purse<sup>2</sup>
- · Smartweed<sup>2</sup>
- Stinkweed · Stork's-bill
- Wild buckwheat
- Wild mustard
- Volunteer tame
- mustard
- · Volunteer canola (excluding Clearfield) varieties)

#### **GRASS WEEDS** CONTROLLED

- · Barnyard grass
- · Japanese brome<sup>1</sup>
- · Yellow foxtail
- Green foxtail
- Persian darnel
- · Wild oats
- Volunteer canaryseed
- Volunteer barley

- · Volunteer tame oats
  - Volunteer spring wheat (excluding Clearfield® varieties)
  - Volunteer durum wheat



Surjet™ adjuvant is a blend of surfactant and petroleum hydrocarbons designed for use with Ares™ SN or Amity WDG herbicides.

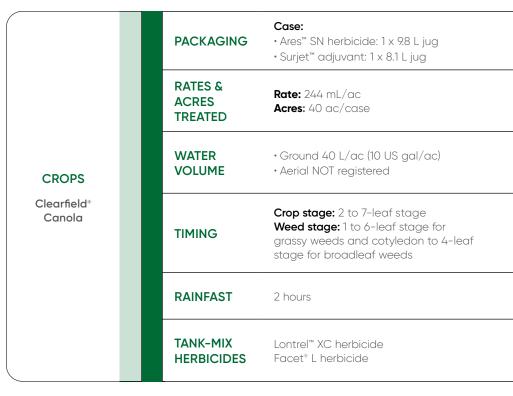
**Rate:** 0.5% v/v

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

Surjet adjuvant is sold in a co-pack with Ares SN.

- 1 For spring germinating Japanese brome control apply at 1 to 4-leaf stage.
- 2 Group 2 susceptible biotypes will not be controlled.
- 3 A tank mix with Facet® L will improve control of Group 2 resistant biotypes.

#### **APPLICATION GUIDELINES**





#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

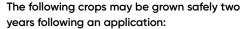
#### **CROP ROTATION**

Sensitivity of injury can vary depending on the crop. If rainfall in your area was less than 125 mm during the growing season between **June 1 to August 31**, it is recommended that you grow field peas, Clearfield® lentils or Clearfield® wheat on Clearfield® canola stubble.

#### The following crops may be grown safely the year following an application:

- Canaryseed
- Chickpeas
- · Field peas
- Field corn · Clearfield® canola

- · Clearfield® canola-quality Brassica juncea
- · Lentils (including Clearfield® lentils)
- · Spring wheat (including Clearfield® varieties)
- · Spring barley



- Canola
- Flax
- Durum wheat Sunflower
- **GRAZING AND HARVEST**

Do not harvest treated crop within 60 days after application.



# **HERBICIDE**

**Avenza**<sup>™</sup>

Powerful broadleaf weed control combined with trusted Group 1 grass chemistry for wheat and barley farmers.

#### WHY USE AVENZA™ HERBICIDE IN WHEAT AND BARLEY?

- · Grass and broadleaf control in one product.
- · Perennial broadleaf weed control without rotational cropping restrictions.
- · Multiple effective mode of action broadleaf weed control.

#### AVENZA™ + 235 mL/ac OF MCPA ESTER 600 (5 oz/ac)

#### **BROADLEAF WEEDS** • Prickly lettuce CONTROLLED

- Annual sow thistle
- Annual sunflower<sup>2</sup>
- Ball mustard
- Burdock
- Cleavers
- Cocklebur
- · Common chickweed2
- · Cow cockle
- · Daisy fleabane
- False flax
- Flixweed
- · Goat's-beard
- · Hemp-nettle<sup>2</sup>
- Kochia
- · Lamb's-quarters
- · Narrow-leaved hawk's beard
- Plantain

- Ragweed
- · Redroot pigweed<sup>2</sup> · Round-leaved mallow<sup>2</sup>
- · Russian piaweed
- Russian thistle
- · Shepherd's purse<sup>2</sup>
- · Smartweed<sup>2</sup>
- · Stinging nettle
- · Stinkweed<sup>2</sup>
- · Stork's-bill
- Sweet clover
- Vetch
- · Volunteer canola<sup>2</sup> (all herbicide tolerant varieties)
- Volunteer flax<sup>2</sup>
- · Wild buckwheat<sup>2</sup>
- · Wild mustard<sup>2</sup>
- Wild radish

#### **GRASS WEEDS** CONTROLLED

- · Barnyard grass<sup>2</sup>
- · Green foxtail
- · Proso millet
- · Volunteer oats
- Volunteer canaryseed
- · Wild oats
- · Yellow foxtail

#### **PERENNIAL WEEDS** CONTROLLED

- · Canada thistle
- Dandelion
- · Perennial sow thistle

#### **APPLICATION GUIDELINES**

	PACKAGING	Case:  • Avenza™ A herbicide: 1 x 8.1 L jug  • Avenza™ B herbicide: 1 x 10 L jug  240 ac Bulk Pack:  • Avenza™ A: 97.2 L  • Avenza™ B: 120 L		
CROPS	RATES	<ul><li>Avenza A: 405 mL/ac</li><li>Avenza B: 500 mL/ac</li></ul>		
Barley Spring wheat	ACRES TREATED	<ul><li>20 ac/case</li><li>240 ac/bulk pack (480 ac/pallet)</li></ul>		
Winter wheat	WATER VOLUME	<b>Ground:</b> 20-40 L/ac (5-10 US gal/ac)		
	TIMING	Crop stage: 3-leaf to just prior to flag leaf emergence		
	RAINFAST	2 hours		
	TANK-MIX HERBICIDES	MCPA Ester 600		



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

Mustard

#### **CROP ROTATION**

 Alfalfa Barley

· Canola

Corn

· Dry Bean

Lentils

- · Faba beans Oats Flax
  - Peas
- Potatoes (except seed potatoes)
- Wheat

#### **GRAZING AND HARVEST**

- 1. Do not cut the treated crop for hay or graze treated crop within 7 days after application.
- 2. Do not harvest the treated crop within 60 days after application.



1 Suppression only when tank mixed with MCPA Ester. 2 Weed controlled through multiple effective modes of action when tank mixed with MCPA Ester at 5 oz

**AVAILABLE IN BULK** 

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# **Cirpreme**<sup>™</sup> **XC**

with Arylex<sup>™</sup>active

Your worst annual AND perennial broadleaf weeds don't stand a chance.

#### **HERBICIDE**

#### WHY USE CIRPREME™ XC HERBICIDE WITH ARYLEX™ ACTIVE?

- Exceptional annual and perennial broadleaf weed control including Canada thistle, dandelion, scentless chamomile and wild buckwheat.
- · Just GO benefits of Arylex™ active. Consistent, reliable performance across a wide range of staging and environmental conditions.
- Two modes of action provide overlapping control of certain key broadleaf weeds.

#### CIRPREME™ XC ALONE (REQUIRES A NON-IONIC SURFACTANT)

#### **BROADLEAF WEEDS** CONTROLLED American

- dragonhead
- · Canada fleabane
- Chickweed
- Cleavers · Cow cockle
- Flixweed
- · Lamb's-quarters
- · Narrow-leaved hawk's beard

- · Redroot pigweed · Round-leaved
- mallow Scentless
- chamomile
- · Shepherd's purse Smartweed
- Stinkweed
- · Stork's-bill
- Velvetleaf
- Volunteer canola
- Volunteer flax
- Volunteer sunflower

#### Wild buckwheat

Wild mustard

#### **GRASS WEEDS** CONTROLLED

Barnyard grass

#### PERENNIAL WEEDS CONTROLLED

- · Canada thistle
- Dandelion

#### **WEEDS SUPPRESSED**

- · Hemp-nettle
- Kochia²
- · Night-flowering catchfly
- · Perennial sow thistle
- · White cockle

#### CIRPREME XC + 235 ML/AC MCPA ESTER 600 (5 OZ/AC)

#### **BROADLEAF** WEEDS CONTROLLED

- American dragonhead
- Annual sow thistle\*
- · Annual sunflower\*
- Burdock
- · Canada fleabane\*
- · Chickweed\*1
- · Cleavers\*1 · Cocklebur
- · Cow cockle\* Field horsetail<sup>3</sup> (top growth)

- · Flixweed\*
- Hemp-nettle
- Henbit
- Lamb's-quarters<sup>1</sup>
- Narrow-leaved hawk's beard\*
- Plantain<sup>3</sup> (top growth)
- Prickly lettuce · Redroot pigweed\*1
- · Round-leaved mallow\*
- · Russian pigweed\*
- Scentless chamomile
- · Shepherd's purse\*

- · Smartweed\*
- Stinkweed\*1
- · Stork's-bill\*
- Velvetleaf
- Vetch
- Volunteer alfalfa
- · Volunteer canola (all herbicide tolerant varieties)
- Volunteer flax
- Volunteer sunflower\*
- Wild buckwheat\*
- · Wild mustard\*1 Wild radish

- **GRASS WEEDS** CONTROLLED
- Barnyard grass

#### PERENNIAL WEEDS CONTROLLED

- · Canada thistle
- Dandelion
- Perennial sow thistle

#### **WEEDS SUPPRESSED**

- Kochia²
- · Night-flowering catchfly
- · White cockle

# **APPLICATION GUIDELINES**

		PACKAGING	<ul> <li>Cirpreme™ A herbicide: 1 x 0.8 kg jug</li> <li>Lontrel™ XC herbicide: 1 x 4.1 L jug</li> </ul>
		RATES	• Cirpreme™ A: 10 g/ac • Lontrel™ XC: 51 mL/ac
CROPS		ACRES TREATED	80 ac/case
Barley		WATER VOLUME	Ground: 20-40 L/ac (5-10 US gal/ac)
Durum wheat Spring wheat		TIMING	<b>Crop stage:</b> 3-leaf to just prior to flag leaf emergence
Winter wheat		RAINFAST	4 hours
		TANK-MIX HERBICIDES	<ul> <li>Simplicity™ herbicide</li> <li>Simplicity™ GoDRI™ herbicide</li> <li>Axial®</li> <li>Everest®</li> </ul>



DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

Wheat

#### **CROP ROTATION**

The year following application, fields can be seeded to: · Peas<sup>4</sup>

- Barley Forage grasses · Canola Mustard · Soybeans<sup>4</sup>
- Flax · Oats

#### **GRAZING AND HARVEST**

Livestock may be grazed on treated crops 7 days following application. Do not harvest the treated crop within 60 days after application.



<sup>4</sup> For pea or soybean rotation, rainfall from June 1 to August 31 in the year of application must be greater than 140 mm (5.5 inches) and annual rainfall must be greater than 175 mm (6.9 inches).

<sup>\*</sup>Controlled by multiple effective modes of action. 1 Including Group 2 resistant biotypes.

<sup>2</sup> Light to moderate infestations (up to 150 plants/m²; up to 15 cm in height), including Group 2 resistant biotypes.

<sup>3</sup> Cirpreme XC + 6 oz/ac of MCPA Ester 600.







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

#### INTRODUCING THE ENLIST WEED CONTROL SYSTEM

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

#### Why use the Enlist weed control system?

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

#### **ENLIST E3™ SOYBEANS**

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

#### Why use Enlist E3 soybeans?

Enlist E3 soybeans are tolerant to 2,4-D, glyphosate and glufosinate herbicides, which are part of a strong resistance management strategy.

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Excellent crop tolerance enabling applications up to the R2 growth stage.

#### THE PROGRAM APPROACH

A two-pass system that uses multiple modes of action to effectively manage hard-to-control and resistant weed biotypes in **Enlist E3™ soybeans**.

#### **BENEFITS INCLUDE:**

Reduced early season competition from annual grass and broadleaf weeds.



Multi-modes of action for resistance management.



Timely post-emergent applications for optimum weed control and reduced weed competition.





Enlist E3







Apply Liberty\* 200 SN herb





#### **TANK MIXING WITH ENLIST 1**

Start with a clean sprayer that has been triple rinsed to avoid contamination from previous herbicides.

- Fill tank ½ full with water and start agitation. Continue agitation throughout mixing process.
- Add products one at a time, allowing enough time for recirculation between additions of each separate product.

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#### Enlist 1 + Liberty 200 SN Tank Mix Order:

- Dry Formulations
- AMS (if required)
- Enlist 1 at 0.73 L/ac
- Liberty 200 SN
- Graminicide
- Adjuvants (if required)
- Fill with remaining water

#### Enlist 1 + Glyphosate Tank Mix Order:

- Dry Formulations
- Enlist 1 at 0.73 L/ac
- · High load Glyphosate
- Graminicide
- Adjuvants (if required)
- · Fill with remaining water



with COLEX•D  $^{\sim}$  technology

#### **HERBICIDE**

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

#### WHY USE ENLIST™ 1?

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

#### ENLIST 1 (0.73 L/AC)

#### WEEDS CONTROLLED

- · Annual sow thistle
- Annual sunflower
- Biennial wormwood²
- · Blue lettuce²
- · Bluebur
- Burdock (before 4-leaf)
- Burdock²
- · Canada thistle²
- CockleburCommon chickweed
- · Common plantain

- Common purslane
- Common ragweedCommon tansy
- · Daisy fleabane
- Dandelion
- False flax
- Field bindweed<sup>2</sup>
- · Field horsetail
- Field peppergrass
- Flixweed
- · Giant ragweed
- $\cdot \, \mathsf{Goat's}\text{-}\mathsf{beard}$
- · Green smartweed
- Hairy galinsoga
- · Hedge bindweed

- ne · Hoary cress
  - Knotweed (before 4-leaf)
  - Kochia
  - · Lady's-thumb
  - · Lamb's-quarters
  - · Leafy spurge<sup>2</sup>
  - Mouse-eared
  - chickweed<sup>2</sup>
     Mustards
  - (except green tansy)
  - Oak leaf goosefoot
  - Pennsylvania smartweed
  - Perennial sow thistle<sup>2</sup>

- Pineappleweed
- · Redroot pigweed
- Russian pigweed
- Russian thistle
- Shepherd's purse
- · Sweet clover
- Tartary buckwheat
- VelvetleafVetch
- · Volunteer canola<sup>1</sup>
- Wild buckwheat
- Wild radish

# APPLICATION GUIDELINES

		PACKAGING	<b>Case:</b> 2 × 10.2 L <b>Tote:</b> 547 L
		RATES	Enlist™ field corn and Enlist E3™ soybeans: 0.73 L/ac
	ı	ACRES TREATED	0.73 L/ac rate: • 28 ac/case • 750 acres/tote • Do not exceed 1.46 L/ac per use season.
		WATER VOLUME	•10-15 gal/ac
CROPS  Enlist™ corn  Enlist E3™ soybeans	ı	TIMING	<ul> <li>Enlist E3 soybeans tank-mix with glyphosate up to R2 (full flower)</li> <li>Enlist E3 soybeans tank-mix with Liberty* 200 SN (glufosinate) up to R1 (beginning bloom)</li> <li>Enlist corn up to V8 or 120 cm in height</li> </ul>
		RAINFAST	2 hours
		TANK-MIX HERBICIDES	Registered tank mixes:  • Glyphosate at 360 g ae/ac or 1 REL (Group 9)  Supported tank mixes:  • Liberty* 200 SN (glufosinate – Group 10)  Control of volunteer Enlist corn in Enlist E3 soybeans:  • Select™  • Centurion*  • Poast* Ultra  Consult the Enlist Product Use Guide available at EnlistCanada.ca.

#### APPLICATION INFORMATION

#### **On-Target Application Requirements**

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

Boom Height: 60 cm or less.

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

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

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

#### **CROP ROTATION**

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

#### PRE-HARVEST INTERNVAL

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

Do not graze treated Enlist E3 soybeans.

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

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<sup>1</sup> Including glyphosate-tolerant and Clearfield

canola varieties.
2 Top growth control only.

with COLEX•D™ technology



**HERBICIDE** 

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

#### WHY USE ENLIST DUO™?

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

#### ENLIST DUO (1.74 L/AC)

#### **WEEDS** CONTROLLED

- · Annual sow thistle
- Annual sunflower
- Barnyard grass
- Biennial wormwood<sup>2</sup>
- · Blue lettuce²
- · Bluebur
- Burdock (before 4-leaf)
- · Burdock<sup>2</sup>
- · Canada fleabane
- · Canada thistle<sup>3,5</sup>
- · Cleavers
- Cocklebur
- · Common chickweed
- · Common milkweed<sup>3, 4</sup>
- · Common plantain
- · Common purslane
- · Common ragweed
- · Common tansy

- · Corn spurry
- Cow cockle · Daisy fleabane
- Dandelion
- · Dog mustard
- · Eastern black flowering
- nightshade
- · Fall panicum
- False flax · Field bindweed<sup>3</sup>
- Field horsetail
- Field peppergrass
- Flixweed
- Giant foxtail
- · Giant ragweed
- · Goat's-beard
- Green foxtail
- Green smartweed
- Hairy galinsoga
- · Hedge bindweed
- · Hemp-nettle
- Hoary cress

- Knotweed (before 4-leaf)
- Kochia
- · Lady's-thumb
- · Lamb's-quarters
- Large crabarass
- · Leafy spurge<sup>2</sup>
- · Mouse-eared chickweed2
- Mustards (except green tansy)
- Narrow-leaved hawk's-beard
- Nightflowering catchfly
- ·Oak leaf goosefoot ·Waterhemp
- · Palmer amaranth<sup>3</sup>
- Pennsylvania
- smartweed Perennial
- sow-thistle<sup>3, 5</sup>
- Pineappleweed
- Quackgrass · Redroot pigweed

- Roundleaf mallow<sup>3</sup>
- · Russian pigweed
- · Russian thistle
- · Shepherd's purse
- · Smooth crabgrass
- · Smooth pigweed
- Stinkweed
- · Sweet clover
- · Tartary buckwheat
- Velvetleaf
- Vetch
- Volunteer barley
- Volunteer canola<sup>1</sup>
- Volunteer wheat
- Wild buckwheat
- · Wild oats
- · Wild proso millet
- · Wild radish
- · Wild tomato
- · Yellow nutsedge<sup>3,6</sup>

#### 1 Including glyphosate-tolerant and Clearfield® canola varieties.

#### **APPLICATION GUIDELINES**

	PACKAGING	<b>Case:</b> 2 x 8.7 L <b>Tote:</b> 556.8 L	
	RATES	Enlist™ field corn and Enlist E3™ soybeans: 1.74 L/ac Burndown ahead of corn and cereal crops: 0.89 - 1.74 L/ac	
CROPS Enlist™ corn	ACRES TREATED	<ul><li>1.74 L/ac rate:</li><li>10 ac/case</li><li>320 acres/tote</li></ul>	
Enlist E3™ soybeans	WATER VOLUME	10-15 gal/ac	
Burndown before field corn, wheat (spring, winter, durum), barley, rye	TIMING	Crop stage:  • Enlist corn: Up to V8 growth stage or 120 cm height  • Enlist E3 soybeans: Up to R2 stage (full flowering)  • Burndown before field corn, wheat (spring, winter, durum), barley, rye: Prior to planting or after planting (BUT BEFORE CROP EMERGENCE)	
	RAINFAST	2 hours	
	TANK-MIX HERBICIDES	Consult the Enlist Product Use Guide available at <b>EnlistCanada.ca</b> .	

#### **Application information**

#### **On-Target Application Requirements**

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

Boom Height: 60 cm or less

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

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

#### **Crop Rotation**

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

#### Pre-harvest Interval

#### Enlist E3 soybeans:

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

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

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

<sup>2</sup> Top growth control only.

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

<sup>4</sup> Milkweed: 15-60 cm in height and actively growing.

<sup>5</sup> Canada thistle and perennial sowthistle: should be from the rosette stage to 50 cm in height and actively arowina.

<sup>6</sup> Yellow nutsedge: 5-15 cm in height and actively growing.

# **Exhilarate**<sup>™</sup>

Arylex<sup>™</sup>active

Arylex™ active Just GO benefits control all your standard broadleaf weeds in wheat and barley.



#### **HERBICIDE**

#### WHY USE EXHILARATE™ HERBICIDE WITH ARYLEX™ ACTIVE?

- Delivers performance and value for farmers looking to control their most common standard weeds in wheat and barley.
- · Contains Arylex™ active which allows farmers to **Just GO** on small or large weeds, early or late crop staging, and even in cool or dry conditions.
- Two modes of action provide overlapping control on certain key broadleaf weeds.

#### EXHILARATE™ A + 189 mL/ac PLUS M (4 oz/ac OF MCPA ESTER 600)

#### BROADLEAF WEEDS CONTROLLED

#### American

- dragonhead
- Annual sow thistle
- · Canada fleabane<sup>1,2</sup>
- · Chickweed<sup>1,3</sup>
- · Cleavers<sup>1,3</sup>
- · Common ragweed²
- · Cow cockle1
- Dandelion
- Flixweed · Hemp-nettle³
- Henbit
- · Lamb's-quarters3

- Narrow-leaved hawk's beard
- · Redroot pigweed
- · Round-leaved mallow1
- · Shepherd's purse
- Smartweed Stinkweed

Volunteer alfalfa

· Volunteer canola

biotypes)

Volunteer flax

Wild mustard

· Wild buckwheat

(all herbicide tolerant

- · Stork's-bill
- Velvetleaf
  - thistle
  - Scentless chamomile

## **GRASS WEEDS**

CONTROLLED

· Barnyard grass

#### **WEEDS SUPPRESSED**

- · Canada thistle
- Kochia³
- · Night-flowering catchfly
- · Perennial sow
- · White cockle

#### **APPLICATION GUIDELINES**

	PACKAGING	<ul> <li>Exhilarate™ A herbicide: 1 x 0.8 kg jug</li> <li>Plus M (MCPA Ester 600): 2 x 7.56 L</li> </ul>	
_	RATES	• Exhilarate™ A: 10 g/ac • Plus M: 189 mL/ac	
_	ACRES TREATED	80 ac/case	
CROPS	WATER VOLUME	<ul><li>Ground 20-40 L/ac (5-10 US gal/ac)</li><li>Aerial not registered</li></ul>	
Barley			
Durum wheat	TIMING	<b>Crop stage:</b> 3-leaf to just prior to flag leaf emergence	
Spring wheat		leur emergence	
Winter wheat	RAINFAST	1 hour	
	TANK-MIX HERBICIDES	<ul> <li>Simplicity™ herbicide</li> <li>Simplicity GoDRI™ herbicide</li> <li>Axial®</li> <li>Everest®</li> <li>Tandem™ herbicide</li> <li>Axial® Xtreme</li> </ul>	



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Alfalfa
- Barley
- Brown mustard
- Canola
- Corn
- · Dry bean
- · Faba beans
- Field peas
- Flax
- · Juncea canola
- Oats
- Oriental mustard
- · Yellow mustard Potatoes (except seed potatoes)

Spring wheat

Sunflower

Soybeans

#### **GRAZING AND PRE-HARVEST INTERVAL**

- · Livestock may be grazed on treated crops 7 days following application.
- Do not harvest the treated crop within 60 days after application.

<sup>1</sup> Controlled by multiple effective modes of action.

<sup>2</sup> Including Group 2 and Group 9 resistant biotypes.

<sup>3</sup> Including Group 2 resistant biotypes.

**NEW** 

# **Extinguish**™xL

Arylex™active

#### **HERBICIDE**

Delivering a combination of high performance and value, Extinguish™ XL herbicide with Arylex<sup>™</sup> active is a powerful new solution to your weed control problems.

#### WHY USE EXTINGUISH™ XL?

- · Reliable, economical control of key broadleaf weeds like cleavers, dandelion, round-leaved mallow, stork's-bill and narrow-leaved hawk's beard.
- · Convenient all-in-one liquid formulation and compact case size.
- Extinguish XL delivers consistent broadleaf weed control.
- · Wide window of application provides control of small and large weeds and excellent crop safety from the 2-leaf to just prior to flag leaf stage.
- · Multiple modes of action control key broadleaf weeds to delay the onset of herbicide resistance.

#### **BROADLEAF WEEDS** CONTROLLED

- Annual Sow-thistle<sup>1</sup>
- · Canada
- Fleabane<sup>2</sup>
- · Chickweed<sup>1,3</sup>
- · Cleavers<sup>1,3</sup>
- · Common raqweed<sup>2</sup>
- · Cow Cockle1
- Dandelion
- Flixweed
- · Lamb's quarters<sup>3</sup>
- Narrow-leaved hawk's beard
- · Redroot pigweed1

- · Round-leaved mallow
- · Shepherd's purse<sup>1</sup>
- Smartweed
- · Stinkweed1
- · Stork's-bill
- Velvetleaf
- Volunteer alfalfa · Volunteer canola4
- Volunteer flax
- · Wild Buckwheat1
- · Wild mustard<sup>1</sup>

#### **GRASS WEEDS** CONTROLLED

· Barnyard grass

#### **WEEDS SUPPRESSED**

- · Hemp-nettle<sup>1,3</sup>
- Kochia²
- Night flowering catchfly
- Scentless chamomile
- Perennial sow-thistle
- · Canada thistle
- · White cockle

#### **APPLICATION GUIDELINES**

	PACKAGING	<b>Case:</b> 2 x 6.74 L jugs <b>Drum:</b> 80.9 L
	RATES	337 mL/ac
	ACRES TREATED	20 ac/jug 240 ac/drum
CROPS	WATER VOLUME	• Ground: 20-40L/ac (5-10 US gal/ac)
Barley  Durum wheat  Spring wheat	TIMING	Crop stage: 2-leaf to just prior to flag leaf emergence Weed stage: 1-leaf to 8-leaf
Winter wheat	RAINFAST	1 hour
	TANK-MIX HERBICIDES	<ul> <li>Axial®</li> <li>Everest® 3.0</li> <li>Simplicity™ herbicide</li> <li>Simplicity™ GoDRI*5,6 herbicide</li> <li>Tandem™ herbicide</li> <li>Traxos®</li> <li>Trondus®</li> <li>Varro®</li> </ul>



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Alfalfa
- Barley
- Brown mustard
- Canola
- Corn
- Durum wheat
- · Dry bean
- · Faba bean
- Flax
  - · Juncea Canola
- Oats
- · Oriental mustard
- · Peas (field)
- Potatoes
- Soybean Spring wheat
- Sunflower
- Winter wheat
- (except seed potatoes) · Yellow mustard

#### **GRAZING AND PRE-HARVEST INTERVAL**

- · Livestock may be grazed on treated crops 7 days following application.
- Do not harvest the treated crop within 60 days after application.
- · Withdraw meat animals from treated fields at least 3 days before slaughter.
- Do not harvest forage or cut hay within 30 days after application.

1 Weed controlled by multiple effective modes of action (except for Group 2 resistant biotypes) 2 Including Group 2 and 9 resistant biotypes

**3** Including Group 2 resistant biotypes 4 Including all herbicide-resistant biotypes **5** Consult tank-mix partner label for rate-specific claims 6 Agral 90 at 0.25% v/v or Bindem at 60 mL/ac is required

IN-CROP | CEREAL GRASS

TRALKOXYDIM: 80 g/ac

# **Liquid Achieve**<sup>™</sup>SC

#### **HERBICIDE**

Better value control of grass weeds in barley and wheat.

#### WHY USE LIQUID ACHIEVE™ SC HERBICIDE?

- Effective control of wild oats, persian darnel, barnyard grass and green or yellow foxtail in wheat and barley.
- · Wide window of application.
- Trusted crop safety.
- · Multiple pack sizes: 80 acre cases or 480 acre drums.

GRASS WEEDS CONTROLLED

- Barnyard grass
- Persian darnel
- Wild oats

- Green foxtail
- '
- Volunteer oats
   Yellow foxtail

#### CARRIER® ADJUVANT REQUIRED AT 0.5% V/V:

Carrier adjuvant technology now available for use with Liquid Achieve SC.

LIQUID ACHIEVE SC AND CARRIER RATE CHARTS:		<b>Liquid Achieve SC Rate</b> 200 mL/ac 8 L jug or 96 L drum		Carrier Rate
		40 ac/jug	480 ac/drum	8 L jug
Water volume	4	,542 Litre Tank (1,2	00 US Gallon Tank	<b>(</b> )
5 US gal/ac	240 acres	6 jugs	0.50 drum	3 jugs
10 US gal/ac	120 acres	3 jugs	0.25 drum	3 jugs
Water volume	3,785 Litre Tank (1,000 US Gallon Tank)			
5 US gal/ac	200 acres	5 jugs	0.42 drum	2.5 jugs
10 US gal/ac	100 acres	2.5 jugs	0.21 drum	2.5 jugs
Water volume	3,028 Litre Tank (800 US Gallon Tank)			
5 US gal/ac	160 acres	4 jugs	0.33 drum	2 jugs
10 US gal/ac	80 acres	2 jugs	0.17 drum	2 jugs

#### **APPLICATION GUIDELINES**

		PACKAGING	Case: 2 x 8 L jugs Pallet: 5 x 96 L drums	
		RATES	200 mL/ac	
CROPS Barley		ACRES TREATED	• 40 ac/jug • 480 ac/drum	
Durum wheat Fall rye		WATER VOLUME	• Ground: 20-40 L/ac • Aerial: 12-18 L/ac (3-	
Spring rye Spring wheat Triticale Winter wheat  Cereal crops underseeded to	TIMING	Crop stage: 2-leaf to just prior to flag leaf emergence Weed stage: Wild oats 1 to 6-leaf; other grasses 1 to 4-leaf		
		RAINFAST	1 hour	
legume forages:  Alfalfa Bird's foot trefoil Clover Sainfoin		TANK-MIX HERBICIDES	<ul> <li>Attain™ XC herbicide</li> <li>Buctril® M</li> <li>Curtail® M</li> <li>Infinity®</li> <li>Infinity® FX</li> <li>Lontrel™ herbicide</li> <li>MCPA Ester 600</li> <li>Mextrol®</li> <li>OcTTain™ XL herbicide</li> </ul>	<ul> <li>Pardner™</li> <li>Pixxaro™</li> <li>herbicide</li> <li>Prestige™ XL</li> <li>herbicide</li> <li>Prominex™</li> <li>herbicide</li> <li>Thumper®</li> <li>Trophy®</li> <li>2,4-D Ester 700</li> </ul>



# DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

Seed to all major crops the year following application.

#### **GRAZING AND HARVEST**

Allow 16 days after application before cutting hay or harvesting forage.

Mature crops may be harvested 60 days after application.



Intake  $^{\text{\tiny{M}}}$  Adjuvant can be used at 0.66% v/v if Carrier Adjuvant is not available.

Liquid Achieve SC requires the addition of ammonia (Finish) with all EC broadleaf tank-mixes at 0.25% v/v + Carrier adjuvant at 0.5% v/v If bicarbonates > 400 ppm, add AMS to the tank first at 1% v/v.

**AVAILABLE IN BULK** 

65

**APPLICATION GUIDELINES** 

· Under cool or dry conditions, control





The most effective in-season thistle control available – right down to the roots.

#### HERBICIDE

#### WHY USE LONTREL™ XC HERBICIDE?

- Translocation throughout the plant for **effective control for both Canada thistle and sow thistle.**
- · Up to a 73% thistle stand reduction the year after application.
- · Ability to choose a rate that matches the size of your thistle problem
- · Improved, stronger, more convenient formulation.

#### BROADLEAF WEEDS CONTROLLED<sup>1</sup>

# CONTROLLED¹ • Alsike clover

# PERENNIAL WEEDS WEEDS CONTROLLED SUPPRESSED

· Sheep sorrel

- Ox-eyed daisy
- · Common groundsel · Canada thistle
- Ragweed Perennial sow
- chamomile
   Red clover
   Tufted vetch
   White clover
- Vetch

Scentless

- Volunteer alfalfa
- · Volunteer soybean
- Wild buckwheat

#### **GRAZING AND HARVEST**

• For canola, allow 3 to 5 days before grazing treated areas.

thistle (top growth)

- For field corn, allow 40 days before grazing treated areas or feeding cattle with corn silage from treated areas
- For all other crops, no label restrictions on the grazing of crops or forages treated with Lontrel™ XC.

	CROPS
	Cereals
	Corn
0	rasses

Oilseeds

Other (refer to product label)

WATER
VOLUME

• Ground 40-80 L/ac (10-21 US gal/ac)
• Aerial not registered

Canola stage: 2 to 6-leaf
Cereal stage: 3 to flag-leaf
TIMING

Corn stage: Emergence to 8-leaf (VE-V6)

**PACKAGING** 

**RATES &** 

**TREATED** 

**RAINFAST** 

**HERBICIDES** 

**ACRES** 

**Weed stage:** Canada thistle rosette to pre-bud

4 hours

Case:  $4 \times 2.67 L$ 

Acres: 13-40 ac/jug

may be severely reduced

Ares™ SN herbicide
 TANK-MIX
 Amity™ WDG

· Select® · Compo

herbicide Odyssey® • Poast® Ultra Compatible with all forms of

glyphosate

# DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

• Barley • Forage grasses

orage grasses • Rye

CanolaMustardSummerfallowFlaxOatsWheat

Soybeans, field peas (crop rotation) - Fields previously treated with Lontrel" XC herbicide up to 0.17 L/ha

Soybeans, field peas (crop rotation) - Fields previously treated with Lontrel" XC herbicide up to 0.17 L/ha can be seeded after a minimum of 10 months to soybeans or 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 are experienced during the months of June to August inclusive (less than 14 cm rainfall) in the year of application, delay seeding soybeans and field peas an additional 12 months (total 22 months following application).

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Have you relied on Eclipse™ XC herbicide for excellent weed control in glyphosate tolerant canola/corn?

Consider tank-mixing Lontrel™ XC with your glyphosate for the same trusted control.

CLOPYRALID: 40 g/ac GLYPHOSATE: 180 g/ac

<sup>1</sup> The performance of Lontrel XC is rate dependent; control is achieved at the rate of 137 mL/ac (0.34 L/ha) or higher.

# **OcTTain**<sup>™</sup>XL

#### **HERBICIDE**

Trusted, easy to use, high performance broadleaf weed control.

#### WHY USE OCTTAIN™ XL HERBICIDE?

- · Performance and value. The standard for kochia control (including Group 2 and Group 9 resistant), plus wild buckwheat and 25 other key broadleaf weeds.
- Ease of use. Available in 40-acre cases, 240-acre drums and 1,280-acre totes.
- · Crop-safe and flexible. Excellent crop safety in barley, wheat and durum.
- · Tank mix with Simplicity™ GoDRI™ (wheat), Liquid Achieve™ (barley) herbicides, and other grass weed control products.

#### **BROADLEAF WEEDS** CONTROLLED

- Annual sunflower
- · Blue lettuce<sup>1, 4</sup>
- Bluebur
- Burdock
- · Cleavers3
- · Cocklebur
- · Dandelion<sup>2, 4</sup>
- · Docks4
- · Dog mustard<sup>4</sup>
- Field bindweed<sup>1,4</sup>
- · Field horsetail1
- · Field peppergrass<sup>4</sup>
- Flixweed

- · Goat's-beard
- · Gumweed<sup>4</sup>
- · Hairy galinsoga<sup>4</sup>
- · Hedge bindweed4
- · Hemp nettle
- · Hoary cress<sup>1</sup>
- · Kochia³
- · Lamb's-quarters
- · Leafy spurge<sup>1,4</sup>
- Mustards (except
- green and grey tansy)
- · Oak-leaved goosefoot4
- Plantain
- Prickly lettuce
- · Ragweed

- · Round-leaved mallow
- · Russian thistle<sup>4</sup>
- · Shepherd's purse
- · Smartweed<sup>4</sup>
- Stinkweed
- · Stork's-bill
- · Sweet clover
- Tansy mustard<sup>4</sup>
- Tartary buckwheat<sup>4</sup>
- Vetch
- · Volunteer canola<sup>5</sup>
- · Volunteer flax
- · Wild buckwheat
- Wild radish

#### **WEEDS SUPPRESSED**

- Annual sow thistle<sup>4</sup>
- · Canada thistle<sup>1,4</sup>
- · Chickweed<sup>3</sup>
- Perennial

# sow thistle1

#### **APPLICATION GUIDELINES**

CROPS Barley Durum wheat Spring wheat Winter wheat	PACKAGING	Case: 2 x 9 L jugs Pallet: 5 x 108 L drums Tote: 576 L	
	RATES	450 mL/ac	
	ACRES TREATED	<ul><li>20 ac/jug</li><li>240 ac/drum</li><li>1280 ac/tote</li></ul>	
	WATER VOLUME	<ul> <li>Ground 20-40 L/ac (5-10 US gal/ac)</li> <li>Aerial 12-20 L/ac (3-5 US gal/ac)</li> </ul>	
	TIMING	Crop stage: 4-leaf to just prior to flag-leaf emergence Weed stage: 1 to 6-leaf	
	RAINFAST	1 hour	
	TANK-MIX HERBICIDES	<ul> <li>Everest®</li> <li>Horizon®</li> <li>Liquid Achieve™ SC herbicide</li> <li>Puma® Super</li> </ul>	<ul> <li>Simplicity™ herbicide</li> <li>Simplicity™ GoDRI™ herbicide</li> <li>Traxos®</li> </ul>



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

 Alfalfa Barlev

Canola

• Corn Dry beans · Faba beans

Flax

Mustard

 Peas Forage grasses

Lentils

Oats

Potatoes

Rye

 Soybeans · Sugar beets

Sunflowers

Wheat

#### **GRAZING AND HARVEST**

- · Allow 7 days after application before grazing lactating animals.
- · Withdraw meat animals from treated areas at least 3 days before slaughter.
- · Allow 30 days after application before cutting hay or harvesting forage.
- Mature crops may be harvested 60 days after application.



1 Top growth control only.

2 Spring rosettes.

3 Including Group 2 resistant biotypes.

4 Requires the addition of 86 mL/ac (2 oz/ac) of 2,4-D Ester 700.

5 All herbicide-tolerant varieties.

**AVAILABLE IN BULK** 69

**NEW** 

# **OnDeck**<sup>™</sup>

#### **HERBICIDE**

You can finally have it both ways. Control kochia and other key weeds with a unique combination of actives, and re-crop without any restrictions next season.

#### WHY USE ONDECK™ HERBICIDE?

- · Unique combination of Group 27 and Group 6 actives is designed to provide proactive herbicide resistance management.
- · Provides excellent control of key broadleaf weeds like kochia, wild mustard, wild buckwheat and volunteer canola, plus control of green and yellow foxtail.
- · Enjoy complete rotational freedom and seed any major crop next season.

#### **BROADLEAF** WEEDS CONTROLLED

- Chickweed
- Cleavers
- Common mallow<sup>3</sup>
- · Common ragweed3
- · Common waterhemp
- · Hemp-nettle
- Kochia²
- · Lamb's-quarters
- · Narrow-leaved hawk's beard
- · Redroot pigweed
- · Round-leaved mallow
- Russian thistle
- · Shepherd's purse
- Smartweed
- Stinkweed
- · Volunteer canola
- · Wild buckwheat
- · Wild mustard

#### **WEEDS SUPPRESSED**

- · Green foxtail1
- Yellow foxtail<sup>1</sup>

**GRASS WEEDS** 

CONTROLLED

- · Barnyard grass<sup>3</sup>
- · Canada thistle<sup>4</sup>
- Perennial
- sow-thistle4

#### **APPLICATION GUIDELINES**

	PACKAGING	<b>Case:</b> 2 × 6.475 L jugs <b>Drum:</b> 77.7 L <b>Tote:</b> 414.4 L	
CROPS Barley Durum wheat Spring wheat Winter wheat	RATES	Standard Rate (Recommended): 324 mL/ac High Rate: 435 mL/ac	
	ACRES TREATED	Standard Rate: 20 ac/jug, 240 ac/drum, 1280 ac/tote High Rate: 15 ac/jug, 180 ac/drum, 956 ac/tote  Recommended: 40 L/ac (10 US gal/ac) Ground: 20-80 L/ac (5-20 US gal/ac) Aerial: Minimum 20 L/ac (5 US gal/ac)  Crop stage: 1-leaf to jointing (1st node stage, BBCH31) Weed stage: 1 to 6-leaf	
	WATER VOLUME		
	TIMING		
	RAINFAST		
	TANK-MIX HERBICIDES	<ul> <li>Simplicity™ GoDRI™ herbicide <ul> <li>Simplicity™</li> <li>herbicide</li> <li>Horizon® NG</li> <li>Everest® 2.0**</li> <li>MCPA Ester 600</li> <li>Trondus®*</li> <li>Axial®*</li> </ul> </li> </ul>	



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### CROP ROTATION (10 MONTHS AFTER APPLICATION)

Lentils

 Alfalfa Canola

· Dry bean

• Fall rye

- Grass grown for seed and forage
- Oats
  - · Peas (field, edible)
- · Mustard (oriental,
- brown, yellow)
- Potatoes
- (except seed potatoes)

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#### **GRAZING AND HARVEST**

- · Allow 30 days after application before grazing, cutting hay or silage.
- Mature crops may be harvested 50 days after application.

Soybean

Sunflower

<sup>\*</sup>Axial or Trondus Herbicide may be substituted with any equivalent pinoxaden product.

<sup>\*\*</sup>Everest 2.0 may be substituted with any equivalent

<sup>1</sup> Including Group 1 and Group 2 resistant biotypes 2 Including Group 2, Group 4, and Group 9 resistant biotypes

<sup>3</sup> Requires the addition of an adjuvant MSO, HSOC, COC, Merge or Carrier at 0.5 to 1.0% v/v 4 Up to 30cm in height

flucarbazone product.



Arylex<sup>™</sup>active

Puts you in control and provides the flexibility to tank-mix with ANY graminicide partner.

#### **HERBICIDE**

#### WHY USE PIXXARO™ HERBICIDE WITH ARYLEX™ ACTIVE?

- Exceptional broadleaf weed control in wheat and barley.
- · Contains Arylex™ active which allows farmers to Just GO on small or large weeds, early or late crop staging, and even in cool or dry conditions.
- Provides **flexibility** to tank-mix with the right graminicide partner.

#### **BROADLEAF** WEEDS CONTROLLED

- American dragonhead
- Annual sow thistle
- Annual sunflower
- Ball mustard
- Burdock
- · Canada fleabane
- · Chickweed1
- · Cleavers1
- · Cocklebur
- Flixweed
- · Hemp-nettle<sup>1</sup>

- Henbit
- · Kochia²
- · Lamb's-quarters
- · Nightshade species · Volunteer alfalfa (hairy, Eastern black, and cutleaf)
- Plantain
- Prickly lettuce
- · Ragweed (common, false and giant)
- · Redroot pigweed
- · Round-leaved mallow
- · Shepherd's purse
- Stinkweed

- · Stork's-bill
- Velvetleaf

biotypes)

- Vetch
- · Volunteer canola (all herbicide tolerant
- Volunteer flax
- Wild buckwheat
- · Wild mustard1
- Wild radish

#### **GRASS WEEDS** CONTROLLED

· Barnyard grass

#### **WEEDS SUPPRESSED**

- · Canada thistle
- Dandelion
- · Field horsetail
- Perennial sow thistle
- Smartweed

#### **APPLICATION GUIDELINES**

	PACKAGING	Case: • Pixxaro™ A herbicide: 1 x 4.9 L jug • Plus M Ester 600: 1 x 9.45 L jug
	RATES	<ul><li>Pixxaro™ A: 122.5 mL/ac</li><li>Plus M Ester 600: 235 mL/ac</li></ul>
CROPS	ACRES TREATED	· 40 ac/case
Barley  Durum wheat	WATER VOLUME	Ground 20-40 L/ac (5-10 US gal/ac)
Spring wheat Winter wheat	TIMING	Crop stage: 3-leaf to just prior to flag leaf emergence Weed stage: 1 to 8-leaf (or larger; see label)
	RAINFAST	1 hour
	TANK-MIX HERBICIDES	<ul> <li>Axial®</li> <li>Everest®</li> <li>Horizon®</li> <li>Liquid Achieve™</li> <li>herbicide</li> <li>Traxos®</li> <li>Puma® Advance</li> <li>Simplicity™ herbicide</li> <li>herbicide</li> <li>Traxos®</li> </ul>



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Alfalfa
- Barley
- Corn
- Canola
- · Dry bean (Phaseolus vulgaris species including pinto, kidney and white types)
- Faba beans
- - Field peas
- Flax Mustard
- Oats
- Potatoes (except seed potatoes)
- Soybeans
- Spring wheat Sunflowers
- Timothy

#### **GRAZING AND PRE-HARVEST INTERVAL**

- · Livestock may be grazed on treated crops 7 days following application.
- Do not harvest the treated crop within 60 days after application.
- Do not cut the treated crop for hay or silage within 21 days after application.

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For a complete weed list and specific weed staging, please refer to the Pixxaro label. 1 Including Group 2 resistant biotypes. 2 Including Group 2 and Group 9 resistant biotypes.

## Pixxaro<sup>™</sup> A

Arylex<sup>™</sup>active

Puts you in control and provides the flexibility to customize your weed control.

#### **HERBICIDE**

#### WHY USE PIXXARO™ A HERBICIDE WITH ARYLEX™ ACTIVE?

- Exceptional broadleaf weed control in wheat and barley.
- · Contains Arylex™ active which allows farmers to Just GO on small or large weeds, early or late crop staging, and even in cool or dry conditions.
- Provides **flexibility** to customize your weed control with the right graminicide and phenoxy partners.

#### PIXXARO™ A ALONE AT 80 AC/JUG (122.5ML/AC):

#### WEEDS CONTROLLED: · Cow cockle

- American dragonhead
- Barnyard grass
- Canada fleabane
- Chickweed
- Cleavers<sup>1</sup> (1-9 whorl)
- Common ragweed
- Flixweed
- · Giant ragweed
- Hemp-nettle
- Henbit (up to bud stage Redroot pigweed and 15 cm in height)
- Kochia² (up to 15 cm in height)
- · Nightshade species (hairy, Eastern black, and cutleaf)
- Lamb's-quarters
- Round leaved mallow (up to 6 leaf stage)
- Shepherd's-purse

#### · Stork's-bill

- Velvetleaf
- Wild buckwheat

#### PIXXARO A AND MCPA ESTER 600 AT 235ML/AC (5 OZ):

- American dragonhead
- Burdock
- · Canada fleabane
- Chickweed
- · Cleavers<sup>1</sup> (1-9 whorl)
- · Cocklebur
- Common plantain
- Common ragweed · Cow cockle
- · Annual sow thistle
- · Barnyard grass

- · Prickly lettuce
- and tansy)
- (up to 6 leaf stage)

- Vetch
- · Volunteer canola
- cm in height)

- - · Volunteer alfalfa (up to 25 cm in height)
- Volunteer flax (up to 15 cm in height)

- WEEDS CONTROLLED: · Flixweed
  - · Giant ragweed · Hemp-nettle
    - · Henbit (up to bud stage and 15 cm in height)
    - · Kochia² (up to 15 cm in height)
    - · Lamb's-quarters
    - · Mustards (except dog
    - · Redroot pigweed

- Round leaved mallow · Shepherd's-purse
- Stinkweed
- · Stork's-bill
- · Volunteer alfalfa (up to 25 cm in height)
- · Volunteer flax (up to 15
- · Wild buckwheat

- · Wild mustard
- Wild radish
- · Wild sunflower

#### WEEDS SUPPRESSED

- · Canada thistle
- Dandelion
- Field horsetail
- · Perennial sow thistle Smartweed

#### PIXXARO A AND 2,4-D ESTER 700 AT 215ML/AC (5 OZ):

#### WEEDS CONTROLLED:

- · American dragonhead · Goat's beard · Annual sow thistle
- Barnvard arass
- Burdock · Canada fleabane
- Chickweed
- · Cleavers<sup>1</sup> (1-9 whorl)
- · Cocklebur
- Common plantain
- Common ragweed · Cow cockle

- Flixweed
- · Giant ragweed
- Hemp-nettle
- and 15 cm in height) · Kochia² (up to 15 cm
- in height) Lamb's-auarters
- · Mustards (except dog
- · Prickly lettuce

- and tansy)
- · Redroot pigweed

- Round leaved mallow (up to 6 leaf stage)
- · Russian thistle · Shepherd's-purse
- · Henbit (up to bud stage · Stinkweed · Stork's-bill
  - Vetch · Volunteer alfalfa (up to 25 cm in height)
  - · Volunteer canola · Volunteer flax (up to 15 cm in height)

· Wild buckwheat

- · Wild mustard
- · Wild radish
- · Wild sunflower

#### WEEDS SUPPRESSED

- · Canada thistle
- Dandelion
- · Perennial sow thistle
- Smartweed

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

1 Including Group 2 resistant biotypes. 2 Including Group 2 and Group 9 resistant biotypes.

#### **APPLICATION GUIDELINES**

	PACKAGING	<b>Case:</b> • 2 x 9.8 L jugs	
_	RATES	•122.5 mL/ac	
_	ACRES TREATED	•80 ac/jug	
CROPS  Barley	WATER VOLUME	Ground 20-40 L/ac (5-10 US gal/ac)	
Durum wheat Spring wheat	TIMING	Crop stage: 3-leaf to just prior to flag leaf emergence Weed stage: 1 to 8-leaf (or larger; see label)	
Winter wheat	RAINFAST	1 hour	
	TANK-MIX HERBICIDES	<ul> <li>Axial®</li> <li>Everest®</li> <li>Horizon®</li> <li>Liquid Achieve™</li> <li>herbicide</li> <li>MCPA Ester 600</li> <li>Puma® Advance</li> <li>Simplicity™</li> <li>herbicide</li> <li>Traxos®</li> <li>2, 4-D Ester 700</li> </ul>	

#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- · Spring wheat
- Barley

• Corn

- · Faba beans
- Oats Flax Canola
- Sunflowers

Soybeans

· Field peas

- · Potatoes (except seed potatoes)
- Mustard Alfalfa
- · Dry bean (Phaseolus vulgaris species including pinto, kidney
  - and white types) Timothy

#### **GRAZING AND PRE-HARVEST INTERVAL**

- · Livestock may be grazed on treated crops 7 days following application.
- Do not harvest the treated crop within 60 days after application.
- Do not cut the treated crop for hay or silage within 21 days after application.

## **Pixxaro** FLEXX

**Arylex**<sup>™</sup>active

Puts you in control and provides the flexibility to customize your weed control.

#### **HERBICIDE**

#### WHY USE PIXXARO™ FLEXX HERBICIDE WITH ARYLEX™ ACTIVE?

- Exceptional broadleaf weed control in wheat and barley.
- · Contains Arylex™ active which allows farmers to Just GO on small or large weeds, early or late crop staging, and even in cool or dry conditions.
- Provides **flexibility** to customize your weed control with the right graminicide and phenoxy partners.

#### PIXXARO FLEXX ALONE AT 80 AC/JUG (122.5ML/AC):

#### WEEDS CONTROLLED: · Cow cockle

- American dragonhead
- Barnvard arass
- Canada fleabane Chickweed
- Cleavers<sup>1</sup> (1-9 whorl)
- Common ragweed
- Flixweed
  - Giant ragweed Hemp-nettle
  - Henbit (up to bud stage Redroot pigweed and 15 cm in height)
  - Kochia² (up to 15 cm in height)
- · Nightshade species (hairy, Eastern black, and cutleaf)
- Lamb's-quarters
- Round leaved mallow (up to 6 leaf stage)
- Shepherd's-purse
- · Stork's-bill
  - Velvetleaf
  - · Volunteer alfalfa (up to 25 cm in height)
  - Volunteer flax (up to 15 cm in height)
  - Wild buckwheat

#### PIXXARO FLEXX AND MCPA ESTER 600 AT 235ML/AC (5 OZ):

- American dragonhead
- · Annual sow thistle · Barnyard grass
- Burdock
- · Canada fleabane
- Chickweed
- · Cleavers<sup>1</sup> (1-9 whorl)
- · Cocklebur
- Common plantain
- Common ragweed
- · Cow cockle

- WEEDS CONTROLLED: · Flixweed
  - · Hemp-nettle
  - and 15 cm in height)
  - height)

  - and tansy)

- · Giant ragweed
- · Henbit (up to bud stage
- · Kochia² (up to 15 cm in
- · Lamb's-quarters
- · Mustards (except dog
- · Prickly lettuce
- · Redroot pigweed

- Round leaved mallow (up to 6 leaf stage)
- · Shepherd's-purse
- Stinkweed
- · Stork's-bill Vetch
- · Volunteer alfalfa (up to 25 cm in height)
- · Volunteer canola · Volunteer flax (up to 15
- cm in height)
- · Wild buckwheat

- · Wild mustard
- Wild radish
- · Wild sunflower

#### WEEDS SUPPRESSED

- · Canada thistle
- Dandelion
- Field horsetail
- · Perennial sow thistle
- Smartweed

#### PIXXARO FLEXX AND 2,4-D ESTER 700 AT 215ML/AC (5 OZ):

#### WEEDS CONTROLLED:

please refer to the Pixxaro FLEXX label.

- · American dragonhead · Goat's beard
- · Annual sow thistle Barnvard arass
- Burdock
- · Canada fleabane
- Chickweed
- · Cleavers<sup>1</sup> (1-9 whorl) · Cocklebur
- Common plantain
- Common ragweed
- · Cow cockle

- Flixweed
- · Giant ragweed
- Hemp-nettle
- · Henbit (up to bud stage · Stinkweed and 15 cm in height) · Kochia² (up to 15 cm
- in height) Lamb's-auarters
- · Mustards (except dog and tansy)
- Prickly lettuce
- · Redroot pigweed

- · Round leaved mallow (up to 6 leaf stage)
- · Russian thistle · Shepherd's-purse
- · Stork's-bill
- Vetch
- · Volunteer alfalfa (up to 25 cm in height)
- · Volunteer canola · Volunteer flax (up to 15 cm in height)

· Wild buckwheat

- · Wild mustard · Wild radish
- · Wild sunflower

#### WEEDS SUPPRESSED

- · Canada thistle
- Dandelion

2 Including Group 2 and Group 9 resistant biotypes.

- · Perennial sow thistle
- Smartweed

For a complete weed list and specific weed staging, 1 Including Group 2 resistant biotypes.

## **APPLICATION GUIDELINES**

	PACKAGING	Case: • 2 x 9.8 L jugs	
	RATES	• 122.5 mL/ac	
	ACRES TREATED	• 80 ac/jug	
CROPS  Barley	WATER VOLUME	Ground 20-40 L/ad	c (5-10 US gal/ac)
Durum wheat Spring wheat	TIMING	Crop stage: 3-leaf flag leaf emergend Weed stage: 1 to 8- (or larger; see labe	ce -leaf
Winter wheat	RAINFAST	1 hour	
	TANK-MIX HERBICIDES	<ul> <li>Axial®</li> <li>Everest®</li> <li>Horizon®</li> <li>Liquid Achieve™</li> <li>herbicide</li> <li>MCPA Ester 600</li> <li>Puma® Advance</li> </ul>	<ul> <li>Simplicity™ herbicide</li> <li>Simplicity™ GoDRI™ herbicide</li> <li>Traxos®</li> <li>2, 4-D Ester 700</li> </ul>



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- · Spring wheat
- Barley
  - · Oats

Canola

• Corn

- Soybeans Sunflowers
- · Faba beans
- Flax · Field peas
- · Potatoes (except seed potatoes)
- Mustard Alfalfa
- · Dry bean (Phaseolus vulgaris species including pinto, kidney and white types)
  - Timothy

#### **GRAZING AND PRE-HARVEST INTERVAL**

- · Livestock may be grazed on treated crops 7 days following application.
- Do not harvest the treated crop within 60 days after application.
- Do not cut the treated crop for hay or silage within 21 days after application.

**CROPS** 

Barley

Canaryseed

Durum wheat

Forage grasses (see label for

complete list)

Oats

Spring wheat

Winter wheat

**PACKAGING** 

**RATES** 

**ACRES** 

WATER

**TIMING** 

**RAINFAST** 

TANK-MIX

**HERBICIDES** 

**VOLUME** 

**TREATED** 

**APPLICATION GUIDELINES** 

• Ground 20-40 L/ac (5-10 US gal/ac)

Crop stage: 3-leaf to just prior to flag

· Puma® Advance

Simplicity™ GoDRI™

Simplicity™

herbicide

herbicide

Aerial 12-20 L/ac (3-5 US gal/ac)

Weed stage: 1 to 6-leaf stage

**Case:** 2 x 9.5 L jugs

**Drum:** 113.6 L drum

Low rate: 710 mL/ac

High rate: 950 mL/ac

Low rate:

High rate:

10 ac/jug

• 13.5 ac/jua

• 160 ac/drum

• 120 ac/drum

leaf emergence

4 hours

Axial<sup>®</sup>

· Everest®

Horizon

· Liquid Achieve™

SC herbicide

## **Prestige**<sup>™</sup>XL

Maximize potential. Every acre, clean.

#### **HERBICIDE**

#### WHY USE PRESTIGE™ XL HERBICIDE?

- · Excellent control of thistles, cleavers, kochia and more.
- · Your cleanest cereal crops, year after year.
- · Multiple pack sizes: cases and drums.

#### 950 mL/ac (HIGH RATE)

#### **BROADLEAF WEEDS** CONTROLLED

#### Annual sow thistle

- Annual sunflower
- Burdock
- · Chickweed3,4
- · Cleavers3 Cocklebur
- Common groundsel
- · Field horsetail<sup>5</sup>

- Flixweed · Hemp-nettle
- · Kochia³
- · Lamb's-quarters
- Plantain⁵
- · Prickly lettuce
- Raaweed
- · Redroot pigweed
- · Round-leaved
- mallow
- · Russian pigweed

· Lamb's-quarters

- Scentless chamomile
- · Shepherd's purse
- Smartweed
- Stinkweed
- · Stork's-bill
- Tartary buckwheat
- Vetch
- · Volunteer canola<sup>6</sup>
- Volunteer flax
- · Volunteer sunflower

- · Wild buckwheat
- Wild mustard
- Wild radish

#### PERENNIAL WEEDS CONTROLLED

- · Canada thistle<sup>1</sup>
- · Dandelion<sup>2</sup>
- Perennial sow thistle1

#### 710 mL/ac (LOW RATE)

#### **BROADLEAF WEEDS** CONTROLLED

- Annual sunflower
- Burdock
- Cocklebur

- Cleavers<sup>3</sup>

Field horsetail⁵

- · Prickly lettuce · Ragweed · Shepherd's purse
- Stinkweed

· Kochia³

Plantain<sup>5</sup>

- Flixweed
- Volunteer flax
- · Volunteer sunflower
- Wild buckwheat · Wild mustard
- Wild radish
- · Stork's-bill Vetch

#### CONTROLLED Canada thistle¹

(low infestations)

**PERENNIAL WEEDS** 

#### **WEEDS SUPPRESSED**

Volunteer canola<sup>6</sup>

#### PRESTIGE™ XL REQUIRES THE ADDITION OF 0.25% V/V AMMONIA TO BE MIXED WITH SIMPLICITY™ GODRI™ HERBICIDE

If Bicarbonates are >400 ppm, add AMS to the tank first at 2% v/v. Go to PrestigeSimplicitySupport.corteva.ca or call 1-800-667-3852 for further details.

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- 1 Season-long control, with some regrowth in the fall (top growth control).
- 2 Spring rosettes only.
- 3 Including Group 2 resistant biotypes.
- 4 Controls emerged weeds only.
- - 5 Top growth only 6 All herbicide-tolerant canola varieties.

#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

· Canola

Flax

- Barlev Mustard

  - Oats
  - · Field Peas<sup>7</sup>
- · Sugar beets

· Rve

- Summerfallow
- Wheat

#### **GRAZING AND HARVEST**

- · Livestock may graze treated areas 7 days after application.
- · Withdraw meat animals from treated areas at least 3 days before slaughter.
- · Allow 7 days after application before cutting hay or harvesting forage.
- · Mature crops may be harvested 60 days after application.



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



#### HERBICIDE

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

#### WHY USE PRISM™ SG HERBICIDE?

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

#### **BROADLEAF WEEDS** CONTROLLED

Redroot pigweed

#### **GRASS WEEDS** CONTROLLED

- · Barnyard grass
- · Fall panicum
- · Green foxtail
- Witchgrass
- · Yellow foxtail

#### PERENNIAL WEEDS CONTROLLED

Quackgrass

#### **BROADLEAF WEEDS SUPPRESSED**

· Lamb's-quarters

#### **CROP ROTATION**

#### **ANY TIME**

Field corn

#### **FOUR MONTHS AFTER APPLICATION**

· Winter wheat

## 10 MONTHS AFTER · Durum wheat

- APPLICATION
- Barley Canola
- Chickpeas
- Corn (sweet or seed) Dry beans
- · Faba beans
- Field peas
- Flax
- Lentils
- Oats
- Potatoes

- · Red clover
- Sorghum
- Soybeans
- · Spring wheat Sunflowers
- · White beans

#### **APPLICATION GUIDELINES**

	PACKAGING	12 x 480 g bottles
_	RATES	24 g/ac
_	ACRES TREATED	20 ac/bottle
_	WATER VOLUME	40 L/ac (10 US gal/ac)
CROPS Potatoes	TIMING	<ul> <li>Apply as a broadcast spray, with a recommended surfactant, to potatoes prior to initiation of flowering</li> <li>Recommended non-ionic surfactant: Citowett Plus, Agral 90 or Ag-Surf at 2 L per 1000 L spray solution (0.2% v/v)</li> <li>Application to control annual grasses and quackgrass must be made before the crop canopy can interfere with spray coverage of the target weeds. Cultivation is NOT recommended within 7-10 days prior to or after application.</li> </ul>
_	RAINFAST	4 hours
	TANK-MIX HERBICIDES	Tricor 75DF



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **APPLICATION TIMING**

Weeds which emerge after application of Prism™ SG herbicide will not be controlled. Application should be made when the majority of weeds have emerged. Annual grass and broadleaf weeds are most sensitive when small and actively growing. Early crop establishment and a good crop stand are important in providing competition for weeds and effective post-emergence control of quackgrass and annual weeds when using Prism™ SG.

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#### PRE-HARVEST INTERVAL

30 days



Always read and follow label directions.

**APPLICATION GUIDELINES** 

## **Prominex**<sup>™</sup>

Arylex<sup>™</sup>active

**HERBICIDE** 

Control annual AND perennial broadleaf weeds with the convenience of an all-in-one formulation.

#### WHY USE PROMINEX™ HERBICIDE WITH ARYLEX™ ACTIVE?

- · Elite control of tough broadleaf weeds, including Canada thistle, cleavers, dandelion, hemp-nettle, kochia, wild buckwheat and many more.
- · With Arylex™ active you can Just GO. Small or large weeds, early or late crop stage and in cool or dry conditions.
- · Completely customizable choose the best phenoxy and graminicide partner for optimal weed control.

#### PROMINEX™ ALONE

#### **BROADLEAF WEEDS** CONTROLLED

#### American dragonhead

- · Canada fleabane²
- · Chickweed<sup>2</sup>
- · Cleavers1
- · Common ragweed<sup>2</sup>
- · Cow cockle
- Flixweed<sup>1</sup>

- · Giant ragweed<sup>2</sup> · Hemp-nettle<sup>1</sup>
- Henbit
- Kochia²
- · Lamb's-quarters
- · Nightshade species · Wild buckwheat (Eastern black, hairy and cutleaf)
- · Redroot pigweed
- · Round-leaved mallow

#### Shepherd's purse<sup>1</sup>

- · Stork's-bill
- Velvetleaf
- Volunteer alfalfa
- Volunteer flax
- Wild radish

#### **GRASS WEEDS** CONTROLLED

· Barnyard grass

#### PERENNIAL WEEDS CONTROLLED

· Canada thistle

#### **WEEDS SUPPRESSED**

- · Annual sow thistle
- · Wild mustard

#### PROMINEX + 235 mL/ac MCPA ESTER 600 (5 oz/ac)

#### PROMINEX ALONE WEEDS PLUS:

- Annual sow thistle
- · Ball mustard
- Burdock · Cocklebur
- Field horsetail (top growth)
- False ragweed
- Plantain
- · Prickly lettuce
- Stinkweed
- Vetch
- Volunteer canola
- · Wild mustard
- Wild radish
- · Wild sunflower

#### **SUPPRESSED**

- Dandelion
- Smartweed
- Perennial sow thistle

#### PROMINEX + 215 mL/ac 2,4-D ESTER 700 (5 oz/ac)

#### PROMINEX ALONE **WEEDS PLUS:**

Annual sow thistle

1 Including Group 2 resistant biotypes. 2 Including Groups 2 and 9 resistant biotypes.

- Bluebur
- Burdock
- Cocklebur
- · False ragweed
- · Goat's beard
- Plantain
- · Prickly lettuce
- · Russsian thistle
- Stinkweed
- · Volunteer canola Wild radish
- · Wild sunflower

#### **WEEDS**

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

## **RATE**

**ACRES** 

**TREATED** 

**PACKAGING** 

**CROPS** 

Barley **Durum wheat** 

Spring wheat

Winter wheat

415 mL/ac

· 20 ac/jug · 240 ac/drum

Case: 2 x 8.3 L jugs

**Drum:** 99.4 L

**TIMING** 

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

**RAINFAST** 

Axial<sup>®</sup>

4 hours

TANK-MIX **HERBICIDES** 

- · Everest® Horizon
- · Liquid Achieve™ SC herbicide
- · Simplicity" GoDRI™ herbicide

Simplicity™

herbicide

- Puma® Advance
- Traxos®
- Trondus<sup>®</sup>

#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Barley
- · Canola · Corn

Flax

- · Oats Mustard
- Field Peas<sup>3</sup> · Soybeans<sup>3</sup>
- Summerfallow
- Timothy
- Wheat



## **Rexade**<sup>™</sup>

Arylex™active

The complete wheat herbicide.

### **HERBICIDE**

#### WHY USE REXADE™ HERBICIDE WITH ARYLEX™ ACTIVE?

- Exceptional grass and broadleaf weed control.
- · Complete, convenient, all-in-one box solution.
- · GoDRI™ Rapid Dispersion Technology for easy storage, transport, and mixing.

#### **BROADLEAF** WEEDS CONTROLLED

- American dragonhead
- Annual sunflower
- Bluebur
- Burdock
- · Canada fleabane<sup>5</sup>
- · Chickweed<sup>2</sup>
- · Cleavers<sup>3</sup>
- Cocklebur
- · Common ragweed<sup>4</sup>
- · Corn spurry
- · Cow cockle²
- · Flixweed<sup>2</sup>
- · Hemp-nettle<sup>2,3</sup>
- · Henbit<sup>4</sup>
- Lamb's-quarters<sup>2,3</sup>
- Mustard<sup>2</sup> (except dog and green tansy)

#### · Plantain

- · Prickly lettuce
- · Redroot pigweed<sup>2,3</sup>
- · Round-leaved mallow<sup>2</sup>
- Russian thistle<sup>1</sup>
- · Shepherd's purse<sup>2</sup>
- Smartweed
- · Stinkweed<sup>2</sup>
- · Stork's-bill
- · Sweet clover
- Velvetleaf
- Volunteer alfalfa
- · Volunteer canola
- · Volunteer flax
- · White cockle
- · Wild buckwheat<sup>2</sup>
- · Wild radish1

#### **GRASS WEEDS** CONTROLLED

- · Annual sow thistle

- · Kochia<sup>1,3</sup>

- · Barnyard grass
- · Japanese brome
- · Wild oats
- · Yellow foxtail

#### **WEEDS SUPPRESSED**

- · Canada thistle
- Dandelion
- · Downy brome
- · Green foxtail
- · Night-flowering catchfly

#### **APPLICATION GUIDELINES**





#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

· Brown mustard

Barley

Canola

Peas

- Flax
  - Wheat
  - Oats
- Soybeans
- Sunflowers
- Potatoes
- (except seed potatoes)
- Yellow mustard

#### **GRAZING AND HARVEST**

- · Allow 7 days after application before grazing lactating animals.
- · Livestock may graze treated areas 3 days after application.
- · Withdraw meat animals from treated areas at least 3 days before slaughter.
- · Allow 30 days after application before cutting hay or harvesting forage.
- Mature crops may be harvested 60 days after application.



12 to 4-leaf staging.

2 Controlled through multiple effective modes of action.

3 Including Group 2 resistant biotypes.

4 Up to bud stage and 15 cm in height.

5 Including Group 2 and Group 9 resistant biotypes.

**PACKAGING** 

**RATES** 

**ACRES** 

WATER

**VOLUME** 

**TIMING** 

**RAINFAST** 

**TANK-MIX** 

**HERBICIDES** 

**TREATED** 

**APPLICATION GUIDELINES** 

Ground 20-40 L/ac (5-10 US gal/ac)

**Crop stage:** 3-leaf to just prior to

flag-leaf emergence

MCPA Ester 600

2.4-D Ester 700

Case: 2 x 9.7 L jugs

**Drum:** 116.4 L

486 mL/ac

· 20 ac/jug

1 hour

· 240 ac/drum





## **Rezuvant**<sup>™</sup> XL

Arylex<sup>™</sup>active

#### **HERBICIDE**

Premium Group 1 grassy weed control with broad spectrum broadleaf weed control in wheat and barley.

#### WHY USE REZUVANT™ XL HERBICIDE WITH ARYLEX™ ACTIVE?

- · Crop-safe, flexible and leading Group 1 performance on wild oats, green foxtail, barnyard grass and more.
- · Unparalleled control of cleavers, hemp-nettle, wild buckwheat, kochia, and many other tough broadleaf weeds.
- · Phenoxy flexibility tank-mix with MCPA or 2,4-D Ester to finetune your broadleaf weed control.

#### **REZUVANT™ XL ALONE**

#### **BROADLEAF** WFFDS

#### CONTROLLED

- American dragonhead
- · Canada fleabane
- Chickweed
- Cleavers
- Common ragweed
- · Cow cockle
- Cutleaf nightshade
- · Eastern black nightshade
- Flixweed

- Hairy nightshade
- · Hemp-nettle Henbit
- Kochia
- · Lamb's-quarters
- · Redroot pigweed
- · Round-leaved
- mallow
- · Shepherd's purse
- · Stork's-bill
- Velvetleaf Volunteer alfalfa
- · Volunteer flax
- · Wild buckwheat

#### CONTROLLED · Barnyard grass

**GRASS WEEDS** 

- · Green foxtail
- Proso millet
- Volunteer oats
- Volunteer
- canaryseed
- · Wild oats
- · Yellow foxtail

Wild mustard

Wild sunflower

Wild radish

#### REZUVANT XL + 235 mL/ac MCPA ESTER 600 (5 oz/ac)

#### **REZUVANT XL** ALONE **WEEDS PLUS:**

· Ball mustard

Burdock

· Annual sow thistle

- Plantain
- Prickly lettuce
- Raaweed (common. false and giant)
- Stinkweed
- Vetch
- · Volunteer canola Cocklebur

#### REZUVANT XL + 215 mL/ac 2,4-D ESTER 700 (5 OZ/AC)

#### **REZUVANT XL** ALONE

- **WEEDS PLUS:** • Bluebur
- Burdock
- Cocklebur
- · Field horsetail
- Stinkweed
- · Goat's beard
- · Prickly lettuce
- Hoary cress
- Plantain
- · Russian thistle
- Annual sunflower
- · Sweet clover
- Vetch
- Wild radish

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- Russian knapweed

- Wild mustard

#### **WEEDS SUPPRESSED**

- Annual sow thistle

#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

**CROPS** 

**Barley** 

Spring wheat

Winter wheat

- Alfalfa
- Barlev

• Corn

- vulgaris species including pinto, kidney · Canola and white types)
  - Field peas
  - - Flax
- · Dry bean (Phaseolus Mustard Oats
  - - (except seed potatoes)

  - Potatoes Timothy
  - Soybeans

#### **GRAZING AND HARVEST**

- · Livestock may be arazed on treated crops 21 days following application.
- Do not harvest the treated crop within 60 days after application.



· Spring wheat

Sunflowers

**AVAILABLE IN BULK** 

**IN-CROP | CEREAL GRASS** PYROXSULAM: 6 g/ac 2

## **Simplicity**<sup>™</sup>

#### **HERBICIDE**

Superior performance, including elite Group 2 wild oat and bonus broadleaf weed control with no re-cropping restrictions.

#### WHY USE SIMPLICITY™ HERBICIDE?

- · Superior performance, providing elite grass and broadleaf weed control.
- · Wide window of application the only Group 2 wild oat product that can be applied up to just prior to flag leaf emergence.
- · Tank-mix flexibility and rotational freedom to all major crops the following year.

#### **BROADLEAF WEEDS CONTROLLED**

- Chickweed<sup>1</sup>
- · Cleavers1
- Corn spurry
- · Cow cockle
- Flixweed
- · Hemp-nettle<sup>1</sup>
- · Redroot pigweed
- · Round-leaved mallow
- · Shepherd's purse
- · Smartweed<sup>1</sup>
- Stinkweed
- · Volunteer canola (excluding Clearfield®)

1 Not including Group 2 resistant.

provides an increased level of control.

#### **GRASS WEEDS CONTROLLED**

- · Wild oats
- Barnyard grass
- Downy brome (fall application)
- · Japanese brome
- · Yellow foxtail

#### **WEEDS SUPPRESSED**

- · Canada thistle
- Dandelion
- Downy brome (spring application)
- · Green foxtail<sup>2</sup>
- · Persian darnel
- · Russian thistle
- · White cockle
- · Wild buckwheat

## **APPLICATION GUIDELINES**

_	PACKAGING	Case: • Simplicity™ herbicide: 2 x 8 L jugs • Water Conditioner: 2 x 1.5 L jugs
_	RATES	<ul> <li>Simplicity™: 200 mL/ac</li> <li>Water Conditioner: 37.5 mL/ac</li> </ul>
_	ACRES TREATED	40 ac/jug (80 ac/case)
CROPS	WATER VOLUME	<ul><li>Ground 20-40 L/ac (5-10 US gal/ac)</li><li>Aerial minimum 12 L/ac (3 US gal/ac)</li></ul>
Durum wheat Spring wheat Winter wheat	TIMING	Crop stage: 3-leaf to just prior to flag-leaf emergence Weed stage: •1 to 4-leaf, two tillers stage of wild oats •1 to 5-leaf stage of broadleaf weeds
_	RAINFAST	2 hours
	TANK-MIX HERBICIDES <sup>3</sup>	<ul> <li>Attain™ XC</li> <li>herbicide</li> <li>Buctril® M</li> <li>Cirpreme™ XC</li> <li>herbicide</li> <li>herbicide</li> <li>Prominex™</li> <li>Cirpreme™ XC</li> <li>herbicide</li> <li>Curtail® M</li> <li>Exhilarate™</li> <li>herbicide</li> <li>Stellar™ XL</li> <li>MCPA Ester 600</li> <li>OcTTain™ XL</li> <li>herbicide</li> <li>Thumper®</li> <li>Tilt® fungicide</li> </ul>



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Barley
- · Brown mustard
- Canola
- · Canola-quality Brassica juncea
- Chickpea Dry bean (Phaseolus vulgaris species)
- Field peas
- Flax
- Lentils
- Mustard (brown, yellow)
- Oats
- Potatoes
- Soybean
- Spring wheat
- Sunflower
- Yellow mustard

#### **GRAZING AND HARVEST**

- · Livestock may graze treated areas 7 days after application.
- Mature crops may be harvested 60 days after application.

<sup>3</sup> Unless otherwise stated. Always read and follow label directions



2 Corteva Agriscience research trials indicate that application to small stage, actively growing plants

IN-CROP | CEREAL GRASS

PYROXSULAM: 4.5 g/ac



Simplicity<sup>™</sup> herbicide Wild Oat Rate. Simply better value.

#### **HERBICIDE**

#### WHY USE SIMPLICITY™ WILD OAT RATE?

- Cost effective Group 2 control of wild oats and Japanese brome.
- Wide window of application from 3-leaf to just prior to flag-leaf emergence.
- Rotational freedom ability to seed all major crops the year following application.

For early season applications in low to moderate wild oat populations that are typical in the brown soil zones of Southern Alberta and Southern Saskatchewan.

#### WILD OAT RATE

#### **GRASS WEEDS CONTROLLED**

- · Wild oats
- · Japanese brome<sup>1</sup>
- · Barnyard grass<sup>1</sup>

#### WILD OAT PERFORMANCE

Wild Oat Control Rating

09	% 20%	40%	60%	80%	100%
	Simplicity GoDRI		Very ç	good (90 – 95%	)
	Source: Corteva Agriscie	ence Field Resea	rch Data (2006 to	2019).	
	Varro®/Velocity® n	n3	Goo	d (85 – 89%)	
	Source: Corteva Agriscie	ence Field Resea	rch Data (2009 to	o 2019).	

90

#### **APPLICATION GUIDELINES**

	PACKAGING	Case: • Simplicity™ herbicide: 2 x 8 L jugs • Water Conditioner: 2 x 1.5 L jugs
_	RATES	<ul><li>Simplicity™: 150 mL/ac</li><li>Water Conditioner: 28.3 mL/ac</li></ul>
_	ACRES TREATED	53 ac/jug (106 ac/case)
CROPS  Durum wheat	WATER VOLUME	Ground 20-40 L/ac (5-10 US gal/ac) Aerial minimum 12 L/ac (3 US gal/ac)
Spring wheat Winter wheat	TIMING	Crop stage: 3-leaf to just prior to flag-leaf emergence Weed stage: 1 to 4-leaf
_	RAINFAST	2 hours
	TANK-MIX HERBICIDES <sup>2</sup>	<ul> <li>Attain™ XC herbicide <ul> <li>Buctril® M</li> <li>OcTTain™ XL herbicide</li> <li>Prestige™ XL herbicide</li> <li>Thumper®</li> <li>Tilt® fungicide</li> </ul> </li> </ul>



## DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Barley
- Brown mustard
- Canola
- Canola-quality
   Brassica juncea
- Chickpea
- Dry bean (Phaseolus vulgaris species)
- Field peas
- ica juncea Flax
- Lentils
- Oats
- Potatoes
- Soybean
- · Spring wheat

#### **GRAZING AND HARVEST**

- Livestock may graze treated areas7 days after application.
- Mature crops may be harvested 60 days after application.



Sunflower

Yellow mustard

2 Unless otherwise noted. Always read and follow label directions.

1 Based on Corteva Agriscience research trials.

**IN-CROP | CEREAL GRASS** PYROXSULAM: 6 g/ac 2

## **Simplicity** GoDRI GoDRI

#### **HERBICIDE**

Superior performance, including elite Group 2 wild oat and bonus broadleaf weed control with no re-cropping restrictions in a convenient, easy-to-use GoDRI™ formulation.



#### WHY USE SIMPLICITY™ GODRI™ HERBICIDE?

- · Superior performance, providing elite grass and broadleaf weed control.
- · Wide window of application the only Group 2 wild oat product that can be applied up to flag leaf.
- · Broadleaf herbicide tank-mix partner flexibility.
- · Rotational freedom to all major crops the following year.
- Convenient GoDRI™ herbicide formulation for fast, easy mixing and handling.

#### CONTROLLED

- Chickweed
- Cleavers<sup>1</sup>
- Corn spurry
- · Cow cockle
- Flixweed
- · Hemp-nettle
- · Redroot pigweed
- · Round-leaved mallow
- · Shepherd's purse
- · Smartweed<sup>1</sup>
- Stinkweed
- · Volunteer canola (excluding Clearfield®)

#### **BROADLEAF WEEDS GRASS WEEDS** CONTROLLED

- Wild oats
- Barnyard grass
- Downy brome (fall application)
- Japanese brome
- · Yellow foxtail
- Dandelion
- · Downy brome
- · Persian darnel
- Russian thistle

#### WHEN TANK-MIXING SIMPLICITY™ GODRI™ WITH A BROADLEAF HERBICIDE THAT DOES NOT REQUIRE A SURFACTANT, BINDEM UTILITY MODIFIER MUST BE USED. **BINDEM IS SOLD SEPARATELY.**

When spraying Simplicity GoDRI alone, the addition of a non-ionic surfactant is ALWAYS required. The following non-ionic surfactants can be used: Agral 90 at 0.25% v/v, Sentry at 0.25% v/v, Ag-Surf® Original at 0.25% v/v

#### **WEEDS SUPPRESSED**

- · Canada thistle
- (spring application)
- · Green foxtail<sup>2</sup>

- · White cockle
- · Wild buckwheat

#### **APPLICATION GUIDELINES**

	PACKAGING	4 x 2.24 kg jugs	
_	RATES	28 g/ac	
_	ACRES TREATED	80 ac/jug (320 ac/case	e)
CROPS	WATER VOLUME	<ul><li>Ground 20-40 L/ac (5</li><li>Aerial minimum 12 L/ac</li></ul>	~
Durum wheat Spring wheat Winter wheat	TIMING	Crop stage: 2 leaf (fully to flag leaf Weed stage: •1 to 4-leaf, two tillers si •1 to 5-leaf stage of bro	tage of wild oats
Fall Rye	RAINFAST	2 hours	
Spring Rye Triticale	TANK-MIX HERBICIDES <sup>3</sup>	Attain™ XC herbicide     Buctril® M     Cirpreme™ XC herbicide     Curtail® M     Exhilarate™ herbicide     MCPA Ester 600     OcTTain™ XL herbicide	<ul> <li>Prestige™ XL herbicide</li> <li>Prominex™ herbicide</li> <li>Pixxaro™ herbicide</li> <li>Refine Extra®</li> <li>Stellar™ XL herbicide</li> <li>Thumper®</li> <li>Tilt® fungicide</li> </ul>



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Alfalfa
- Barley
- · Brown mustard
- · Canola
- Canola-quality Brassica juncea
- Chickpea
- · Dry bean (Phaseolus vulgaris species)
- Field corn
- Field peas
- Flax
- Lentils
- Oats Potatoes
- Soybean
  - · Spring wheat Sunflower
  - · Yellow mustard

#### **GRAZING AND HARVEST**

- · Livestock may graze treated areas 7 days after application.
- · Mature crops may be harvested 50 days after application.



<sup>1</sup> Not including Group 2 resistant.

<sup>2</sup> Corteva Agriscience research trials indicate that application to small stage, actively growing plants provides an increased level of control.

<sup>3</sup> Unless otherwise stated. Always read and follow label directions.

IN-CROP | CEREAL GRASS

PYROXSULAM: 4.5 g/ac

## **Simplicity** GoDRI ✓

**HERBICIDE** 

Simplicity™ GoDRI™ herbicide Wild Oat Rate. Simply better value.



#### WHY USE SIMPLICITY™ GODRI™ WILD OAT RATE?

- · Cost effective control of wild oats and Japanese brome.
- · Wide window of application from 2-leaf to flag-leaf.
- Rotational freedom ability to seed all major crops the year following application.

For early season applications in low to moderate wild oat populations that are typical in the brown soil zones of Southern Alberta and Southern Saskatchewan.

#### WILD OAT RATE

#### **GRASS WEEDS CONTROLLED**

- · Wild oats
- · Japanese brome<sup>1</sup>
- · Barnyard grass<sup>1</sup>

#### WILD OAT PERFORMANCE

1 Based on Corteva Agriscience research trials.

# Wild Oat Control Rating 0% 20% 40% 60% 80% 100% Simplicity GoDRI Very good (90 – 95%) Source: Corteva Agriscience Field Research Data (2006 to 2019). Varro\*/Velocity\* m3 Good (85 – 89%) Source: Corteva Agriscience Field Research Data (2009 to 2019).

WHEN TANK-MIXING SIMPLICITY GODRI WITH A BROADLEAF HERBICIDE THAT DOES NOT REQUIRE A SURFACTANT, BINDEM UTILITY MODIFIER MUST BE USED.

BINDEM IS SOLD SEPARATELY.

When spraying Simplicity GoDRI alone, the addition of a non-ionic surfactant is ALWAYS required. The following non-ionic surfactants can be used:

Agral 90 at 0.25% v/v, Sentry at 0.25% v/v, Ag-Surf\* Original at 0.25% v/v

## APPLICATION GUIDELINES

PACKAGING	4 x 2.24 kg jugs	
RATES	21 g/ac	
ACRES TREATED	106 ac/jug (424 ac/case)	
WATER VOLUME	<ul> <li>Ground 20-40 L/ac (5-10 US gal/ac)</li> <li>Aerial minimum 12 L/ac (3 US gal/ac)</li> </ul>	
TIMING	Crop stage: 2 leaf (fully expanded) to flag-leaf Weed stage: 1 to 4-leaf	
RAINFAST	2 hours	
TANK-MIX HERBICIDES <sup>2</sup>	<ul> <li>Attain™ XC herbicide <ul> <li>Buctril® M</li> <li>OcTTain™ XL herbicide</li> <li>Prestige™ XL herbicide</li> <li>Thumper®</li> <li>Tilt® fungicide</li> </ul> </li> </ul>	
	RATES  ACRES TREATED  WATER VOLUME  TIMING  RAINFAST	



## DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Alfalfa
- Barley
- Brown mustard
- Canola
- Canola-quality
- Brassica juncea
- Chickpea
- Dry bean (Phaseolus vulgaris species)
- Field corn
- Field peas
- Flax

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- LentilsOats
- Potatoes
- Soybean
- Spring wheat
- Sunflower
- · Yellow mustard

#### **GRAZING AND HARVEST**

- Livestock may graze treated areas 7 days after application.
- Mature crops may be harvested 50 days after application.



<sup>2</sup> Unless otherwise stated. Always read and follow label directions.

## **Sortan**<sup>™</sup>IS

Cleaner fields, higher yields.

#### **HERBICIDE**

#### WHY USE SORTAN™ IS HERBICIDE?

- Moisture Activated Extended Control: Extended control of tough broadleaf and grassy weeds throughout the critical weed free period (CWFP).
  - CWFP in corn is from emergence (VE) to the V4 stage.
- · Removes Early-Season Weed Competition
- Excellent control of volunteer glyphosate-tolerant canola and wild buckwheat.
- Recommend the high rate (30 g/ac) + glyphosate herbicide (at 1 REL) at pre-emergent to early post (V3) timing.
- Good results observed with the 60 ac/case rate + 1 REL of Glyphosate depending on weed staging.
- · Resistance Management Tool
  - Additional mode of action to glyphosate providing a great tool for resistance management.

#### WEEDS CONTROLLED

#### PRE-EMERGENT APPLICATION: 30 g/ac RATE

- · Barnyard grass
- · Green foxtail
- · Yellow foxtail\*
- Large (hairy)
   crabgrass\*
- · Fall panicum
- · Lady's thumb\*
- Proso millet
- · Shepherd's purse
- Annual sow thistle\*
- Volunteer canola (excluding Clearfield)
- · Volunteer wheat

#### POST-EMERGENT APPLICATION: 15 g/ac RATE

- Annual sow thistle<sup>1</sup>
- Redroot pigweed,
   2-4 leaves (including triazine-resistant biotypes)
- Volunteer canola
- Volunteer soybeans (including glyphosatetolerant)
- Wild buckwheat<sup>1</sup>

FOR OPTIMUM PERFORMANCE, SORTAN™ IS SHOULD BE

TANK MIXED WITH 1 REL OF GLYPHOSATE HERBICIDE.

For optimum extended control, Sortan IS requires a

rainfall within 3–5 days after application for activation. Activation of Sortan IS occurs when the top 5–10 cm of

the soil profile is thoroughly moistened following a rainfall event making the herbicide readily available to control

germinating annual weeds.

#### POST-EMERGENT APPLICATION: 23 g/ac RATE

- Achieve more consistent control under heavier weed populations
- Weed spectrum identical to 15g/ac rate

#### POST-EMERGENT APPLICATION: 30 g/ac RATE ALL WEEDS CONTROLLED AT 15 & 23 g/ac RATES PLUS:

- Barnyard grass
- Green foxtail
- · Giant foxtail
- Fall panicum
- · Lamb's-quarters\*
- Large (hairy)
   crabgrass\*
- · Old witchgrass
- · Quackgrass\*
- · Shepherd's purse
- Wild buckwheat
- · Wild oats\*1
- · Volunteer wheat
- · Yellow foxtail\*

## APPLICATION GUIDELINES

	PACKAGING	4 x 1.2 kg jugs
	RATES	<ul> <li>Pre-emergent rate: 30 g/ac</li> <li>Post-emergent rate: 15 g/ac, 23 g/ac, or 30 g/ac (Refer to product label for more details on post-emergent application)</li> </ul>
CROPS Silage Corn	ACRES TREATED	<ul> <li>Pre-emergence at 30 g/ac: 40 ac/jug</li> <li>Post-emergence at 30 g/ac: 40 ac/jug</li> <li>Post-emergence at 23 g/ac: 60 ac/jug</li> <li>Post-emergence at 15 g/ac: 80 ac/jug</li> </ul>
Grazing Corn Grain Corn	WATER VOLUME	Minimum 40 L/ac (10 US gal/ac)
	TIMING	<ul> <li>• Pre-emergent application:</li> <li>before emergence of weeds</li> <li>• Post-emergent application: Up to</li> <li>5-leaf stage (or 3 visible collars)</li> </ul>
	RAINFAST	2-4 hours
	TANK-MIX HERBICIDES	Tank-mix with 1 L equivalent of glyphosate



## DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

## 10 MONTHS AFTER APPLICATION

- Barley
- Canola
- Chickpeas
- · Corn (field, seed,
- Dry beans
- · Faba beans
- Field peasFlax
- Lentils
- eld, seed, Oats

- Potatoes
- Soybeans
- Spring wheat (including durum)
- Sunflowers

## FOUR MONTHS AFTER APPLICATION

Winter wheat

#### **GRAZING AND HARVEST**

Must not be applied within 30 days of harvest. Do not graze or silage for a minimum of 30 days.



<sup>\*</sup> Supression only.

<sup>1</sup> Control when tankmixed with glyphosate.

Stellar performance. Made easy.

#### **HERBICIDE**

#### WHY USE STELLAR™ XL HERBICIDE?

- · High performing broadleaf weed control in an easy to use, all-in-one formulation.
- · Re-cropping and early application flexibility.
- · Best broadleaf weed control option in oats with excellent crop safety.

#### STELLAR™ XL ALONE

#### BROADLEAF WEEDS

#### CONTROLLED Annual sunflower

- Burdock
- Chickweed<sup>3</sup>
- · Cleavers<sup>1, 3</sup>
- · Cocklebur
- Common ragweed
- Flixweed · Hemp-nettle<sup>1</sup>
- · Kochia<sup>1</sup>
- · Lamb's-auarters
- Plantain
- Prickly lettuce
- · Redroot pigweed
- Russian piqweed
- Smartweed Stinkweed<sup>3</sup>
- Vetch
- · Volunteer canola<sup>2</sup>

**WEEDS** 

**SUPPRESSED** 

· Stork's-bill

- · Volunteer flax · Wild buckwheat
- Wild mustard<sup>3</sup> Wild radish
- · Shepherd's purse<sup>3</sup>

#### When Stellar XL is tank mixed with Simplicity™ GoDRI™ herbicide (full rate) these additional weeds are controlled or suppressed:

#### **BROADLEAF**

- · Canada thistle
- Corn spurry
- · Cow cockle Dandelion
- · Round-leaved mallow<sup>3</sup>
- · Russian thistle

#### **GRASS**

- Barnyard grass
- Japanese brome
- Wild oats
- · Yellow foxtail

#### **WEEDS SUPPRESSED**

- · Narrow-leaved hawk's beard
- · White cockle

#### **APPLICATION GUIDELINES**

	PACKAGING	<b>Case:</b> 2 x 8.1 L jugs <b>Drum:</b> 97.1 L <b>Tote:</b> 518 L
_	RATES	405 mL/ac
CROPS Barley	ACRES TREATED	<ul><li>20 ac/jug</li><li>240 ac/drum</li><li>1280 ac/tote</li></ul>
Oats Spring wheat	WATER VOLUME	<ul><li>Ground: 20-40 L/ac (5-10 US gal/ac)</li><li>Aerial: not registered</li></ul>
Durum wheat Winter wheat	TIMING	Crop stage: 3-leaf to just prior to flag-leaf emergence Weed stage: 1 to 4-leaf
_	RAINFAST	2 hours
	TANK-MIX HERBICIDES	<ul> <li>Axial®</li> <li>Traxos®</li> <li>Everest®</li> <li>Sierra™</li> <li>Simplicity™ herbicide</li> <li>Simplicity™ GoDRI™ herbicide</li> </ul>



Barley

Canola

Corn

#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

after application.

- Alfalfa
- Fababeans
  - · Field beans
  - Flax · Lentils
- Mustard • Oats
- Peas
- Potatoes

#### **GRAZING AND HARVEST**

Allow 7 days after application before cutting hay or harvesting forage. Mature crops may be harvested 60 days



Soybean

Sunflower

Wheat

1 Including Group 2 resistant biotypes. 2 All herbicide-tolerant canola varieties. 3 Controlled by multiple effective modes of action.

**AVAILABLE IN BULK** 

99

## **Steadfast**<sup>™</sup>IS

#### HERBICIDE

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

#### WHY USE STEADFAST™ IS?

- **Proven control of annual grasses.** Steadfast IS provides dependable control of key annual grasses such as green foxtail and wild oat.
- Crop safety under a wide range of conditions. Includes a safener allowing for use on short season hybrids.
- Wide window. Steadfast IS can be safely applied to field corn up to the 6 leaf stage (V4).

#### STEADFAST IS ALONE

#### WEEDS CONTROLLED

- · Green foxtail
- · Volunteer canola
- · Volunteer wheat
- Wild Oat

#### **APPLICATION GUIDELINES**

PACKAGING	6 x 540 g bottles
RATES	27 g/ac
ACRES TREATED	• 20 ac/bottle
WATER VOLUME	• Ground 20-40 L/ac (5-10 US gal/ac)
TIMING	• <b>Hybrid field corn:</b> 1-6 leaves (4 visible collars = V4)
RAINFAST	2 hours
TANK-MIX HERBICIDES	<ul> <li>Non-GMO field corn: Steadfast™ IS herbicide can be tank-mixed with registered broadleaf herbicides to ensure cross-spectrum control of grass and broadleaf weeds</li> <li>Glyphosate Tolerant Corn: Tank-mix with a registered glyphosate</li> </ul>
	RATES  ACRES TREATED  WATER VOLUME  TIMING  RAINFAST



## DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

ANYTIME AFTER APPLICATION:

4 MONTHS AFTER

Field corn

APPLICATION:

10 MONTHS AFTER

• Barley

Canola

Chickpeas

Corn (sweet or seed)

- Dry Beans<sup>†</sup>
- $\cdot \, \mathsf{Durum} \; \mathsf{wheat} \\$
- · Field peas
- FlaxOats
- Potatoes

## Winter wheatADJUVANTS:

APPLICATION:

Non-GMO field corn: Add a non-ionic surfactant at 2 L per 1000 L spray solution (0.2% v/v)
Glyphosate-tolerant corn: If tank-mixing
Steadfast™ IS with glyphosate, a non-ionic surfactant is not required.

#### PRE-HARVEST INTERVAL:

30 days for corn (silage, fodder or grain)

† Dry bean varieties may vary in their tolerance to herbicides, including to Steadfast IS. Since not all dry bean varieties as rotational crops have been tested for tolerance to Steadfast IS, first planting of each variety to field previously treated with Steadfast IS should be limited to a small area to



Soybeans

· Spring wheat

White beans

confirm the tolerance prior to adoption as a general field practice. Additionally, consult your seed supplier for information on the tolerance of specific varieties of dry common beans to Steadfast IS Herbicide.

2



PYROXSULAM: 6 g/ac FLUROXYPYR: 41 g/ac

## **Tandem**

#### **HERBICIDE**

Control problem grass and broadleaf weeds in wheat with the tougher, easier, total-acre solution.

#### WHY USE TANDEM™ HERBICIDE?

- · Tougher control of wild oats, Japanese brome, chickweed, cleavers, hemp-nettle, kochia, wild buckwheat, and many more.
- · Increased flexiblility wide window of application, excellent crop safety, and rotational freedom.

#### **TANDEM™ ALONE**

#### **BROADLEAF WEEDS** CONTROLLED

· Chickweed 1,4

· Cleavers<sup>1,4</sup>

· Corn spurry

· Hemp-nettle

Bluebur

Burdock

· Cow cockle

Flixweed

#### Stinkweed

· Kochia<sup>4</sup>

mallow1

Smartweed

Volunteer canola<sup>2</sup>

Redroot pigweed

· Shepherd's purse

· Round-leaved

Volunteer flax

#### **GRASS WEEDS** CONTROLLED

- · Barnyard grass
- · Japanese brome
- Wild oats<sup>3</sup>

#### Yellow foxtail

#### **WEEDS SUPPRESSED**

- · Canada thistle
- · Dandelion<sup>6</sup>
- · Downy brome<sup>6</sup>
- Green foxtail⁵
- · Russian thistle
- · Stork's-bill
- · Wild buckwheat

#### TANDEM + 241 mL/ac OF 2,4-D ESTER 700 (6 oz/ac)

#### **ALL TANDEM ALONE** • Flixweed<sup>1</sup> **WEEDS PLUS:**

- · Goat's-beard
- Plantain
- Cocklebur · Prickly lettuce
- Lamb's-auarters<sup>1</sup>
- Ragweed · Redroot pigweed<sup>1</sup>
  - · Smartweed<sup>1</sup>
  - Stinkweed<sup>1</sup>
  - Sweet clover
- Volunteer sunflower
- · Wild buckwheat
- · Wild mustard1
- · Wild radish

#### TANDEM + 234 mL/ac OF MCPA ESTER 600 (5 oz/ac)

#### **ALL TANDEM ALONE** • Prickly lettuce **WEEDS PLUS:**

- Burdock · Cocklebur
- · Lamb's-quarters1
- Ragweed
- · Shepherd's purse<sup>1</sup>
- Smartweed<sup>1</sup>

- · Stinkweed1
- Vetch
- Volunteer sunflower
- · Wild mustard
- Wild radish
- Wild buckwheat

#### 1 Controlled by multiple effective modes of action. 2 Volunteer Clearfield canola is controlled with the addition of MCPA or 2,4-D.

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## provides an increased level of control.

## **APPLICATION GUIDELINES**

	PACKAGING	Case: • Tandem™ A herbicide: 1 x 8 L jug • Tandem™ B herbicide: 1 x 4.84 L jug • Water conditioner: 1 x 1.5 L jug
	RATES	<ul> <li>Tandem™ A: 200 mL/ac</li> <li>Tandem™ B: 121 mL/ac</li> <li>Water conditioner: 37.5 mL/ac</li> </ul>
CROPS	ACRES TREATED	40 ac/case
Durum wheat  Spring wheat	WATER VOLUME	<b>Ground:</b> 20-40 L/ac (5-10 US gal/ac) <b>Aerial:</b> Min. 12 L/ac (3 US gal/ac)
Winter wheat	TIMING	Crop stage: 3-leaf to just prior to flag-leaf emergence Weed stage: 1 to 4-leaf, two tillers stage for wild oats and 1 to 5-leaf stage for broadleaf weeds
	RAINFAST	2 hours
	TANK-MIX HERBICIDES	<ul><li>Curtail® M herbicide</li><li>MCPA Ester 600</li><li>2,4-D Ester 700</li></ul>



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Barley
- Mustard
- · Canola
- Chickpeas
  - Peas
- Corn
- Potatoes

· Oats

- · Dry beans
- Soybeans
- Flax
- Sunflower
- · Lentils Wheat

#### **GRAZING AND HARVEST**

- Livestock may graze treated areas 7 days after application.
- · Allow 7 days after application before grazing lactating animals.
- · Withdraw meat animals from treated areas at least 3 days before slaughter.
- · Allow 30 days after application before cutting hay or harvesting forage.
- Mature crops may be harvested 60 days after application.

#### Additional broadleaf weeds controlled when tank-mixed with Curtail™ M herbicide (10 ac/jug)

- Annual sow
- Canada Cocklebur
- groundsel

- quarters
- · Perennial sow
- Plantain<sup>5</sup>
- Prickly lettuce

- - (annual and volunteer)
  - Tartary

  - sunflower

<sup>3</sup> Including Group 1 resistant biotypes. 4 Including Group 2 resistant biotypes.

<sup>5</sup> Corteva Agriscience research trials indicate that application to small stage, actively growing plants

<sup>6</sup> Spring rosettes.

2



#### **HERBICIDE**

Delivers powerful broadleaf weed control combined with Group 2 grass chemistry for wheat farmers.

#### WHY USE TRIDEM™ HERBICIDE IN WHEAT?

- · Delivers wide spectrum grass and broadleaf weed control for wheat farmers.
- · Perennial broadleaf weed control without the re-cropping restrictions.

#### TRIDEM $^{\text{M}}$ + 215 mL/ac OF 2,4-D ESTER 700 (5 oz/ac)

#### BROADLEAF WEEDS

- Annual sow thistle
- · Bluebur
- Burdock · Cleavers1
- Cocklebur
- · Common chickweed1
- · Cow cockle
- · Daisy fleabane

· Goat's-beard

- · False flax
- Flixweed

- Kochia
- · Lamb's-quarters
- Narrow-leaved hawk's beard
- Plantain
- · Prickly lettuce
- Ragweed · Redroot pigweed1
- Round-leaved mallow1
- · Russian pigweed
- Russian thistle
- · Shepherd's purse<sup>1</sup>
- · Smartweed1

- · Stinging nettle
- Stinkweed<sup>1</sup>
- · Stork's-bill
- · Sweet clover
- Thyme-leaved spurge
- · Volunteer canola<sup>1</sup> (all herbicide tolerant biotypes)
- Volunteer flax<sup>1</sup>
- Wild buckwheat<sup>1</sup>
- · Wild mustard<sup>1</sup>
- Wild radish
- Wild sunflower<sup>1</sup>

#### **GRASS WEEDS** CONTROLLED

- · Japanese brome
- Wild oats

#### **PERENNIAL WEEDS** CONTROLLED

- · Canada thistle
- Dandelion
- Perennial sow thistle

#### **WEEDS SUPPRESSED**

· Hemp-nettle

#### **APPLICATION GUIDELINES**

CROPS Durum wheat	PACKAGING	Case:  • Tridem A™ herbicide: 1 x 0.84 kg jug  • Tridem B™ herbicide: 2 x 8.1 L jugs  • Bindem™ herbicide: 1 x 2.4 L jug  Bulk Pack:  • Tridem™ A: 1 x 5.04 kg jug  • Tridem™ B: 1 x 97.2 L drum  • Bindem™: 2 x 7.1 L jugs
	RATES	<ul><li>Tridem A: 21 g/ac</li><li>Tridem B: 405 mL/ac</li><li>Bindem: 60 mL/ac</li></ul>
Spring wheat	ACRES TREATED	<ul><li>40 ac/case</li><li>240 acre bulk pack</li></ul>
Winter wheat	TIMING	Crop stage: 4-leaf to just prior to flag-leaf emergence Weed stage: Apply early post-emergence to the main flush of actively growing weeds
	RAINFAST	2 hours
	TANK-MIX HERBICIDES	• 2,4-D Ester 700 • MCPA Ester 600



#### DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

- Alfalfa
- Barley
- Brown mustard
- Canola
- Corn
- · Dry common beans · Oats (phaseolus vulgaris)
- Fababeans
- Flax

**GRAZING AND HARVEST** 

Do not harvest grain within 60 days of application.

- Lentils
- - Oriental mustard
  - Peas
  - Potatoes (except seed potatoes)
  - Soybeans



Sunflower

· Yellow mustard

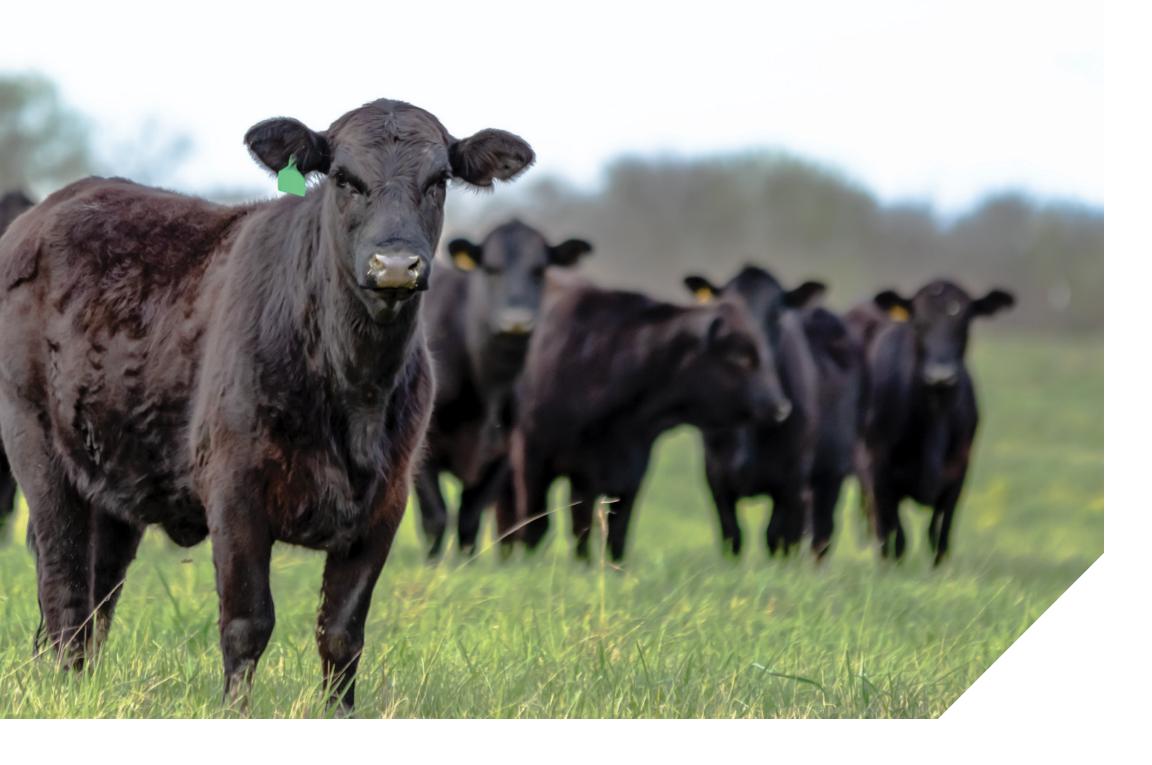
Wheat

1 Controlled by multiple effective modes of action when tank mixed with 2,4-D Ester at 5 oz/ac.

**AVAILABLE IN BULK** 

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# RANGE & PASTURE HERBICIDES



## **Grazon**<sup>™</sup>XC

#### HERBICIDE

The solution for controlling both undesirable trees and broadleaf weeds in permanent pastures and grazed rangeland.

#### WHY USE GRAZON™ XC HERBICIDE?

- · Proven and effective extended control of a variety of trees and broadleaf weeds including aspen, birch, dandelion and leafy spurge.
- · Minimal disruption of grazing post application.

#### BROADLEAF WEEDS CONTROLLED

- Burdock
- · Canada thistle
- · Common ragweed · Sweet clover
- Common yarrow
- Dandelion
- Dock
- Fleabane

- Goldenrod
- · Leafy spurge
- Plantain
- Prickly lettuce
- · Red clover
- Toadflax
- Vetch
- Wild carrot

#### TREES & WOODY **SPECIES**

#### CONTROLLED

- Aspen
- Birch
- · Wild prairie rose
- Willow

#### TREES SUPPRESSED

· Balsam poplar

#### **PRECAUTIONS**

- Do not apply within 1.5 times the height of desirable trees in pastures.
- Do not spray if injury to existing forage legumes cannot be tolerated.
- Take appropriate measures to prevent application or drift onto plants and trees that are not intended for control.

#### **GRAZING**

- · No grazing restrictions for beef livestock.
- · Allow 7 days after application before grazing lactating dairy animals.
- Withdraw meat animals from treated areas at least 3 days before slaughter.

## **Gateway**<sup>™</sup> **ADJUVANT**

Gateway™ adjuvant is a non-ionic, paraffinic oil blend surfactant designed for use with Corteva's Range & Pasture herbicides.

**Rate:** 0.25% - 0.375% v/v is recommended with Grazon™ XC to achieve optimal control of tree species as well as leafy spurge and toadflax.

#### **APPLICATION GUIDELINES**

	PACKAGING	<b>Case:</b> 2 x 10 L jugs
	RATES & ACRES TREATED	Broadleaf weed control: 1.9 L/ac Tree control: 2.5 L/ac + 0.25%-0.375% v/v Gateway™ adjuvant for ground applications. (Height restrictions apply, please contact Corteva Agriscience for more information) • For aerial application information please contact your Corteva Range & Pasture Specialist. • Backpack applications to small areas: 67 mL of Grazon™ XC herbicide in 10 L of water (0.67% solution) for weed control • For all applications, coverage of the targeted foliage is very important
	WATER VOLUME	• Ground: minimum 80 L/ac (20 US gal/ac)
USAGES  Permanent Pastures  Rangeland	TIMING	<ul> <li>Target timing to the most problematic plants. For example, if your primary target is dandelion, timing will likely be earlier (May 15 to June 15). If the primary target is Canada thistle, wait long enough for the majority of thistles to emerge (July 1 to 30).</li> <li>Apply when the primary target plant is actively growing, after emergence and prior to flowering.</li> <li>Environmental stresses such as severe drought or extended periods of heat may decrease efficacy.</li> <li>Grazon™ XC controls weeds and root systems that are present at time of application; weeds that have not emerged will not have the same level of control.</li> </ul>
	RAINFAST	4 hours
	TANK-MIX HERBICIDES	For control of low growing brush such as western snowberry and wild rose, as well as tree species such as willow and poplar growing in the same area, Grazon XC can be tank-mixed with Reclaim <sup>™</sup> II herbicide. Please contact a Corteva Agriscience representative for rate recommendations and timing.

Always read and follow label directions.

## Reclaim<sup>™</sup>II

#### **HERBICIDE**

Proven brush control. Reclaim™ II herbicide controls brush with the added benefit of broad-spectrum, invasive broadleaf weed control.

#### WHY USE RECLAIM™ II?

- Extended control: The only solution providing up to 24 months control of buckbrush, wild rose, Canada thistle, and other broadleaf species.
- · Broad-spectrum: Broad-spectrum control that allows you to manage both invasive broadleaf weeds and low growing brush in one application.

#### **SHRUBS** CONTROLLED

- Shrubby cinquefoil
- Prairie wild rose
- Silverberry (wolf willow)
- Western snowberry (buckbrush

#### BROADLEAF **WEEDS** CONTROLLED

- Absinth wormwood
- · Annual sow thistle
- Annual sunflower
- · Baby's breath
- · Ball mustard
- Biennial wormwood
- · Black henbane
- Bluebur
- Brown knapweed
- Bull thistle
- Burdock
- · Canada fleabane
- · Canada goldenrod

- · Canada thistle
- Clover
- Cocklebur

- · Cow cockle

- Fireweed
- Flixweed
- · Goat's-beard
- · Green smartweed
- Gumweed
- · Hairy galinsoga
- Hawkweed
- · Hedge bindweed
- · Hemp-nettle

- Chickweed

- · Common groundsel
- Common tansy
- Corn spurry
- Cudweed
- · Curly dock
- Dandelion
- Dog mustard
- Perennial Field bindweed\*
- pepperweed Field peppergrass
- Perennial sow thistle Field scabious
  - - Plantain
    - Plumeless thistle

· Hoary alyssum

Hoarv cress

· Horse nettle

Musk thistle

· Lady's-thumb

Lamb's-quarters

· Narrow-leaved

hawk's beard

· Oak-leaved

goosefoot

· Ox-eye daisy

· Pasture sage

- Prairie sage
- Prickly lettuce
- · Prostrate pigweed
- Purple loosestrife
- Pussytoes
- Ragweed
- (common, western) Redroot pigweed

- · Rush skeletonweed
  - Russian knapweed
  - · Russian thistle
  - · Scentless chamomile
  - · Shepherd's purse
  - Spotted knapweed
  - Stinkweed
  - · Stork's-bill
  - Sweet clover
  - Tall buttercup
  - Tartary buckwheat
  - Tumbleweed
  - Vetch
  - · Volunteer alfalfa
  - · Volunteer canola
  - · Wild buckwheat
  - · Wild caraway
  - · Wild carrot
  - · Wild mustard
  - Wild parsnip
  - Wild radish
  - Wild strawberry
  - · Yellow star thistle

## **Gateway**<sup>™</sup>

#### **TNAVULDA**

Gateway™ adjuvant is a non-ionic, paraffinic oil blend surfactant designed for use with Corteva's Range & Pasture herbicides.

Rate: 0.2% v/v is required with Reclaim II for ground applications.

#### Case: 20 ac/case

**APPLICATION GUIDELINES** 

#### **RATES & ACRES TREATED**

**PACKAGING** 

- Reclaim™ II A herbicide: 93 g/ac
- Reclaim™ II B herbicide: 0.7 L/ac Reclaim™ II requires the addition of a non-

ionic surfactant such as Gateway™ adjuvant.

• For aerial application information please contact your Corteva Range & Pasture Specialist.

#### **WATER VOLUME**

**TIMING** 

• Ground: minimum 80 L/ac (20 US gal/ac)

#### **USAGES**

Permanent **Pastures** 

Rangeland

- Target timing to the most problematic plants. For example, if your primary target is buckbrush, timing will likely be earlier (June 1 to 30). If the primary target is Canada thistle, wait long enough for the majority of thistles to emerge (July 1 to 30). • Apply after the target weed and shrub
- species have emerged and prior to plant growth cessation and the hardening off of leaves. Shrub species develop a waxy cuticle on the leaf surface resulting in reduced uptake and control later in the season. For weed species, applications should be made when weeds are actively growing but prior to
- · Environmental stresses such as severe drought or extended periods of heat may decrease efficacy.
- Reclaim II controls weeds and root systems that are present at time of application: weeds that have not emerged will not have the same level of control.

#### **RAINFAST**

4 hours

**HERBICIDE** TANK-MIX

**HERBICIDES** 

For control of low growing brush such as western snowberry and wild rose, as well as tree species such as willow and poplar growing in the same area, Reclaim II can be tank mixed with Grazon™ XC herbicide. Please contact a Corteva Agriscience representative for rate recommendations and timing.

#### **OPTIMIZING PERFORMANCE**

- · Do not spray if injury to existing forage legumes cannot be tolerated.
- · Do not apply within the dripline of desirable trees.
- Take appropriate measures to prevent application or drift on plants and trees not intended for control

#### **GRAZING**

- · No grazing restrictions for beef livestock.
- · Allow 7 days after application before grazing lactating dairy animals.
- Withdraw meat animals from treated areas at least 3 days before slaughter.

Always read and follow label directions.

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<sup>\*</sup> Suppression

**NEW** 

## **Restore**<sup>™</sup>NXT

Rinskor™active

Restore™ NXT herbicide with Rinskor™ active provides selective control of invasive broadleaf weed species while utilizing lower use rates.

#### **HERBICIDE**

#### WHY USE RESTORE™ NXT?

- · Excellent extended control of invasive broadleaf weeds.
- Consistent weed control across variable conditions
- Lower use rate
- Favorable environmental profile. Rinskor™ active is a new structural class of synthetic auxin herbicide that rapidly degrades in the soil and has a low persistence in the environment.
- · Selective. When applied at recommended rates, provides effective control of labeled weeds and does not harm grass or desirable plant species.

#### **WEEDS** CONTROLLED

- Absinth wormwood
   Hairy buttercup
- Annual sowthistle
- Bitter sneezeweed Horsenettle
- Bull thistle
- Canada fleabane
- · Canada thistle
- Cleavers
- Clover
- · Common
- broomweed
- Common ragweed
- · Common waterhemp
- Cudweed
- · Curly dock

- Fireweed
- Fuller's teasel
- · Hairy fleabane
- · Lamb's-quarter
- Mullein
- Musk or noddina thistle
- Orange hawkweed
- Ox-eye daisy
- · Perennial sowthistle · Western ragweed
- Plumeless thistle
- Poison hemlock
- Prickly lettuce
- Purple loosestrife
- Rush skeletonweed

- chamomile
- · Spotted knapweed · Common yarrow
  - Tall buttercup
    - Tall ironweed

Scentless

Scotch thistle

- Tansy ragwort
- Tropic croton
- Tropical soda apple
- Velvetleaf
- Wild caraway
- Wild chervil
- Wild parsnip
- Yellow star thistle

**WEEDS** 

**SUPPRESSED** 

Common tansy

· Diffuse knapweed

· Sulphur cinquefoil

· Russian knapweed

Dandelion

Japanese

knotweed

Canada goldenrod

#### **APPLICATION GUIDELINES**

		PACKAGING	<b>Case:</b> 2 x 10 L jugs
	RATES & ACRES TREATED	<ul> <li>0.6 L/ac</li> <li>Restore™ NXT herbicide requires the addition of a non-ionic surfactant such as Gateway™ adjuvant.</li> <li>For aerial application information please contact your Corteva Range &amp; Pasture Specialist.</li> <li>Backpack applications to small areas: 15 mL (0.15% solution) of Restore™ NXT plus 50 mL (0.5% v/v) of surfactant in 10 L of water.</li> </ul>	
USAGES		WATER VOLUME	• Ground: minimum 80 L/ac (20 US gal/ac)
Permanent Pastures Rangeland	TIMING	<ul> <li>Target timing to the most problematic weed. For example, if your primary target is tall buttercup, timing will likely be earlier (May 15 to June 30). If the primary target is Canada thistle, wait long enough for the majority of thistles to emerge (July 1 to 30).</li> <li>Apply when the primary target weed is actively growing, after emergence and prior to flowering.</li> <li>Environmental stresses, such as severe drought or extended periods of heat, may decrease efficacy.</li> <li>Restore NXT herbicide controls weeds and root systems that are present at time of application; weeds that have not emerged will not have the same level of control.</li> </ul>	
		RAINFAST	4 hours

#### **OPTIMIZING PERFORMANCE**

- Do not spray if injury to existing forage legumes cannot be tolerated.
- Do not apply within the dripline of desirable trees.
- Take appropriate measures to prevent application or drift onto plants and trees not intended for control.

#### **GRAZING**

- · No grazing restrictions for livestock.
- Withdraw meat animals from treated areas at least 3 days before slaughter.

## **Gateway**<sup>™</sup>

**ADJUVANT** 

Gateway<sup>™</sup> adjuvant is a non-ionic, paraffinic oil blend surfactant designed for use with Corteva's Range & Pasture herbicides.

Rate: 0.25-0.5% v/v is required with Restore NXT.

Always read and follow label directions.

## **Restore**<sup>™</sup>II

#### HERBICIDE

A broad-spectrum herbicide controlling a wide range of invasive broadleaf weeds to help restore the health and productivity of pastures.

#### WHY USE RESTORE™ II HERBICIDE?

- · An easy-to-use solution for extended control of invasive broadleaf weeds.
- · Minimal disruption of grazing post application.

#### **WEEDS** CONTROLLED

- Absinth wormwood
- Annual sow thistle
- Biennial wormwood
- Bitter sneezeweed
- · Blue lettuce
- · Bluebur
- · Bull thistle
- Burdock
- · Buttercup (hairy, tall)
- · Canada fleabane
- · Canada goldenrod
- · Canada thistle
- · Cocklebur
- Common broomweed
- · Common chickweed
- · Common plantain
- · Common purslane
- · Cudweed
- Curled dock
- Dandelion
- · Dog mustard

- · False flax
- Field bindweed
- Fleabane (daisy, hairy)
- Flixweed
- Fuller's teasel
- · Goat's-beard
- Groundsel
- Gumweed
- Hawkweed
- · Heal-all
- · Hedge bindweed
- Hoary cress
- Horsenettle
- Knotweed
- · Lamb's-quarters
- Mouse-eared chickweed
- Musk or nodding thistle
- Mustards (except Tansy)
- · Narrow-leaved hawk's beard
- · Oak-leaved goosefoot

- Ox-eye daisy
- Perennial sow thistle
  - Pineapple weed
  - Plumeless thistle

Pepperarass

- Prickly lettuce Prostrate piaweed
- Ragweed (common, western)
- · Redroot pigweed
- · Russian pigweed
- Russian thistle
- Scentless chamomile
- Sheep sorrel
- · Shepherd's purse
- Smartweed (green, Pennsylvania)
- · Spotted knapweed
- · Stinging nettle
- Stinkweed
- · Sulphur cinquefoil
- · Sweet clover
- · Tall ironweed
- · Tansy ragwort

- Tartary buckwheat
- Tropic croton
- Tropical soda apple
- Velvetleaf
- Volunteer canola
- Wild radish
- Wild sunflower
- Yellow rocket
- · Yellow star thistle

#### **APPLICATION GUIDELINES**

	PACKAGING	<b>Case:</b> 2 x 9.71 L jugs
	RATES & ACRES TREATED	<ul> <li>1 L/ac</li> <li>For aerial application information please contact your Corteva Range &amp; Pasture Specialist.</li> <li>Backpack applications to small areas: 24 mL of Restore™ II herbicide in 10 L of water (0.24% solution)</li> </ul>
	WATER VOLUME	• Ground: minimum 80 L/ac (20 US gal/ac)
USAGES  Permanent Pastures  Rangeland	TIMING	<ul> <li>Target timing to the most problematic weed. For example, if your primary target is tall buttercup, timing will likely be earlier (May 15 to June 30). If the primary target is Canada thistle, wait long enough for the majority of thistles to emerge (July 1 to 30).</li> <li>Apply when the primary target weed is actively growing, after emergence and prior to flowering.</li> <li>Environmental stresses, such as severe drought or extended periods of heat, may decrease efficacy.</li> <li>Restore™ Il controls weeds and root systems that are present at time of application; weeds that have not emerged will not have the same level of control.</li> </ul>
	RAINFAST	4 hours

#### **OPTIMIZING PERFORMANCE**

- Do not spray if injury to existing forage legumes cannot be tolerated.
- Do not apply within the dripline of desirable trees.
- Take appropriate measures to prevent application or drift onto plants and trees not intended for control.

#### **GRAZING**

- · No grazing restrictions for beef livestock.
- · Allow 7 days after application before grazing lactating dairy animals.
- · Withdraw meat animals from treated areas at least 3 days before slaughter.

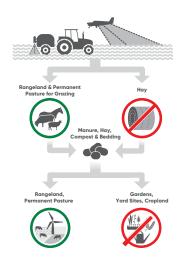
Always read and follow label directions.

#### STEWARDSHIP & BEST PRACTICES

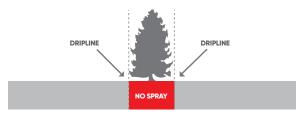
Corteva Agriscience Range & Pasture products are effective tools in managing weeds, brush and trees in permanent grass pastures and grazed rangeland. Understanding precautions, restrictions and how to steward range and pasture products properly is important to ensure satisfactory results and to protect desirable species and the environment.

#### HAY, SOIL AND MANURE MANAGEMENT

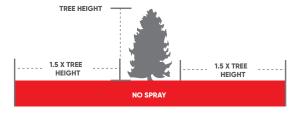
- Soil from treated areas should never be moved to areas where sensitive plants may be planted within five years.
- Manure from livestock consuming treated grass should never be used for compost or around susceptible plants.
- Clippings from grass which have been treated with Corteva Agriscience Range & Pasture herbicides should never be used for composting or mulching.



#### **BUFFERS**



• Reclaim™ II, Restore™ II and Restore™ NXT with Rinskor™ active herbicides should NOT be used over the top of desirable trees. They should only be used up to the dripline (outermost edge of the tree canopy) of desirable trees. Use additional caution around lateral root systems, shallow rooting species and those that propagate vegetatively through layering.



- Grazon™ XC herbicide should NOT be used over the top of desirable trees. Applications should remain a distance of 1.5 times the height of desirable trees at all times.
- Do not apply Grazon™ XC to coarse texture soils (>40% sand) with a high water table (within 1.8 metres or 6 feet of the soil surface).
- Do not apply Grazon XC within 30 metres (approximately 100 feet) of an open water body (does not include dugouts) or as per provincial regulations.

#### **GRAZING AND CUTTING RESTRICTIONS**



- No grazing restrictions for livestock, apart from a seven day grazing restriction for lactating dairy animals for Restore™ II, Reclaim™ II and Grazon™ XC herbicides.
- · Withdraw all animals three days prior to slaughter.
- If forage or hay must be removed from an area treated with Restore™ II, Reclaim™ II or Grazon™ XC, do not cut the forage or hay within 30 days of application.

  Allow 7 days after an application of Restore™ NXT with Rinskor™ active before cutting forage or hay.
- If livestock are being moved from a pasture treated with Corteva Agriscience Range & Pasture herbicides to a legume-based pasture, it is recommended that animals be grazed on an untreated, non legume-based pasture for three days when treating with Restore II, Restore NXT or Reclaim II and seven days when treating with Grazon XC.

Range and pasture products are designed for permanent grass pastures and rangeland where grazing is the method of harvest. The manure or compost from an animal fed treated forage should only be used on appropriate use sites where the loss of broadleaf plants, including legumes, can be tolerated.

#### **RE-SEEDING AND GRASS TOLERANCE**



 Newly seeded grass should not be sprayed until secondary root development and a minimum of four leaf surfaces have established
 well past the seedling stage.



- · Safe to established grasses.
- · Grasses may be seeded 10 months following an application.
- · Legume re-establishment may be affected for up to five years.
- Soil organic matter, rainfall and temperature all affect the rate of degradation.



• Avoid applications under stress conditions when grass is not actively growing (hot or cold weather, excessive moisture or drought) as grass injury, including leaf discolouration and stunting of growth, in the season of application may result.



## **Acapela**<sup>™</sup>

Speed, agility and exceptional coverage.

#### **FUNGICIDE**

#### WHY USE ACAPELA™ FUNGICIDE?

- Rapidly absorbed, moving quickly into and within each plant allowing you to spray even when conditions are challenging.
- Unique fungicide that quickly and efficiently surrounds, penetrates, and protects the leaf and stem.
- Group 11 fungicide effectively controls sclerotinia disease spread in canola crops.
- **Supports positive plant health & performance,** even in stressful conditions by increasing chlorophyll content and plant productivity.
- Better coverage means more consistent protection, providing outstanding disease control for healthier crops and higher yield potential.

#### DISEASES CONTROLLED

#### **CANOLA**

 Sclerotinia stem rot (white mould)

#### **CEREALS**

- · Crown rust
- Leaf rust
- Net blotch
- Powdery mildew
- · Scald
- · Septoria leaf blotch
- Stripe rust
- Tan spot

#### **CORN**

- Northern corn leaf blight
- · Tar spot\*

#### FLAX

• Pasmo (Septoria linicola)

#### PULSE CROPS (PEAS, LENTILS, CHICKPEAS, DRY BEANS)

- Anthracnose (lentils and dry beans)
- Ascochyta blight (lentils)
- Asian soybean rust
- Mycosphaerella blight\* (field peas)
- Sclerotinia stem rot (white mould)\*

#### **SOYBEANS**

- Asian soybean rust
- Frogeye leafspot
- White mould\* (Sclerotinia sclerotiorum)
- Septoria brown spot

#### **POTATOES**

- Early blight
- White mould (Sclerotinia sclerotiorum)
- · Late blight



#### APPLICATION GUIDELINES

	PACKAGING	• 9.6 L jug • 115.2 L drum
CROPS Canola Cereals Corn Flax Potatoes Pulse crops (peas, lentils, chickpeas, dry beans) Soybeans	RATES & ACRES TREATED	• Canola: 0.32 L/ac (30 ac/jug or 360 ac/drum) • Cereals: 0.19 L/ac (50 ac/jug or 600 ac/drum) • Corn:  - Northern corn leaf blight: 0.21 to 0.32 L/ac (30 to 45 ac/jug) - Tar spot: 0.32L/ac (30 ac/jug) • Flax: Pasmo (Septoria linicola) - 0.24 L/ac (40 ac/jug or 480 ac/drum) • Pulse crops: (Peas, lentils, chickpeas, dry beans) - Anthracnose, Ascochyta blight: 0.24 L/ac (40 ac/jug or 480 ac/drum) - Sclerotinia stem rot (white mould): 0.35 L/ac (27 ac/jug or 325 ac/drum) • Soybeans: - Sclerotinia stem rot (white mould): 0.35 L/ac (27 ac/jug) - Asian soybean rust, frogeye leafspot, septoria brown spot: 0.24 to 0.35 L/ac (27 to 40 ac/jug) • Potatoes: - Early blight and white mould: 0.24 - 0.40 L/ac - Late blight: 0.18 - 0.40 L/ac
	WATER VOLUME	<ul><li>10-15 US gal/ac</li><li>Aerial minimum of 50 L/ha (4.5 US gal/ac)</li></ul>
	TIMING	Refer to the Acapela fungicide label for complete use instructions.
	RAINFAST	1 hour



DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

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#### **CROP ROTATION**

Any crop the following year.

#### **CEREAL PRECAUTIONS**

Do not apply to cereals after flowering<sup>1</sup>

#### PRE-HARVEST INTERVAL

Refer to product label.

1 Feekes Growth Stage 10.5.1 or Zadoks Growth Stage 60



\*Suppression only



FUNGICIDE

Unleash best-in-class sclerotinia protection for stronger, more vigorous and higher-yielding canola.

#### WHY USE VIATUDE™ FUNGICIDE?

- **Delivers best-in-class sclerotinia protection** from two of the strongest actives.
- **Provides multiple modes of action** with a unique combination of two highly effective active ingredients that both provide protection against sclerotinia in canola crops.
- **Protects plants inside and out** against sclerotinia, providing a healthy yield advantage.
- · Better canola protection that is reliable, powerful and approved by farmers like you.

#### DISEASES CONTROLLED

#### **CANOLA**

Sclerotinia

#### **SOYBEAN**

· White mould

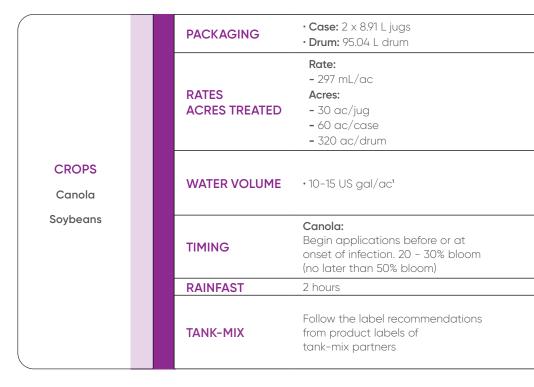






\*Under low-to-moderate moisture conditions.

#### **APPLICATION GUIDELINES**





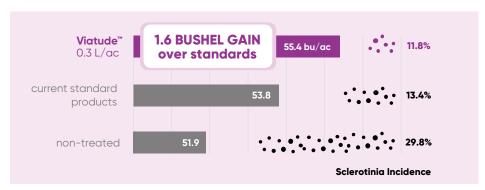
## DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

#### **CROP ROTATION**

Any crop can be planted 30 days following the last application of Viatude™ fungicide.

#### PRE-HARVEST INTERVAL

36 days



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Source: Corteva field studies, Canada, 2021; results from 11 field trials

\*Suppression only.

<sup>1</sup> Higher water volumes are beneficial for maximum plant coverage.



**NEW** 

## **Zetigo**<sup>™</sup>PRM

Adavelt<sup>™</sup>active

**FUNGICIDE** 

**NEW** Zetigo<sup>™</sup> PRM fungicide, is a dual mode of action fungicide with Adavelt<sup>™</sup> active, a brand new Group 21 active ingredient.

#### WHY USE ZETIGO™ PRM?

- Brand-new mode of action: contains a new, novel mode of action. The only Group 21 fungicide available in pulses!
- Multiple Effective Modes of Action: delivers stacked and diverse disease management, this new combo helps to preserve critical fungicide actives for an effective fungicide rotation, while boosting the crops plant health benefits.
- Excellent Control: powerful, preventative, leaf disease control, protecting crop quality and end use marketability to maximize yield potential and return on investment.
- **Better Coverage:** the systemic movement properties of Zetigo PRM deliver more complete coverage and protection.

#### DISEASES CONTROLLED

#### LENTILS

- Anthracnose
- Ascochyta blight
- · Botrytis grey mould

#### **FIELD PEAS**

- AnthracnoseAscochyta/
- Mycosphaerella blight
- Powdery mildew
- · Botrytis grey mould

#### **CHICKPEAS**

- · Ascochyta blight
- · Botrytis grey mould

#### **FABA BEANS**

· Chocolate spot

## Zetigo PRM provides the only new, effective tool to prevent further resistance in a pulse market that needs NEW.

Zetigo PRM	Untreated Check	Competitor
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2022 Western Canadian field trials. Comparison in lentils.

#### **APPLICATION GUIDELINES**

	PACKAGING	• Case: 2 x 9.72 L jugs
CROPS	RATES ACRES TREATED	Rate: - 324 mL/ac Acres: - 30 ac/jug - 60 ac/case
Lentils Field Peas	WATER VOLUME	· 15 US gal/ac¹
Chickpeas Faba beans	TIMING	Before onset of disease, generally at first flower and prior to row closure.
	RAINFAST	2 hours
	TANK-MIX	Follow the label recommendations from product labels of tank-mix partners



DOWNLOAD THE 2025 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK-MIX INSTRUCTIONS.

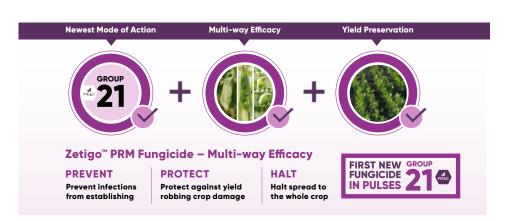
#### **CROP ROTATION**

Any crop can be planted 30 days following the last application of Zetigo™ PRM fungicide.

#### PRE-HARVEST INTERVAL

Canola PHI: 28 days Cereals PHI: 45 days

Please refer to label for more crop specific PHIs.



<sup>1</sup> Higher water volumes are beneficial for maximum plant coverage.



# **Delegate**<sup>™</sup> Jemvelva active

Harness nature's strength for sustainable farming.

#### INSECTICIDE

#### WHY USE DELEGATE™ INSECTICIDE WITH JEMVELVA™ ACTIVE?

- Performance. Delegate<sup>™</sup> provides quick and effective control of foliage feeding insects including Colorado potato beetle and European corn borer.
- **Resistance management.** Delegate contains a unique Group 5 active ingredient, Jemvelva active, making it an excellent tool for potato growers managing Colorado potato beetle resistance.
- Ease of use. Low use rates delivered through a convenient dry formulation.
- Flexibility. Market access approvals allow freedom to use Delegate across all production acres.

#### **INSECTS CONTROLLED**

#### CORN

- European corn borer
- Western bean cutworm

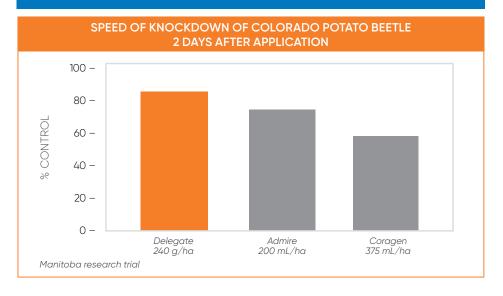
#### POTATOES

- · Colorado potato beetle
- European corn borer

#### **SOYBEANS**

- Armyworm
- WHEAT
- Armyworm

#### DELEGATE IS REGISTERED FOR AERIAL APPLICATION ON POTATOES



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#### APPLICATION GUIDELINES

	PACKAGING	6 x 840 g bottles
	RATES	Corn:  - Western bean cutworm: 50-85 g/ac  - European corn borer: 50-85 g/ac  - Potatoes:  - Colorado potato beetle: 65-97 g/ac  - European corn borer: 65 g/ac  - Soybeans & Wheat:  - Armyworm: 40-80 g/ac
CROPS  Corn  Potatoes  Soybeans  Wheat	TIMING	<ul> <li>Western bean cutworm and European corn borer: Time the application at egg hatch or to small larvae.</li> <li>Armyworm: Time the application at peak egg hatch and/or small larvae stage.</li> <li>Colorado potato beetle: Time the application at egg hatch or small larvae.</li> <li>Use the higher rate for higher pest</li> </ul>
		pressure or for larger larvae. Ensure sufficient water volume for complete coverage of the plant foliage.
	RAINFAST	2 hours
	TANK MIXES	Delegate™ insecticide with Jemvelva™ active can be mixed with fungicides and micro-nutrients. Consult your Corteva Agriscience representative if you are tank-mixing Delegate™.

#### **OPTIMIZING PERFORMANCE**

- Spray solution pH can affect the performance of Delegate
  - A spray pH between 5 and 9 is preferred for best results
  - If required, adjust spray solution pH prior to the addition of Delegate
- Aerial application (for potatoes and corn only): Apply only by fixed-wing or rotary aircraft equipment. Use a minimum spray volume of 12 L/ac.

#### **CROP ROTATION**

Rotate to labelled crops only.

#### **PRECAUTIONS**

- · Maximum of 3 applications per year
- Minimum re-treatment interval of 5 days for corn, soybeans and wheat
- Minimum re-treatment interval of 7 days for potatoes

**Do not** apply this product to flowering crops or weeds if bees are visiting the treatment area.

**Do not** make more than two consecutive applications of Group 5 insecticides.

#### PRE-HARVEST INTERVAL

- Sweet and seed corn: 1 day
- Forage and potatoes: 7 days
- · Wheat: 21 days
- Soybeans, field corn, popcorn and stover harvest: 28 days

Always read and follow label directions.



## bíologícals

#### **GROWING TOGETHER**

Biological products from Corteva Agriscience are designed to keep farms productive and healthy today and tomorrow.

Using proven, predictable solutions across all crop stages, our Biologicals portfolio helps build more productive crops and maximize crop potential. This is achieved by helping crops use nutrients and inputs more effectively, and improving naturally occurring processes to help them grow. We believe healthy farms are productive farms. And this keeps each farming operation strong today, tomorrow, and for generations to come.

#### WHAT IS A BIOLOGICAL?

Biological products are an innovative, sustainable solution to today's biggest farming challenges - they consist of materials that already exist in nature; some are actual living organisms, like beneficial bacteria, while others, like enzymes, are inspired from natural materials.

#### **MAXIMIZE YOUR ACRE WITH BIOLOGICALS**

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



#### **BOOST PERFORMANCE**

Activate the plant and its environment to maximize the harvest by enhancing the plants' ability to efficiently utilize soil, nutrients, water, and sunlight.



#### **BUILD RESILIENCE**

Empower crop vigour to withstand adversity and stress by enabling crops to thrive in the face of abiotic stresses and unfavourable weather.



#### **PROTECT POTENTIAL**

Shield crops from pests and disease to ensure viability by incorporating powerful and flexible solutions in crop protection programs.

#### WHY CHOOSE BIOLOGICALS?



Biologicals can improve plant performance by unleashing their full potential - enhancing physiological processes and minimizing stresses.



Biologicals give us the ability to take our crop management to the next level. Giving you the peace of mind to manage unpredictability and control the uncontrollable, helping you unlock new levels of on-farm potential.



Biologicals are here to create the highest impact for everyone, and everything involved – the farm, the environment and our planet, government, and society.



## To Learn More, Visit:



## PROTECT YOUR NITROGEN FOR BETTER YIELDS.

#### **Optinyte** technology

Nitrogen fertilizer is critical to achieving healthy, high yield potential crops. Protect your fertilizer investment with N-Serve™ and eNtrench™ NXTGEN nitrogen stabilizers with Optinyte™ technology.

#### WHY USE N-SERVE™ AND ENTRENCH™ NXTGEN?

- · Optimize opportunity for yield and profit:
  - Corteva Agriscience research trials demonstrate an average yield increase of 8% in canola, 6% in wheat and 7% in corn.
  - Keep 28% more positive nitrogen available in the root zone.
- Expand your application options:
  - Apply up to two weeks earlier in fall before typical anhydrous applications.

- Take advantage of reduced cost of fertilizer in the fall.
- Manage time and efficiency:
- Fall application saves time for seeding operations in the spring.
- · Reduce environmental impacts:
  - Reduces nitrogen greenhouse gas emissions by 51% on average.
  - Reduces leaching of nitrates by 16% on average.

#### BENEFITS OF USING NITROGEN STABILIZERS

CANOLA CORN WHEAT NITROGEN YIELD\*\* YIELD\*\* RETENTION\*

8\* 7\* 6\* 28\*

#### **DECREASED**

NITROGEN GREENHOUSE GAS EMISSIONS\*

51%

NITROGEN LEACHING\*

16%

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

#### N-Serve<sup>™</sup>

Optinyte<sup>™</sup>technology

#### **NITROGEN STABILIZER**

#### **APPLICATION GUIDELINES**

CROPS Canola Corn Wheat	PACKAGING	950 L tote
	RATES	0.95 L/ac
	ACRES TREATED	1000 ac/tote
	TIMING	<ul> <li>Spring: Simultaneously with your anhydrous application</li> <li>Fall: Simultaneously with your anhydrous, up to two weeks earlier than you would typically apply</li> </ul>
	APPLICATION METHOD	Designed for use with anhydrous ammonia

### eNtrench NXTGEN™

Optinyte" technology

#### **NITROGEN STABILIZER**

#### **APPLICATION GUIDELINES**

		PACKAGING	• 2 x 9.94 L case • 454.4 L Tote
	RATES	0.71 L/ac	
CROPS		ACRES TREATED	• 2 x 9.94 L case treats 28 acres • 454.4 L tote treats 640 acres
Canola Corn Wheat	TIMING	<ul> <li>Fall or spring: With urea and liquid manure</li> <li>Pre-plant: With urea or UAN</li> <li>In crop: With side-dressed UAN in corn</li> </ul>	
		APPLICATION METHOD	Designed for use with liquid fertilizers, including UAN and liquid manure     Impregnated on urea

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

<sup>\*\*</sup>Based on Corteva Agriscience Canada research trials.

## **Bindem**

#### **UTILITY MODIFIER**

Bindem™ is a utility modifier used to improve physical tank mix compatibility in herbicide tank mixes.

#### WHY USE BINDEM™ UTILITY MODIFIER?

- Bindem is a utility modifier that improves the physical compatibility of certain grass and broadleaf herbicide tank mixes.
- Bindem must be used with Simplicity™ GoDRI™ herbicide and broadleaf herbicide tank mixes.
- A 4.8 L jug of Bindem treats 80 acres, regardless of water volume used.
- When using Simplicity™ GoDRI™ at the full rate, a 4.8 L jug of Bindem treats the same acres as a 2.24 kg jug of Simplicity GoDRI.



#### **APPLICATION GUIDELINES**

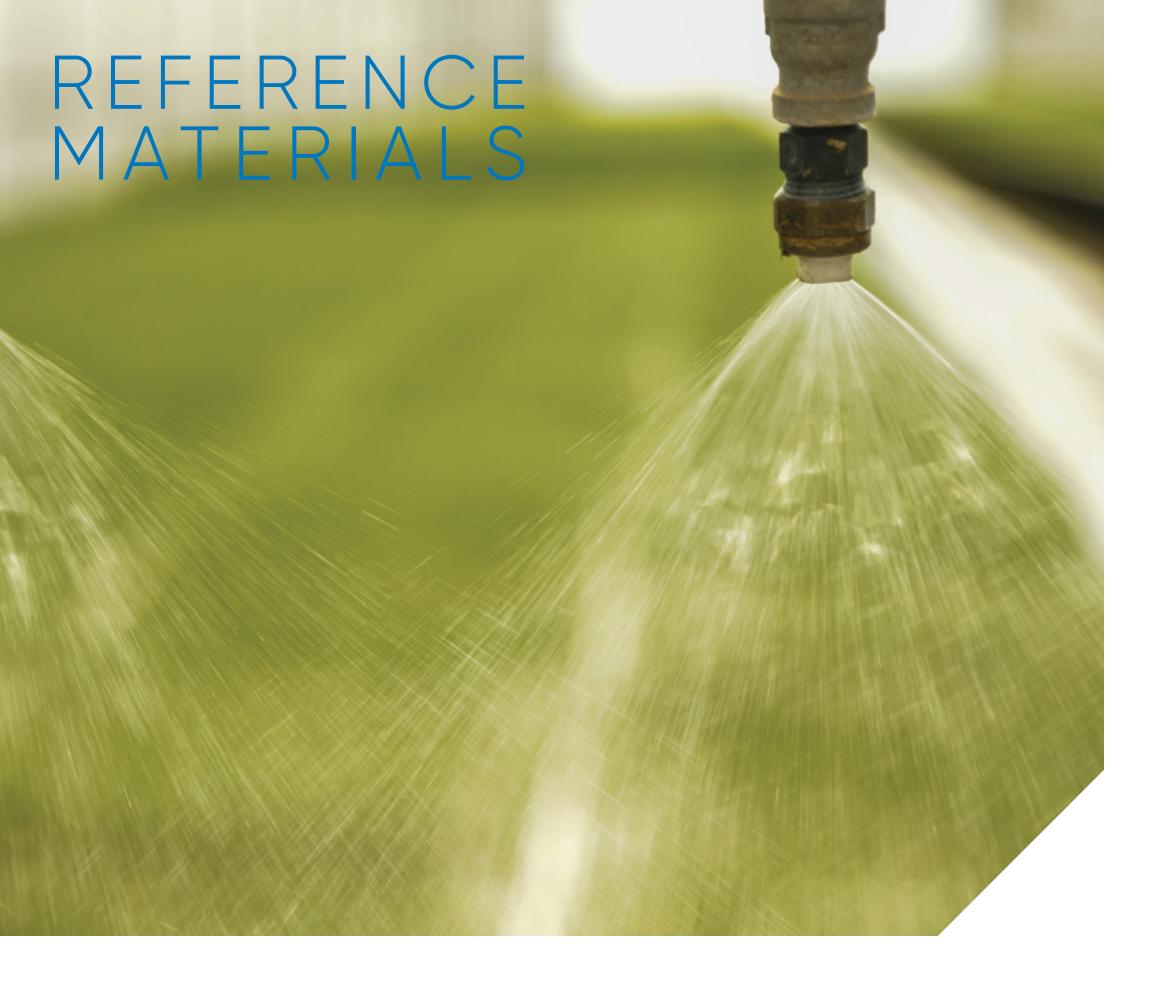
PRODUCTS		PACKAGING	<ul> <li>Bindem™: 4 x 4.8 L case</li> <li>Tridem™ 40 acre case: 1 x 2.4 L jug</li> <li>Tridem 240 bulk unit: 2 x 7.1 L jugs</li> </ul>
Simplicity™ GoDRI™ herbicide Tridem™ herbicide (Bindem utility modifier included		RATES	60 mL/ac
in co-pack)		ACRES TREATED	<ul> <li>Each 4.8 L jug treats 80 acres</li> <li>Each 2.4 L jug treats 40 acres</li> <li>Each 7.1 L jug treats 120 acres</li> </ul>

## SIMPLICITY™ GODRI™ + BROADLEAF HERBICIDE TANK-MIX + BINDEM MIXING INSTRUCTIONS

- 1. Fill the spray tank with  $\frac{1}{2}$  to  $\frac{3}{4}$  of the required amount of water
- 2. Continue agitation throughout the mixing and spraying procedure
- 3. Add any broadleaf tank-mix partners that are a dry formulation
- 4. Add the required amount of Simplicity GoDRI
- 5. Add the required amount of liquid broadleaf tank-mix partner
- 6. Add the required amount of Bindem utility modifier
- 7. Complete filling the sprayer tank with water

#### TRIDEM + BINDEM MIXING INSTRUCTIONS

- 1. Fill sprayer tank  $\frac{1}{2}$  to  $\frac{3}{4}$  full of water
- 2. Continue agitation throughout the mixing and spraying procedure
- 3. Add the required amount of Tridem A Herbicide
- 4. Add the required amount of Tridem B Herbicide and continue to agitate
- 5. Add 2,4-D Ester 700 next and continue agitation
- 6. Add the required amount of Bindem utility modifier
- 7. Complete filling the sprayer tank with water



REFERENCE MATERIALS PERFORMANCE

#### **GROUP 1 MODE OF ACTION - ACCASE INHIBITORS**

CHEMICAL FAMILY	ACTIVE INGREDIENTS	FOUND IN*
Aryloxyphenoxy proprionate (FOP)	clodinafop propargyl	Horizon SG, Harmony brands, Traxos, TraxosTwo
	fenoxaprop-p-ethyl	Puma Advance, Tundra
	quizalofop-p-ethyl	Assure II
Cyclohexanedione (DIM)	tralkoxydim	Liquid Achieve™ SC
	sethoxydim	Poast Ultra, Odyssey brands
	tepraloxydim	Equinox
	clethodim	Centurion
Phenylpyrazolin (DEN)	pinoxaden	Avenza™, Axial, Axial iPak, Axial Xtreme, Epic, Rezuvant, Rezuvant™ XL, Traxos, TraxosTwo

#### GROUP 2 MODE OF ACTION - ALS/AHAS INHIBITORS

		JN - ALS/AHA				
CHEMICAL FAMILY	ACTIVE INGREDIENTS	FOUND IN*	HALF LIFE	PRIMARY FACTORS AFFECTING DEGRADATION		
lmidazolinones –	imazamethabenz	Assert 300	25-36 days	• Soil pH		
IMIs	imazamox	Solo, Viper, Amity™ WDG, Ares™ SN	20-30 days	(lower pH = ↑residual) • Organic matter • Soil moisture		
	imazethapyr	Pursuit, Ares SN	60-90 days	3011 Moistule		
	imazamox + imazethapyr	Odyssey DLX	30-60 days			
	imazamox + imazapyr	Ares SN	30 days			
Sulfonylureas – SUs	metsulfuron- methyl	Ally, Express Pro	14-180 days	• Soil pH (higher pH		
	thifensulfuron- methyl	Express SG, Barricade II, Predicade, Travallas	10 days	<ul><li> ↑residual</li><li> Organic matter</li><li> Soil moisture</li></ul>		
	thifensulfuron- methyl + tribenuron-methyl	Refine SG, Barricade II, Predicade	10-12 days			
Triazolopyrimidines	florasulam	Avenza™, Cirpreme™ XC, Exhilarate™, Korrex™ II, Paradigm™ PRE, PrePass™, Stellar™ XL, Tridem™	3-5 days @ soil temp of 20°C	• Soil temperature (low soil temps = ^residual)		
	pyroxsulam	Simplicity™, Simplicity™ GoDRI™, Rexade™, Tandem™, Tridem™	3 days			
Sulfonylamino- carbonyl triazolinones	flucarbazone sodium	Everest 3.0, Sierra 3.0	50-67 days	• Soil Moisture (low soil H2O = ↑residual) • Organic Matter		
Triazolones	thiencarbazone- methyl	Velocity m3, Varro	17 days	Soil pH     Organic Matter		

#### **GROUP 4 MODE OF ACTION - SYNTHETIC AUXINS**

CHEMICAL FAMILY	ACTIVE INGREDIENTS	FOUND IN*
Phenoxyalkanoic – phenoxy	2,4-D Ester	Attain™ XC, OcTTain™ XL
	MCPA Ester	Exhilarate™, Pixxaro™, Prestige™ XL, Stellar™ XL
Benzoic acids	Dicamba	DyVel, Pulsar, Distinct, Korrex II, Target
Quinoline-Carboxylic acids	Quinclorac	Triton C
Pyridine-Carboxylic acids	Fluroxypyr	Attain XC, OcTTain XL, Stellar XL, Prestige XL, Tandem™, Pixxaro, Avenza™, Tridem™, Rezuvant™, Rezuvant™ XL
	Clopyralid	Curtail M, Cirpreme™ XC, Eclipse™ XC, Lontrel™ XC, Prestige XL, Prominex™
	Aminopyralid	Reclaim™ II, Restore™ II
	Picloram	Grazon™ XC, Tordon™ 22K
Arylpicolinate	Arylex™ active	Cirpreme XC, Exhilarate, Pixxaro, Paradigm™ PRE, Prominex, Prospect, Rexade™, Rezuvant, Rezuvant XL

<sup>\*</sup> All Corteva Agriscience products listed are herbicides. A herbicide may appear in more than one group if it contains more than one active ingredient

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#### 2,4-D HERBICIDE AND MCPA HERBICIDE - RATES & CONVERSIONS

Conversion chart for 2,4-D and MCPA<sup>+</sup>

Conversion chart for 2,4-D and MCPA						
ACTIVE INGREDIENT (oz/ac)	HERBICIDE	CONCENTRATION (G AI/L)	RATE APPLIED (mL/ac)	ACRES PER 10 L JUG		
1	MCPA Na salt	300	94	107		
	MCPA K salt	400	70	142		
	MCPA ester	600	47	214		
	2,4-D LV ester	700	40	249		
2	MCPA Na salt	300	187	53		
	MCPA K salt	400	140	71		
	MCPA ester	600	94	107		
	2,4-D LV ester	700	80	125		
3	MCPA Na salt	300	281	36		
	MCPA K salt	400	211	47		
	MCPA ester	600	140	71		
	2,4-D LV ester	700	120	83		
4	MCPA Na salt	300	374	27		
	MCPA K salt	400	281	36		
	MCPA ester	600	187	53		
	2,4-D LV ester	700	160	62		
5	MCPA Na salt	300	468	21		
	MCPA K salt	400	351	28		
	MCPA ester	600	234	43		
	2,4-D LV ester	700	201	50		
6	MCPA Na salt	300	562	18		
	MCPA K salt	400	421	24		
	MCPA ester	600	281	36		
	2,4-D LV ester	700	241	42		
7	MCPA Na salt	300	655	15		
	MCPA K salt	400	491	20		
	MCPA ester	600	328	31		
	2,4-D LV ester	700	281	36		
8	MCPA Na salt	300	749	13		
	MCPA K salt	400	562	18		
	MCPA ester	600	374	27		
	2,4-D LV ester	700	321	31		
9	MCPA Na salt	300	842	12		
	MCPA K salt	400	632	16		
	MCPA ester	600	421	24		
	2,4-D LV ester	700	361	28		
10	MCPA Na salt	300	936	11		
	MCPA K salt	400	702	14		
	MCPA ester	600	468	21		
	2,4-D LV ester	700	401	25		
18	MCPA Na salt	300	1685	6		
	MCPA K salt	400	1265	8		
	MCPA ester	600	843	12		
	2,4-D LV ester	700	723	14		

#### 2,4-D/MCPA herbicide equivalencies<sup>t</sup>

ACTIVE INGREDIENT	FORMULATION (mL/ac)			COVERAGI RES/10 L J		
oz/ac	500	600	700	500	600	700
1	56	47	40	178	212	250
4	227	189	162	44	53	62
5	283	236	202	35	42	49
6	340	283	243	29	35	41
7	397	331	283	25	30	35
8	453	378	324	22	26	31

#### \*Calculation rounding may have occurred.

# Clean your sprayer, the right way!

Follow our recommended best practices for the best results



## Immediately after spraying



Completely drain the sprayer tank. Use clean water to rinse contamination from spraying equipment.

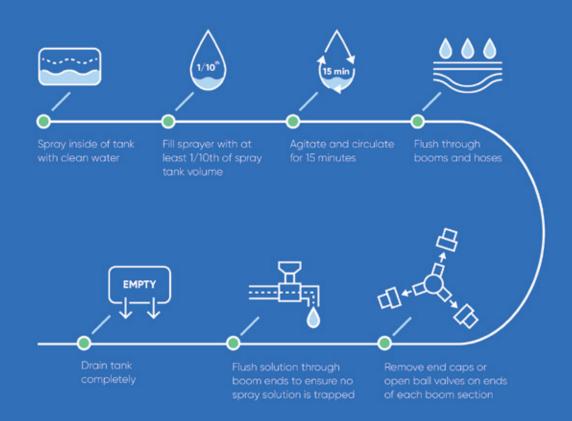
If you cannot clean the sprayer immediately



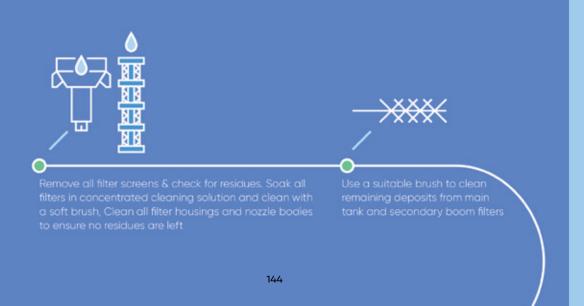
Do a freshwater rinse. Do not let herbicide solutions dry onto tank walls or inside plumbing.

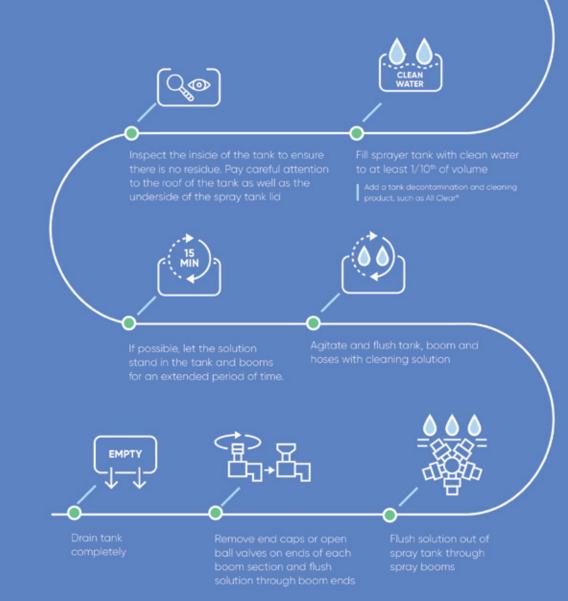
Cleaning your tank properly requires a First, Second and Final Rinse

#### **First Rinse**

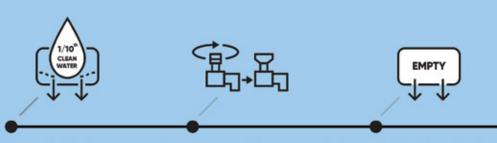


#### **Second Rinse**





### **Final Rinse**



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Rinse tank with clean water and flush through boom and hoses using at least 1/10th of spray tank volume Remove end caps or open ball valves on ends of each boom section and flush solution through boom ends Drain tank completely

#### **WEED GUIDE**

Need help identifying specific weeds? Take a look through our weed guide. We've included the grassy and broadleaf weeds that have been named as the top concerns for Western Canadian growers.



#### AMERICAN DRAGONHEAD

Growth habit: Annual, biennial.

 $\textbf{Competitive ability:} \ \textbf{A serious competitor in cultivated field crops.} \ \textbf{Plants produce}$ 

up to 500 seeds.

Typical crop losses: No data available. Resistance issues: None reported.

Additional information: Stems are erect, branched and square. Flowers are blue

to purple. Juveniles are often confused with henbit and hemp-nettle.





#### **ANNUAL SOW THISTLE**

Growth habit: Annual, winter annual.
Competitive ability: Very strong.
Typical crop losses: No data available.
Resistance issues: None reported.

Additional information: Annual sow thistle is easily mistaken for perennial sow thistle.







#### **BARNYARD GRASS**

Growth habit: Annual grass, spread by seed.

**Competitive ability:** Less competitive than wild oats; more competitive in cereals than wild millet. Less competitive if it emerges into a vigorous crop.<sup>1</sup>

Typical crop losses: No data available.

Resistance issues: Resistance to atrazine reported.

Additional information: Prefers warm, moist soils. Seeds float and are easily spread by

water. Resembles green foxtail at early growth stages.







#### **BLACK MEDIC**

Growth habit: Annual.

Competitive ability: Low; thrives on bare ground; grows rapidly and varies greatly in size.

Typical crop losses: No data available. Resistance issues: None reported.

**Additional information:** This plant will flush through the season, so re-infestation from

plants germinating after herbicide application may be high.



#### **CANADA FLEABANE** (Horseweed)

Growth habit: Annual, winter annual.

Competitive ability: The seed has a pappus (parachute) so it can be carried by wind for

long distances. More competitive under reduced tillage situations.

Typical crop losses: No data available.

Resistance issues: Resistance to Group 22 (paraquat) reported in Ontario. Resistance to

Group 9 (glyphosate) is reported in Ontario and numerous states in the U.S.

**Additional information:** Many seedlings emerge in the fall forming rosettes that overwinter. Can range in height from 7.5 to 180 cm tall. Number of seeds produced is proportional to the plant's height.







#### **CANADA THISTLE**

Growth habit: Perennial.
Competitive ability: Very strong.

Typical crop losses: A light infestation of six thistles per square metre can cause 18% yield

loss in wheat.2

Resistance issues: None reported.

**Additional information:** An extensive root system allows Canada thistle to survive in spite of aggressive top growth control. Apply herbicide at the rosette to pre-bud stage to maximize herbicide translocation to the roots.







#### **CHICKWEED**

Growth habit: Annual, winter annual.

**Competitive ability:** Moderate to strong. Seedling crops can be smothered when chickweed forms a mat and covers them.<sup>2</sup>

**Typical crop losses:** If weather is cool and wet, chickweed will grow on swaths, delay drying time and make crop pick-up difficult.<sup>2</sup>

Resistance issues: Reported resistance to sulfonylurea herbicides.

**Additional information:** Due to the nature of chickweed growth, additional flushes may grow and be present at harvest.



#### **CLEAVERS**

Growth habit: Annual, winter annual.

Competitive ability: Moderate (cereals) to strong (canola, pulses).

**Typical crop losses:** No data is available in cereals. In canola, there is a 20% yield loss at

100 plants per square metre.2

Resistance issues: Reported resistance to Group 2 herbicides.

**Additional information:** Cleavers seed is difficult to separate from canola seed; even a few seeds may severely downgrade canola. Rotate cereals with canola to manage cleavers during the cereal rotation.<sup>2</sup>







#### **COCKLEBUR**

Growth habit: Annual, reproducing by large seed.

Competitive ability: Very competitive in broadleaf crops.

**Typical crop losses:** Infestations in bean crops can cause severe (60% to 70%) losses due to reduced yield, increased moisture content of beans at harvest, and the presence of foreign material.<sup>1</sup>

Resistance issues: None reported.

**Additional information:** Mature cocklebur can grow to 1 m high. Triangular shaped leaves; produces rough burs 1.5 to 2 cm long.

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#### **CORN SPURRY**

Growth habit: Annual.

Competitive ability: None reported, assumed to be low.

Typical crop losses: No data available.

Resistance issues: Naturally tolerant to 2,4-D and MCPA.

**Additional information:** Needle-like leaves grow in whorls. Young corn spurry plants may be confused with field horsetail. Field horsetail stems are jointed with black-tipped bracts

surrounding the nodes.



#### **COW COCKLE**

Growth habit: Annual.

Competitive ability: No data available. Typical crop losses: No data available.

Resistance issues: Naturally tolerant to 2,4-D and MCPA

**Additional information:** Narrow, elongated smooth cotyledons on a short stock. First true leaves appear in a pair showing a crease down the centre. Stems and leaves feel thick and leather like. Flowers are pink in color. Looks similar to night-flowering catchfly and

white cockle.







#### **CURLED DOCK**

Growth habit: Perennial.

Competitive ability: High level of salt tolerance, may out-compete crops in saline areas.

Typical crop losses: May contaminate cereal seed.

Resistance issues: None reported.

Additional information: Reproduces mainly by seeds, but can also reproduce by taproot

fragments. Most often found in higher-moisture soils, e.g. near slough edges.







#### **DANDELION**

Growth habit: Perennial.

Competitive ability: Strong to very strong (especially on bare ground<sup>2</sup>); becoming a major

concern in reduced tillage.

Typical crop losses: No data available. Resistance issues: None reported.

**Additional information:** Focus on control measures to destroy the long taproot. In-crop control is critical. The seedling can be confused with narrow-leaved hawk's beard.







#### **DOWNY BROME**

Growth habit: Annual, winter annual.

Competitive ability: Strong. A prolific seed producer, seeds can remain dormant for many

years.

**Typical crop losses:** May reduce wheat yields up to 92%.<sup>2</sup>

 $\textbf{Resistance issues:} \ \text{Resistance reported to herbicide Groups 1 and 2 in the U.S.} \ \text{Group 9}$ 

resistance has been confirmed in Alberta

**Additional information:** An aggressive species that invades cropland, pastures and rangeland. Seed spread is primarily through contaminated grain, hay, straw, manure and farm machinery.







#### **FIELD BINDWEED**

Growth habit: Twining perennial; reproduces by both roots and seed.

Competitive ability: High.

Typical crop losses: No data available. Resistance issues: None reported.

**Additional information:** May be confused with wild buckwheat. Has an arrow-shaped leaf with blunt tips, while wild buckwheat has an arrow-shaped leaf with a pointy tip.







#### **FIELD DOCK**

Growth habit: Perennial.

Competitive ability: Has a deep taproot. Overwinters as a rosette, producing new buds in

the spring. Mature plant produces an abundance of seed.

Typical crop losses: No data available. Resistance issues: None reported.

Additional information: Field dock is more abundant on the Prairies than curled dock;

similar in appearance to western dock, a non-weedy species.







#### FIELD HORSETAIL

Growth habit: Perennial, reproducing by spores.

Competitive ability: Can be a strong competitor in poorly drained areas.

Typical crop losses: No data available.

Resistance issues: A survivor from prehistoric times, its unusual biology makes it difficult to

control with any method.

 $\textbf{Additional information:} \ \textbf{Can be toxic to livestock.} \ \textbf{Similar to corn spurry when mature, it}$ 

has an extensive tuber-bearing creeping root system.







#### **FLIXWEED**

Growth habit: Annual, winter annual.

 $\label{lem:competitive ability:} Overwintered rosettes are strong competitors that grow rapidly in spring and use valuable moisture. Spring-emerged seedlings are not good competitors. }^{2,3}$ 

Typical crop losses: No data available. Resistance issues: None reported.

**Additional information:** A member of the mustard family often confused with tansy mustard. Tansy mustard seed pods are shorter and fatter than flixweed's

long, slender pods.







#### **FOXTAIL BARLEY**

Growth habit: Perennial, reproducing by seeds.

Competitive ability: Very competitive with crops in saline areas.

 $\textbf{Typical crop losses:} \ \textbf{Can harbour wheat rust and blackstem rust, which can infect and} \\$ 

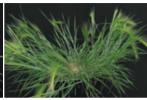
damage crops.

Resistance issues: None reported.

**Additional information:** Spreads quickly because seed heads are well suited to wind dispersal and seedlings develop quickly. Due to narrow leaf structure, there are benefits from higher herbicide rates. Apply to actively growing plants.







#### **GOAT'S-BEARD**

Growth habit: Biennial to short-lived perennial with a long taproot.

Competitive ability: Airborne seeds can colonize bare ground or stressed crops/pastures,

then canopy over desirable vegetation. **Typical crop losses:** No data available. **Resistance issues:** None reported.

**Additional information:** Milky juice, grass-like leaves, dandelion-type flower heads (but larger and with flat tops). Reproduces by seeds that travel long distances on milkweed-like parachutes.





#### **GREEN FOXTAIL** (Wild millet)

Growth habit: Annual grass.

Competitive ability: Poor competitor unless it grows in dense patches.1

**Typical crop losses:** Can reduce yields by 10% to 15% when wheat is planted late. **Resistance issues:** Confirmed resistance to Group 1, 2 and Group 3 herbicides. **Additional information:** Resembles barnyard grass at early growth stages.





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#### HAIRY NIGHTSHADE

Growth habit: Annual.

**Competitive ability:** Can be extremely competitive with pulse crops. Competes through high seed production (2,500 to 5,000 per plant).<sup>4</sup>

**Typical crop losses:** Berries increase dockage. Plant produces a sticky substance that can clog equipment.

Resistance issues: No data available.

**Additional information:** Star-shaped white flowers similar to potato or tomato. Plant contains alkaloids that can poison humans and livestock. May be confused with black nightshade or black henbane.







#### **HEMP-NETTLE**

Growth habit: Annual.
Competitive ability: Strong.

Typical crop losses: High densities of hemp-nettle can result in wheat yield losses of 39%.<sup>2</sup>

Resistance issues: Resistance to Group 2 has been reported.

**Additional information:** The stem is square and covered with downward pointing, bristly

hairs. Hemp-nettle cotyledons have distinct notches at the top.







#### **HENBIT**

Growth habit: Annual, winter annual.

**Competitive ability:** Poor. The plant reproduces by seed; each plant produces up to 200.<sup>2</sup> Germinates at shallow depths; roots are shallow and fibrous.

Typical crop losses: No data available. Resistance issues: None reported.

**Additional information:** Henbit is not common in cultivated crops; it is more common in row crops, gardens and waste areas. Poisonous to livestock. Square stems are branched from the base.







#### JAPANESE BROME

Growth habit: Annual, winter annual.

**Competitive ability:** Aggressive. Reproduces by seed which may germinate in the fall under moist conditions. In dry conditions, it will adapt and grow as a spring annual.

Typical crop losses: No data available. Resistance issues: None reported.

Additional information: Often confused with downy brome or foxtail barley.



#### **KOCHIA**

Growth habit: Annual.

**Competitive ability:** Strong, especially in dry and/or saline soils. Shallow germination. Can establish in low soil moisture conditions.

**Typical crop losses:** In severe infestations, kochia has been known to create up to 100% vield loss.<sup>2</sup>

**Resistance issues:** Reported to have widespread resistance to Group 2 and resistance to Group 9.

**Additional information:** Stays green into fall, which can lead to harvesting difficulties. Its erect, much-branched stem is often purple-striped.







#### LAMB'S-QUARTERS

Growth habit: Annual. Extremely variable growth structure.

Competitive ability: Moderate to strong.

Typical crop losses: High density populations can reduce barley yields 20% to 23%.<sup>2</sup>

Resistance issues: None reported.

**Additional information:** Often confused with redroot pigweed. Seedlings can be distinguished by a covering of silver particles, conspicuous on the underside of leaves.<sup>2</sup>







#### NARROW-LEAVED HAWK'S BEARD

Growth habit: Annual, winter annual.

**Competitive ability:** The annual form competes with special crops, cereals and oilseeds. **Typical crop losses:** The most serious infestations of this weed occur in weak crop stands.<sup>2</sup>

Resistance issues: Reported Group 2 resistance in Alberta.

 $\textbf{Additional information:} \ \textbf{The seedling can be confused with dandelion, but dandelion}$ 

leaves are broader, with deeper lobes, and are darker green in colour.



#### **NIGHT-FLOWERING CATCHFLY**

Growth habit: Annual, winter annual, reproducing by seeds.

Competitive ability: No data available in field crops, assumed to be low. Competes well in

pastures because it is unpalatable to livestock.

Typical crop losses: Impurity in clover and forage seed.

Resistance issues: None reported.

**Additional information:** Stems and leaves are covered with hairs, making herbicide uptake more difficult. Often mistaken for cow cockle and white cockle, but leaves are hairy and the plant is sticky when squeezed.



#### **PERENNIAL SOW THISTLE**

Growth habit: Perennial.

Competitive ability: Very strong. Typical crop losses: No data available. Resistance issues: None reported.

**Additional information:** Perennial sow thistle has a branching root system and larger flowers. It is often confused with annual sow thistle, which is tap-rooted and has much smaller flowers, or spiny annual sow thistle, which has sharp, spiny leaves and smaller

flowers.4







#### PRICKLY LETTUCE

Growth habit: Annual, winter annual, biennial.

Competitive ability: Reproduces by seed which is dispersed by wind.

 $\textbf{Typical crop losses:} \ \textbf{This is a serious weed in cropland that can reduce crop yields}$ 

drastically.

 $\textbf{Resistance issues:} \ \text{Resistance to Group 2 (ALS inhibitors)} \ \text{has been reported in three U.S.}$ 

states.4

**Additional information:** Oblong leaves are sharp-toothed to prickly and often point east and west. The plant has a deep taproot, stems are hollow and grow up to 1.8 m high. Cattle that consume large amounts can develop the respiratory condition pulmonary emphysema.



#### **QUACKGRASS**

**Growth habit:** Perennial grass spread mainly by rhizomes on the extensive root system. **Competitive ability:** Very strong. Rhizomes secrete a toxic substance that suppresses growth of surrounding plants. Quackgrass thrives under cool, moist conditions. **Typical crop losses:** 1 shoot per square metre can reduce wheat yield by 10%.

Resistance issues: None reported.

**Additional information:** Usually occurs in dense patches, but can spread rapidly via underground rhizomes. Scout for patches encroaching from field borders or headlands. Apply herbicide to plants with active growth.



#### **REDROOT PIGWEED**

Growth habit: Annual.

Competitive ability: Strong competitor for nitrogen and moisture.

Typical crop losses: No data available.

Resistance issues: Group 2 resistance has been reported in Manitoba and Eastern Canada. Additional information: Often confused with lamb's-quarters. Seedlings are bright green, with bright red undersides of cotyledons and base of stem. Lamb's-quarters seedlings are silvery-green.<sup>2</sup>







#### **ROUND-LEAVED MALLOW**

Growth habit: Annual, winter annual, biennial, perennial.

Competitive ability: Moderate to strong, especially in manured fields.

Typical crop losses: No data available. Resistance issues: None reported.

Additional information: This weed tends to dominate in soils with lush organic matter,

whether from peat or added manure.



#### **RUSSIAN THISTLE**

Growth habit: Annual.

Competitive ability: Moderate to strong.

**Typical crop losses:** 4 to 52 plants per square metre can reduce spring wheat yields by 20% to 48%.<sup>2</sup> When Russian thistle emerges after the crop, yield losses are less significant.

Resistance issues: Reported resistance to Group 2 herbicides.

**Additional information:** Young leaves are needle-like with soft pointed tips. Mature plants

break off at the stem and tumble in the wind to spread seed.



#### **SCENTLESS CHAMOMILE**

Growth habit: Annual, winter annual, short-lived perennial.

**Competitive ability:** Moderate to strong. Competes most in cool, moist environments. **3 Typical crop losses:** In spring wheat, moderate densities can reduce yield 35% in cool, wet years. <sup>3</sup>

Resistance issues: None reported.

 $\textbf{Additional information:} \ \, \textbf{Overwintered winter-annual plants can become large, bushy and} \, \,$ 

extremely competitive.



#### SHEPHERD'S PURSE

Growth habit: Annual, winter annual. Competitive ability: Weak to moderate. Typical crop losses: No data available.

Resistance issues: Reported resistance to Group 2 herbicides.

Additional information: Relatively easy to control in cereal crops.



#### **SMARTWEED** (Lady's-thumb)

Growth habit: Annual.

Competitive ability: Moderate to very strong.

Typical crop losses: In spring wheat, moderate to high population densities can cause

yield losses of 28% to 58%.1

Resistance issues: Reported resistance to Group 2 herbicides.

Additional information: Naturally tolerant to 2,4-D and MCPA. Under an advanced wheat

canopy, its competitive nature is substantially reduced.<sup>2</sup>



#### **STINKWEED**

**Growth habit:** Annual, winter annual. **Competitive ability:** Very strong.<sup>3</sup>

Typical crop losses: No definitive data available, but usually low.<sup>2</sup>

**Resistance issues:** Reported resistance to Group 2 herbicides in Western Canada. **Additional information:** Control fall rosettes so seed is not formed early the following

spring. Plants release an unpleasant odour when leaves are rubbed.



#### STORK'S-BILL

Growth habit: Annual, winter annual, biennial.

Competitive ability: Strong.

Typical crop losses: Drought-tolerant once established, so it can take over knolls,

significantly reducing yield.<sup>5</sup> **Resistance issues:** None reported.

**Additional information:** A flexible life cycle allows it to adapt to reduced tillage production systems. Problems are currently isolated, but serious where established.<sup>5</sup>



#### WHITE COCKLE

Growth habit: Annual, winter annual, short-lived perennial, reproducing by seeds.

Competitive ability: Low to medium.

Typical crop losses: A common impurity in clover and forage seed.

Resistance issues: None reported.

Additional information: Stems and leaves are covered in hairs, making herbicide uptake

more difficult. Often mistaken for night-flowering catchfly and cow cockle. Night-flowering catchfly has glandular hairs and is sticky when squeezed.



#### WILD BUCKWHEAT

Growth habit: Annual.

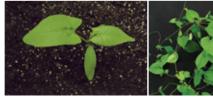
Competitive ability: Moderate to strong.

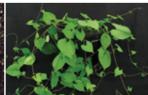
Typical crop losses: In wheat, moderate population densities can cause yield loss of 10%

to 12%.2

Resistance issues: None reported.

**Additional information:** Competes aggressively in canola, so take advantage of control options during cereal rotations. Creates significant harvest problems if stems twine around equipment. May be confused with field bindweed.







#### **WILD MUSTARD**

Growth habit: Annual.

Competitive ability: Very strong.

**Typical crop losses:** At 50 plants per square metre, yield losses can be 16% in wheat

and 74% in flax.3

Resistance issues: Resistance to Group 2 herbicides has been reported.

**Additional information:** Very similar to canola. Short, stiff hairs on main stem are an identifying feature.



#### **WILD OATS**

Growth habit: Annual grass.

**Competitive ability:** Intermediate competitiveness with wheat, less competitive with good stands of barley and canola.

**Typical crop losses:** 10 plants per square metre can reduce wheat, barley and canola yields by 10%.

**Resistance issues:** Resistance to Group 1 and Group 2 herbicides is increasing, making in-crop control more challenging. Resistance has also been confirmed to Group 14 and 15 herbicides in Western Canada.

**Additional information:** Check low spots carefully, as wild oats prefer moist soil. New flushes of growth occur throughout the year after rainfall.



#### YELLOW FOXTAIL

Growth habit: Annual grass.

Competitive ability: Reproduces by seed only.

Typical crop losses: In wheat, moderate population densities can cause yield loss of 16%.1

Resistance issues: Resistance reported to Group 5 herbicides.

**Additional information:** Distinguished from other foxtails by prominent silky, kinky hairs on the upper surface of the leaf blade near the stem.



#### YELLOW TOADFLAX

Growth habit: Perennial, spread by seeds and a creeping root system.

**Competitive ability:** Strong, due to extensive creeping root system. Seeds germinate from shallow depths. Seedlings emerge throughout the season.

 $\textbf{Typical crop losses:} \ \text{In wheat, 7 toadflax stems per square foot can reduce yields by 20\%.} \\ ^{3}$ 

Resistance issues: None reported.

 $\textbf{Additional information:} \ \textbf{Most in-crop herbicides will only suppress this weed.} \ \textbf{Toadflax}$ 

leaves are stalkless and linear, similar to domestic flax.







#### YELLOW WHITLOW-GRASS

Growth habit: Annual, winter annual.

Competitive ability: Commonly found on dry, sandy soils; each plant produces up

to 2,500 seeds.3

Typical crop losses: Data not available. Resistance issues: None reported.

**Additional information:** Commonly found in fields under reduced tillage, but also appears in forage crops, hay fields and on rangeland. Early spring growth competes with crop seedlings for moisture and nutrients. Its yellow flowers appear early in spring.





#### Data References:

1 Manitoba Agriculture, Food and Rural Initiatives 2 Alberta Agriculture and Rural Development

- 3 Saskatchewan Agriculture and Food
- 4 B.C. Ministry of Agriculture and Lands
- 5 Saskatchewan Soil Conservation Association

#### Photo sources:

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Peter Smith, University of Guelph Green Thumb Photography

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University, Bugwood.org

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