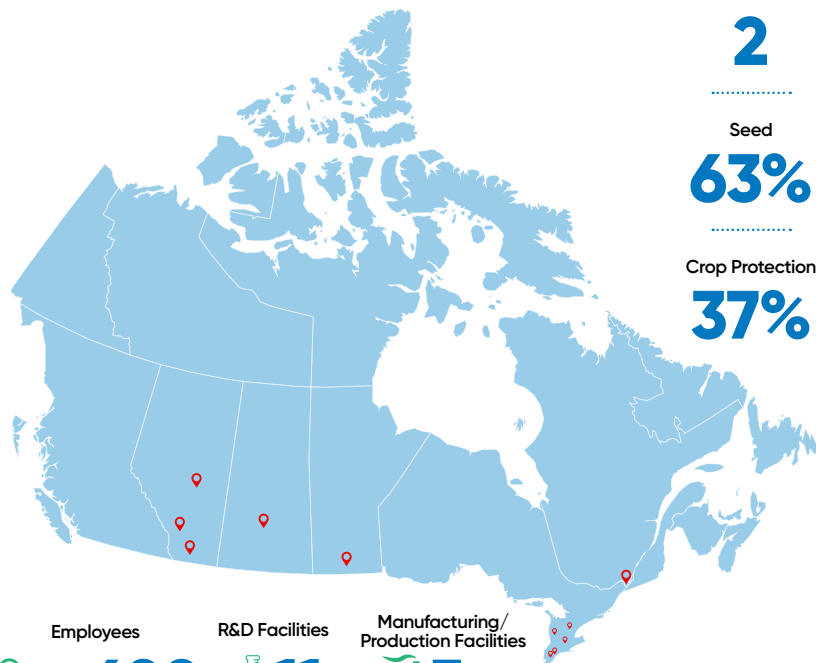


**GROW**

— WITH —  
CORTEVA AGRISCIENCE

2024 WESTERN CANADA  
**FIELD GUIDE**

# Corteva Agriscience in Canada



## Primary Crops:



## Crop Protection:



Learn more at [corteva.ca](http://corteva.ca)

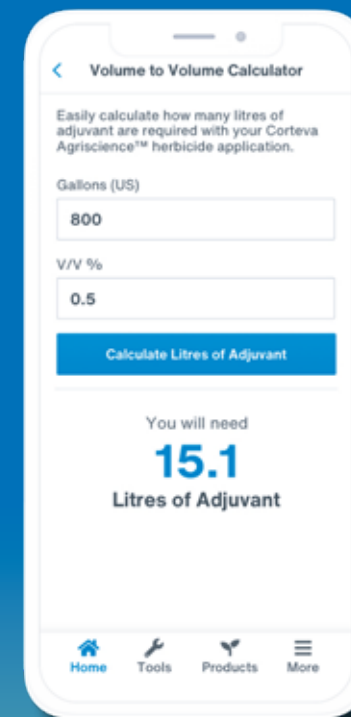
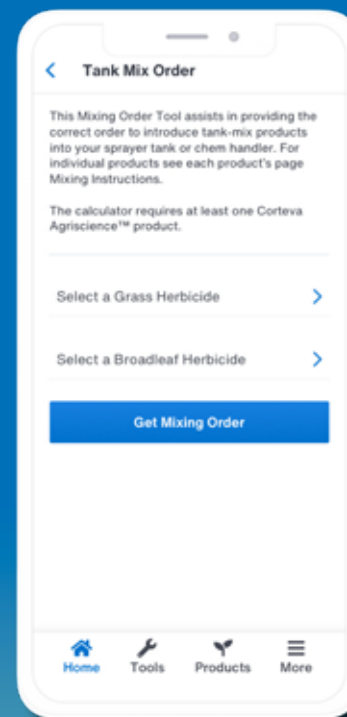
# DOWNLOAD THE 2024 CORTEVA AGRISCIENCE FIELD GUIDE APP

The Corteva Agriscience 2024 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 2024 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 Agriscience has seven 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 tests 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](http://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](http://Pioneer.com/Canada)



# Grow with Corteva Agriscience.

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

**3%** **INNOVATION BONUS (Min. 300 acres)**  
 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.



**3%** **EARLY BOOK**  
 Book by **March 15, 2024** (Early book starting Sept 1, 2023. All products, priority and classic, qualify for early book.)



PROGRAM TIERS	3 CATEGORIES	4 OR MORE CATEGORIES
<b>CORE</b> \$25,000 – \$49,999 MSRP or 320 acres of seed	5%	8%
<b>CORE PLUS</b> \$50,000 – \$119,999 MSRP or 640 acres of seed	6%	10%
<b>CORE MAX</b> > \$120,000 MSRP or 1,500 acres of seed	7%	12%

*Payment on priority and innovation products only.*



**Program Savings**

3%

3%

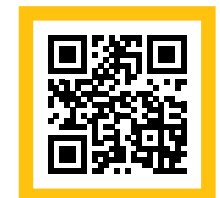
Up to 12%

**Max Savings**

18%



To calculate your savings, scan here:



Eligible program period:  
 September 01, 2023 – August 31, 2024



# 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	FUNGICIDES	BIOLOGICALS	SEED & SEED TREATMENTS
Korrex™ II Paradigm™ PRE Prospect™	Simplicity™ Simplicity™ GoDRI	Cirpreme™ XC Exhilarate™ OcTTain™ XL OnDeck™ Pixxaro™ / Pixxaro™ A Prominex™	Viatude™ Zetigo™ PRM	Utrisha™ N	Brevant® seeds <sup>2</sup> Pioneer® brand seed <sup>2</sup> Lumivia™ CPL insecticide seed treatment Straxan™ fungicide seed treatment
	<b>CROSS SPECTRUM<sup>1</sup> HERBICIDES</b> <small>(Counts as 2 categories)</small>				
	Rexade™ Rezuvant™ XL Tandem™ Tridem™				

## INNOVATION BONUS

INNOVATION PRODUCTS
OnDeck™ Straxan™ Utrisha™ N Viatude™ Zetigo™ PRM

## CLASSIC BRANDS

Acapela™ fungicide	Enlist™ 1 herbicide	PrePass™ FLEX herbicide
Accent™ herbicide	Liquid Achieve™ SC herbicide	Prestige™ XL herbicide
Amity™ WDG herbicide	Lontrel™ XC herbicide	Prism™ SG herbicide
Ares™ SN herbicide	Lumiderm™ insecticide seed treatment <sup>3</sup> for soybeans	Sortan™ IS herbicide
Avenza™ herbicide	Lumisena™ fungicide seed treatment <sup>3</sup>	Stellar™ XL herbicide
Enlist Duo™ herbicide		

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

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

<sup>3</sup> Lumisena and Lumiderm qualify as classic brands when applied as soybean downstream treatments only.

• Classic brands do not count as a category, but build your tier dollars.

• Brevant® and Pioneer® brand seed products do not qualify for the Early Book bonus.

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

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# SEED APPLIED TECHNOLOGY





# SEED APPLIED TECHNOLOGY

## BY CROP

### CANOLA



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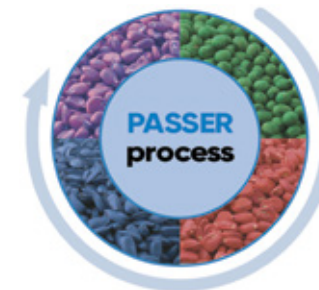


## Win the Start with the NEW Corteva Agriscience™ Seed Applied Technologies Portfolio.

Corteva Agriscience™ 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.



<b>Plantability</b>	Maximizing seed flow and planting precision
<b>Application</b>	Refining processes to work across seed properties and environmental conditions
<b>Stewardship</b>	Minimizing adverse effects on people and the environment
<b>Seed Safety</b>	Ensuring seed treatments don't adversely affect seed germination
<b>Efficacy</b>	Evaluating protection and vigor to confirm seed treatment performs as expected
<b>Regulatory</b>	Meeting regulations and guidelines

Corteva Agriscience 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 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**.
- Up to **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.

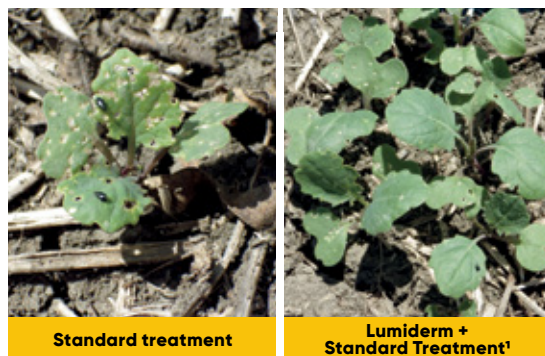
#### LUMIDERM RESULTS

**+1.4** BU/AC

Shown in 137 grower demo trials

**-35%** FLEA BEETLE DAMAGE

Shown in 192 R&D and grower demo trials



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.  
 2 Source: Lumsden, SK. 22 Days After Seeding.  
 3 Source: Vimy, AB

### LUMIDERM™ INSECTICIDE SEED TREATMENT CONTROLS ALL TYPES OF CUTWORMS

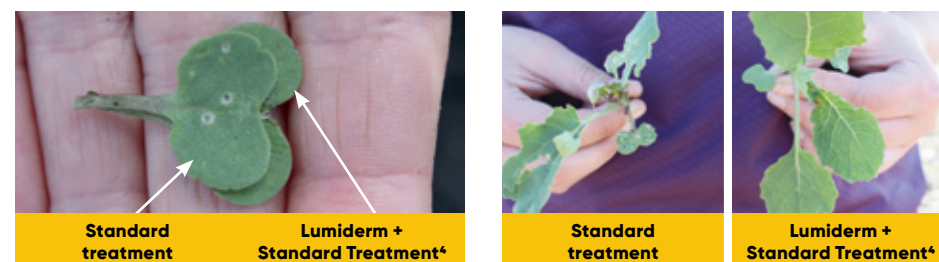
Cutworms are a real problem in canola production. Cutworms are very difficult to detect since they typically live underground during the day and feed at night. This makes it very challenging to control them with a foliar insecticide application.

That's why Lumiderm™ is such an important leap forward in seed treatment technology. 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 hybrids show a significant advantage in plant size, vigour and biomass. Lumiderm treated canola grows bigger, faster and more even than 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





3	4	7	11
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Win the Start with with industry leading disease protection in canola.

**LumiGEN® SEED TREATMENT FUNGICIDE PACKAGE ADVANTAGES**

- The **New** LumiGEN® seed treatments canola fungicide package provides **proven, industry-leading protection** from critical diseases.
- The LumiGEN seed treatments canola fungicide seed treatment package contains **four effective active ingredients** (Groups 3, 4, 7 and 11) for industry leading, broad spectrum disease protection.
- The LumiGEN seed treatments fungicide package delivers outstanding protection of **airborne blackleg, rhizoctonia, pythium, and seedling disease complex.**

**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 yield 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 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.

NEW

**Lumiscend™**

GROUP  
**7**

**NEW** Lumiscend provides powerful airborne blackleg protection

**FUNGICIDE SEED TREATMENT**

A COMPONENT OF THE NEW LUMIGEN SEED TREATMENTS CANOLA DISEASE PACKAGE IS LUMISCEND™ FUNGICIDE SEED TREATMENT, A UNIQUE NEW 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 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.

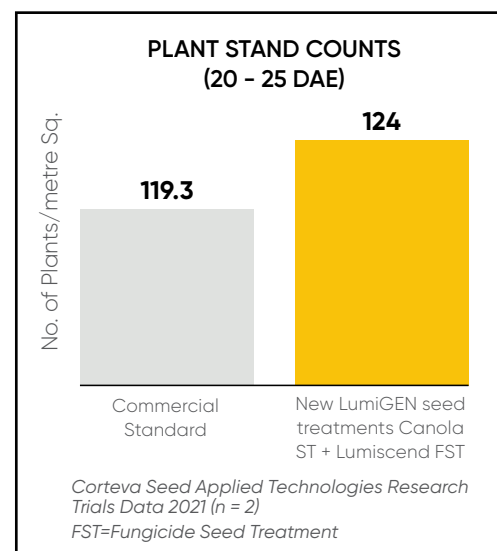


Standard treatment



LumiGEN seed treatments package with Lumiscend

**Powerful Blackleg Protection from NEW Lumiscend™ fungicide seed treatment**



Competitor FST



LumiGEN seed treatments package with Lumiscend

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



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



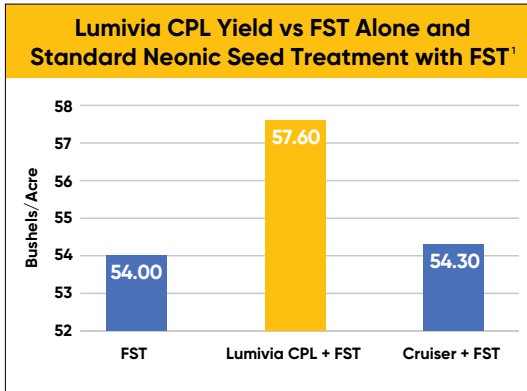
# Lumivia™ CPL

## INSECTICIDE SEED TREATMENT

Win the Start with control of wireworm, cutworm, armyworm and pea leaf weevil in cereals, peas and lentils.

### LUMIVIA™ CPL INSECTICIDE SEED TREATMENT ADVANTAGES

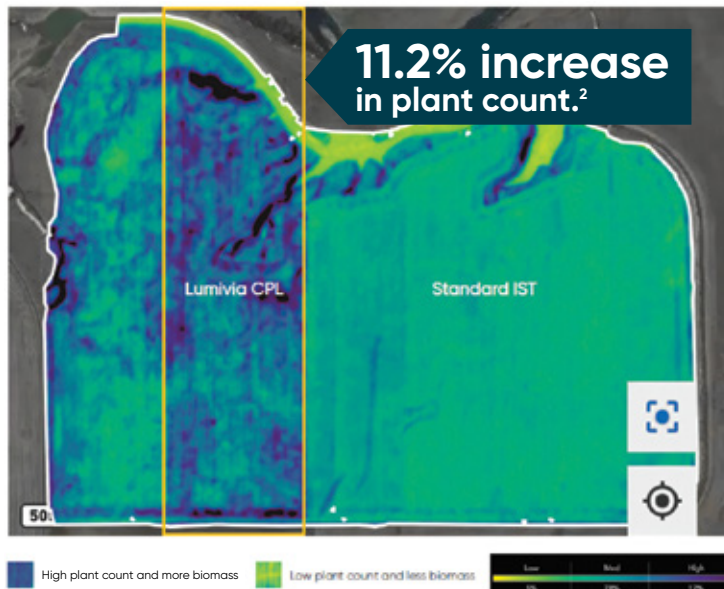
- Outstanding early season insect protection for **cereals, peas and lentils** to help maximize plant stand count and yield potential.
- Reduces the build-up of pest populations.
- Highly systemic movement from the seed coat to roots, mesocotyl, stem and leaves, providing seedling **protection up to 35-40 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.



**LUMIVIA™ CPL YIELD ADVANTAGE**

**+3.3 BU/AC**

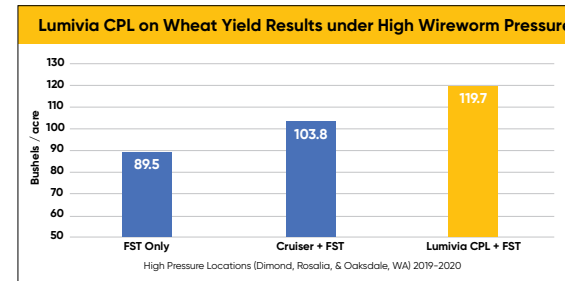
vs. Standard Neonic Seed Treatment



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

<sup>2</sup> 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 PROVIDES THE BROADEST INSECT PROTECTION, INCLUDING WIREWORM AND CUTWORM.



LUMIVIA CPL PROVIDED AN AVERAGE OF

**15.9 BU/AC**

benefit over Cruiser® Seed Treatment.

**LUMIVIA CPL IS THE ONLY PULSE AND CEREAL SEED TREATMENT THAT CONTROLS 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.

PACKAGING
• 4 x 3.5 L Case
• 52 L Keg



# Straxan™

No one protects your cereal crop like Corteva Agriscience™.

## FUNGICIDE SEED TREATMENT

### STRAXAN™ ADVANTAGES

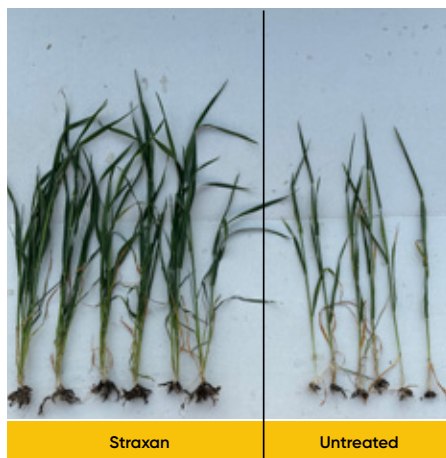
- Provides excellent seedling protection against early season seed and seedling diseases to maximize crop stand establishment and yield potential.
- Ready-to-use and easy-to-apply formulation for complete seed coverage and treating flexibility.
- Excellent partner for Lumivia™ CPL, which provides the 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.



Untreated Seed

Straxan treated Seed

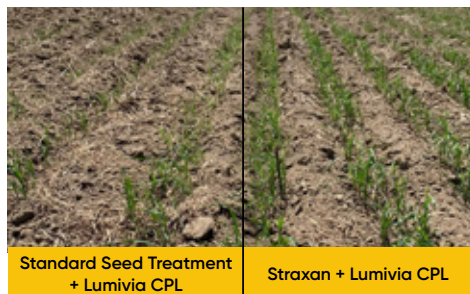


Straxan

Untreated

St. Albert, June 2023

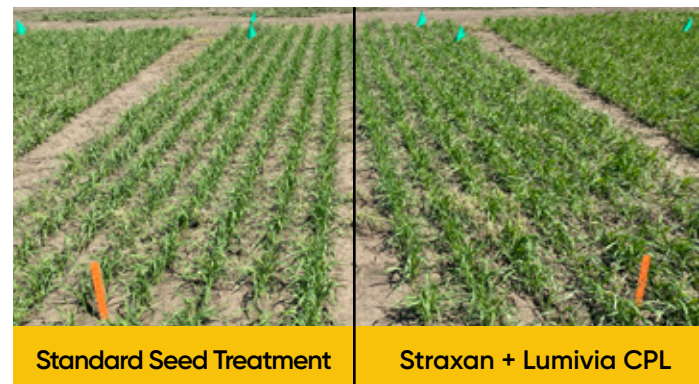
Straxan increases plant count and stand establishment, maximizing the potential of your cereal crop.



Standard Seed Treatment + Lumivia CPL

Straxan + Lumivia CPL

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



Standard Seed Treatment

Straxan + Lumivia CPL

Osler, SK June 2023



Standard Seed Treatment

Straxan + Lumivia CPL

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 9,45 L Case
- 113,45L Drum





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



Fungicide Seed Treatment Only



Lumiderm™ + Fungicide Seed Treatment

Source: Ridgetown, ON

<sup>1</sup>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

<b>CROPS</b> Soybeans	<b>CUTWORM RATE</b>	0.0375-0.075 mg ai/seed	Cutworms, Seedcorn maggot, Japanese beetle, European chafer, Masked chafers, Wireworms
	<b>FULL-SPECTRUM RATE</b>	0.075-0.200 mg ai/seed	Soybean aphid, Bean leaf beetle, Cutworms, Seedcorn maggot, Japanese beetle, European chafer, Masked chafers, Wireworms



Competitor 1    Untreated Check    Competitor 2    Lumiderm

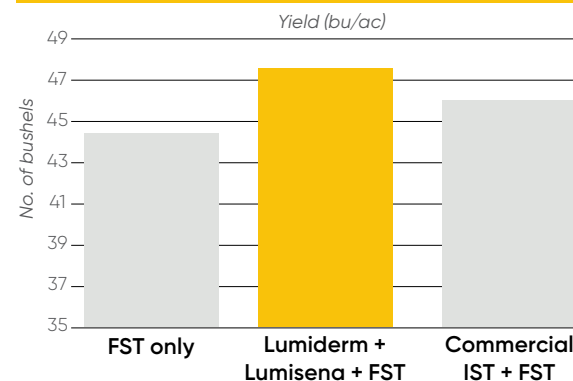
Lumiderm™ insecticide seed treatment is now registered for industry-leading control of cutworms in soybeans

### 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.

### LUMIDERM RESEARCH AUTHORIZATION RESULTS



### LUMIDERM & LUMISENA YIELD ADVANTAGE

**+1.5 BU/AC**

In demo trials compared to standard IST + FST treatment

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.



# 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.

**LUMISENA YIELD ADVANTAGE**

**+3.0 BU/AC**

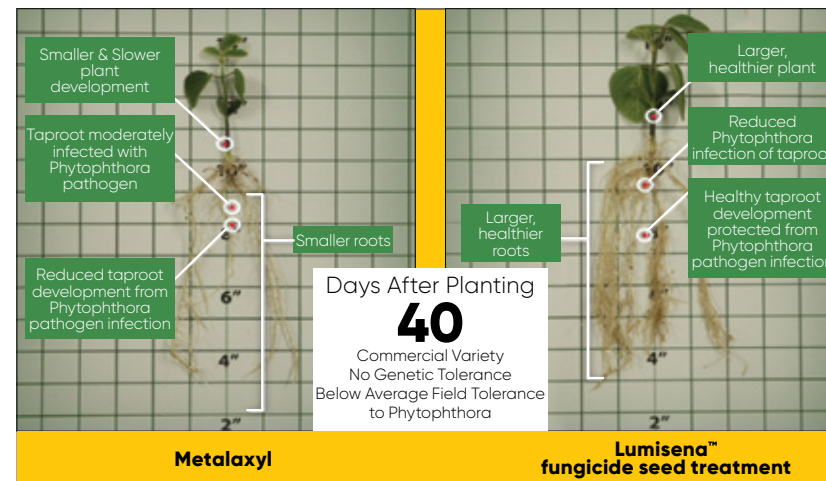
*In demo trials compared to competitor fungicide seed treatment*

### LOOK AT THE RESULTS

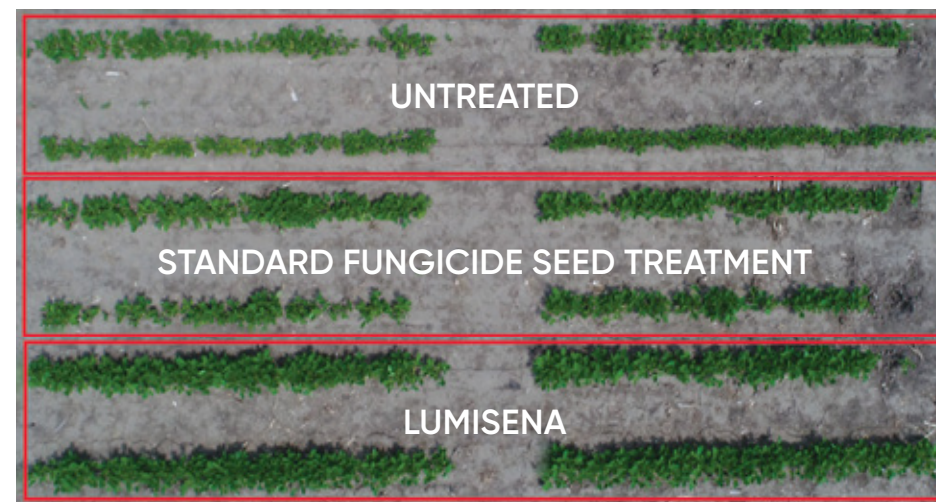
The first six weeks are important for a soybean crop's yield potential. Observe the difference in performance between two soybean plants, 40 days after planting, treated with the high rate of metalaxyl versus Lumisena™ fungicide seed treatment when phytophthora is present.

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
- antisporeulant



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.



NEW

# Lumialza™

## NEMATICIDE SEED TREATMENT

Win the Start with powerful protection from nematodes.

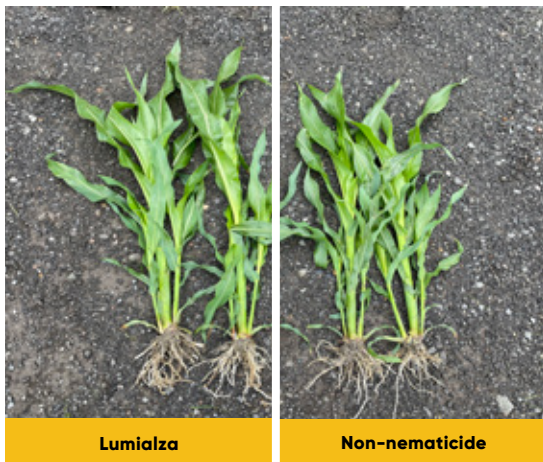
### NEW LUMIALZA™ NEMATICIDE SEED TREATMENT ADVANTAGES

- 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 amyloliquefaciens*, that aggressively colonizes roots near the seed and soil surface and throughout the soil profile, resulting in an extensive zone of root protection.
- Lumialza provides nematode control by colonizing the roots to form a biological barrier from nematode attack, as well as causing 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.



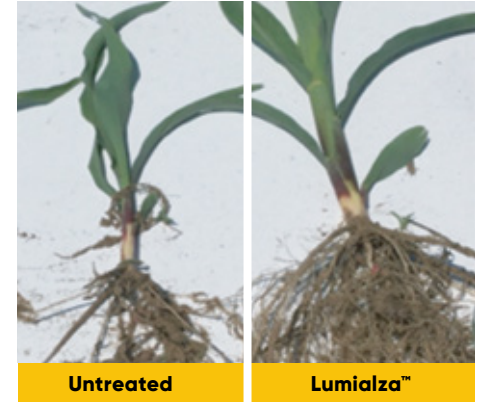
LUMIALZA™ PROVIDES MORE THAN

# 80

DAYS OF PROTECTION

### 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.



LUMIALZA YIELD ADVANTAGE

# 3-9 BU/AC

*In demo trials compared to non-nematicide treatment\**



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

NEW

# Lumiscend™ Pro

## FUNGICIDE SEED TREATMENT

GROUP	GROUP	GROUP
4	7	22

Win the Start with early season disease protection.

### NEW LUMISCEND™ PRO FUNGICIDE SEED TREATMENT ADVANTAGES

- The **NEW** LumiGEN® seed treatments corn fungicide, including new Lumiscend™ Pro, is a unique combination of four active ingredients to deliver MMOA 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



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



SEED APPLIED TECHNOLOGIES



# HERBICIDES





# HERBICIDES

## BY CROP

### WHEAT

Avenza™	48
Cirpreme™ XC	50
Exhilarate™	58
Korrex™ II	34
Liquid Achieve™ SC	60
Lontrel™ XC	62
OcTTain™ XL	64
<b>NEW</b> OnDeck™	66
Paradigm™ PRE	36
Pixxaro™	68
PrePass™ FLEX	38
Prestige™ XL	72
Prominex™	76
Rexade™	78
Rezuvant™ XL	80
Simplicity™	82
Simplicity™	
Wild Oat Rate	84
Simplicity™ GoDRI™	86
Simplicity™ GoDRI™	
Wild Oat Rate	88
Stellar XL™	92
Tandem™	96
Tridem™	98

### SOYBEANS

Enlist™ 1	54
Enlist™ Duo	56

### BARLEY

Avenza™	48
Cirpreme™ XC	50
Exhilarate™	58
Korrex™ II	34
Liquid Achieve™ SC	60
Lontrel™ XC	62
OcTTain™ XL	64
<b>NEW</b> OnDeck™	66
Paradigm™ PRE	36
Pixxaro™	68
PrePass™ FLEX	38
Prestige™ XL	72
Prominex™	76
Rezuvant™ XL	80
Stellar™ XL	92

### CANOLA

Amity™ WDG	44
Ares™ SN	46
Lontrel™ XC	62
Prospect™	40

### CORN

<b>NEW</b> Accent™ IS	42
Enlist™ Duo	56
Lontrel™ XC	62
Prospect™	40
Sortan™ IS	90
Steadfast™ IS	94

### OATS

Korrex™ II	34
Paradigm™ PRE	36
PrePass™ FLEX	38
Prestige™ XL	72
Stellar™ XL	92

### POTATOES

Prism™ SG	74
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### RANGE & PASTURE

Grazon™ XC	102
Reclaim™ II	104
<b>NEW</b> Restore™ NXT	106
Restore™ II	108



# Korrex™ II

## HERBICIDE

Korrex™ II 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?

- **Kochia control.** Superior pre-seed control of kochia, including Group 2 and Group 9 resistant biotypes.
- **Flexible mixing options.** Easy-mixing tank additive for any glyphosate.
- **Broad-spectrum broadleaf weed control**, including dandelion, narrow-leaved 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\*<sup>3</sup>
- Chickweed\*
- Cleavers\*
- Common ragweed\*
- Cow cockle\*
- Flixweed\*
- Hemp-nettle\*
- Kochia\*
- Lamb's-quarters\*
- Narrow-leaved

- hawk's beard
- Redroot pigweed\*
- Russian thistle
- Shepherd's purse\*
- Smartweed\*
- Stinkweed\*
- Volunteer canola\*<sup>1</sup>
- Volunteer flax
- Wild buckwheat\*
- Wild mustard\*

#### GRASS WEEDS CONTROLLED

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

#### PERENNIAL WEEDS CONTROLLED

- Dandelion\*  
*(seedling, overwintered rosettes, mature plants up to 30 cm diameter)*
- Perennial sow thistle<sup>4</sup>

#### WEEDS SUPRESSED

- Annual sow thistle
- Scentless chamomile

#### SPRING AND FALL SOILACTIVE™ EXTENDED CONTROL

- Canada fleabane
- Chickweed<sup>5</sup>

- Cleavers<sup>5</sup>
- Common ragweed
- Dandelion seedling
- Flixweed
- Hemp-nettle<sup>5</sup>
- Lamb's-quarters<sup>5</sup>

- Narrow-leaved hawk's beard<sup>5</sup>
- Redroot pigweed
- Scentless chamomile
- Shepherd's purse<sup>5</sup>

- Smartweed<sup>5</sup>
- Stinkweed<sup>5</sup>
- Volunteer Canola  
*(except Clearfield®)*
- Wild buckwheat
- Wild mustard

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

- Annual sow thistle
- Canada thistle  
*(rosette stage)*
- Quackgrass

\*Weed controlled by multiple effective modes of action.

<sup>1</sup>Including all herbicide-tolerant canola varieties.  
<sup>3</sup>Less than 8 cm in height.

<sup>4</sup>Applications made at advanced stages will reduce effectiveness.

<sup>5</sup>Will not provide extended control of Group 2 resistant biotypes.

## APPLICATION GUIDELINES

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

### MIXING INSTRUCTIONS

1. Fill sprayer tank ½ full of water
  2. Start sprayer tank agitation
  3. Add the required amount of Korrex II A herbicide, continue agitation
  4. Add the required amount of Korrex II B herbicide, continue agitation
  5. Add the required amount of glyphosate, continue agitation
  6. Fill the sprayer tank with sufficient water to spray 20-40 L/ac (5-10 US gal/ac)
- Note: Do not mix undiluted herbicides in the chem-handler*

### CROP ROTATION

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

- Barley
- Canola
- Chickpeas
- Corn
- Field beans
- Flax
- Lentils
- Mustard
- Peas
- Potatoes *(except seed potatoes)*
- Soybeans
- Summerfallow
- Sunflower
- Wheat

### APPLICATION TIMING AND SEEDING

- Korrex II can be applied in the spring prior to seeding wheat, barley or oats and as an initial treatment in summerfallow.
- Korrex II applied in the fall (**after August 1**), can be seeded to winter wheat that fall or spring wheat, durum, barley and oats the following spring.
- Newly registered Spring Rate for use in the fall. Get more acres of Korrex™ II without compromising control, spray early and save.

### GRAZING AND HARVEST

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

# Paradigm™ PRE

Arylex™ 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?

- **Performance.** Controls your toughest weeds, including Group 2 resistant cleavers and hemp-nettle.
- **Just GO.** Controls small or large weeds in cool spring or fall conditions.
- **Herbicide resistance management.**
- **Flexibility.** Tank mix with any glyphosate for your pre-seed burndown.
- **Convenient packaging.** Paradigm PRE's innovative GoDRI™ formulation makes 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\*<sup>2</sup>
- Cleavers\* (up to 9 whorls)
- Common chickweed\* (up to 8 leaves)
- Common ragweed\*<sup>2</sup>
- 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:

- Canada fleabane
- Chickweed<sup>3</sup>
- Cleavers<sup>3</sup>
- Common ragweed
- Dandelion seedling
- Flixweed
- Hemp-nettle<sup>3</sup>
- Lamb's-quarters<sup>3</sup>
- Narrow-leaved 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<sup>®</sup>)
- Wild buckwheat
- Wild mustard

\*Controlled by multiple effective modes of action.  
1 Including all herbicide-tolerant canola varieties.  
2 Less than 8 cm in height and including Group 2 tolerant biotypes.

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

## APPLICATION GUIDELINES

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

### MIXING INSTRUCTIONS

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

### 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 can be applied in the spring prior to seeding wheat, barley or oats.
- Paradigm PRE applied **after August 1** can be seeded to winter wheat that fall or spring wheat, durum, oats and barley the following spring.
- Newly registered Spring Rate for use in the fall. Get more acres of Paradigm™ PRE without compromising control, spray early and save. The following chart shows the fall rate and the newly registered spring rate options.

### 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.



# PrePass™ FLEX

Transform your glyphosate.

## HERBICIDE

### WHY USE PREPASS™ FLEX?

- **Flexibility** to 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.
- **Time management.** Get 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 barley<sup>2</sup>
- 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 thistle<sup>1</sup>
- Quackgrass<sup>1</sup>

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

- Canada fleabane
- Chickweed<sup>4</sup>
- Cleavers<sup>4</sup>
- Common ragweed

- Dandelion seedling
- Flixweed
- Hemp-nettle<sup>4</sup>
- Lady's-thumb
- Lamb's-quarters<sup>4</sup>
- 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<sup>®</sup>)

- Wild buckwheat
- Wild mustard

<sup>2</sup> Seedling, overwintered rosettes, mature plants up to 30 cm in diameter.

<sup>3</sup> All herbicide-tolerant varieties.

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

## APPLICATION GUIDELINES

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

### MIXING INSTRUCTIONS

1. Fill sprayer tank ½ full of water
2. Start sprayer tank agitation
3. Add the required amount of PrePass FLEX 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)

### CROP ROTATION

The year following a spring PrePass FLEX application, fields can be seeded to:

- Alfalfa
- Barley
- Canola
- Chickpeas
- Corn
- Faba beans
- Field beans
- Flax
- Lentils
- Mustard
- Oats
- Peas
- Potatoes (except seed potatoes)
- Soybeans
- Summerfallow
- Sunflower
- Wheat

### 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.

### 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.

# Prospect™

Arylex™ active

## HERBICIDE

Give your canola the best start possible.

### WHY USE PROSPECT™?

- **Controls a wide range of broadleaf weeds**, including cleavers, (overwintered and Group 2 resistant biotypes), hemp-nettle, flixweed, narrow-leaved hawk's beard 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 glyphosate, 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
- Cleavers<sup>1</sup>
- Common ragweed<sup>1</sup>
- Cow cockle
- Eastern black nightshade
- Flixweed
- Hemp-nettle<sup>1</sup>
- Henbit
- Kochia<sup>2</sup>
- Lamb's-quarters
- Morning glory
- 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)<sup>4</sup>
- Volunteer flax
- Waterhemp
- Wild buckwheat
- 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
- Volunteer alfalfa

#### WEEDS SUPPRESSED

- Annual sow thistle

#### WEEDS CONTROLLED THROUGH MULTIPLE EFFECTIVE MODES OF ACTION

- Barnyard grass
- Canada fleabane
- Chickweed
- Cleavers
- Eastern black nightshade
- Flixweed
- Hemp-nettle
- Lamb's-quarters
- Redroot pigweed
- Russian thistle
- Shepherd's-purse
- Smartweed
- Stinkweed
- Wild buckwheat
- Wild mustard

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

<sup>2</sup> Control of light to moderate infestation ≤150 plants/m<sup>2</sup>, ≤15cm in height, suppression of Group 9 resistant kochia biotypes.

<sup>3</sup> Up to 8cm in height; for larger stages use additional glyphosate top-up rates (see label).

<sup>4</sup> Group 9 resistant varieties: under conditions of high density or larger stages control may be reduced.

<sup>5</sup> Seeding/planting depth: minimum 4 cm (1.6 inches) or injury may occur.

## APPLICATION GUIDELINES

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

### MIXING INSTRUCTIONS

1. Fill sprayer tank 1/2 full of water
2. Start sprayer tank agitation
3. Add the required amount of Prospect 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)

### 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. PHI: 60 days.



NEW

# Accent™ IS

## HERBICIDE

Accent™ IS 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 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
- Foxtail, Green
- Foxtail, Yellow<sup>1</sup>
- Old Witchgrass
- Panicum, Fall
- Quackgrass
- Sandbur, Long-spined
- Wild Oats

### APPLICATION GUIDELINES

<b>CROPS</b> Grain corn Seed corn Sweet corn	<b>PACKAGING</b>	6 x 370 g bottles
	<b>RATES</b>	18.5 g/ac
	<b>ACRES TREATED</b>	20 ac/bottle
	<b>WATER VOLUME</b>	10-20 US gal/ac
	<b>TIMING</b>	<b>Hybrid field corn:</b> 1-8 leaves (6 visible collars = V6) <b>Seed corn:</b> 1-7 leaves (5 visible collars = V5) <b>Sweet corn:</b> 1-6 leaves (4 visible collars = V4)
	<b>RAINFAST</b>	2 hours
<b>HERBICIDE TANK MIX HERBICIDES</b>		Accent IS 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.

### MIXING INSTRUCTIONS

1. Fill clean tank about 1/4 full with fresh water.
2. Turn on full agitation.
3. Add the proper amount of Accent IS Herbicide to the water in the spray tank with the agitator running. Maintain full agitation until product is fully dispersed. Continuous agitation is required to keep the product in suspension.
4. After Accent IS Herbicide has been well mixed and is in suspension add the proper amount of tank mix partner (if applicable) to the spray tank with the agitator running.
5. After all products have been well mixed and are in suspension, add a recommended adjuvant (see "Spray Adjuvants" section for a complete list and use rate).
6. If applicable, add 28% liquid urea ammonium nitrate (UAN).
7. Fill the remainder of the spray tank.

### ADJUVANTS

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

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

### CROP ROTATION (10 MONTHS AFTER APPLICATION)

- Alfalfa
- Barley
- Canola (including
- Clearfield canola)
- Corn
- Dry Beans
- Field Pea
- Flax
- Potato
- Sunflower
- Wheat

### PRE-HARVEST INTERVAL

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

<sup>1</sup> Suppression only. For improved control, apply Accent IS with Merge (0.5% v/v) or NIS + UAN (0.2% v/v + 5 L/ha).

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

<sup>3</sup> Use only on labelled sweet corn varieties.



# Amity™ WDG

## HERBICIDE

Superior control of grass and broadleaf weeds in Clearfield® canola

### WHY USE AMITY™ WDG?

- 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 canary seed
- Volunteer durum wheat
- Volunteer spring wheat (excluding Clearfield® varieties)
- Volunteer tame oats
- Wild oats
- Yellow foxtail

#### WEEDS SUPPRESSED

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

# Surjet™

## ADJUVANT

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 sold separately from Amity™ WDG herbicide.

## APPLICATION GUIDELINES

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

### MIXING INSTRUCTIONS

1. Fill the spray tank with ½ to ¾ of the required amount of water
2. Continue agitation throughout the mixing and spraying procedure
3. Add required amount of Amity WDG
4. Add any tank mix partners
5. Add the required amount of Surjet™ adjuvant at 0.5% v/v
6. Complete filling the sprayer tank with water

*Note: Do not mix undiluted herbicides in the chem-handler*

### 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:

- |                          |                          |                |
|--------------------------|--------------------------|----------------|
| • Canary seed            | • Field peas             | • Spring wheat |
| • Chickpeas              | • Flax                   | • Sunflower    |
| • Clearfield® Canola     | • Lentils                |                |
| • Clearfield® Sunflowers | • Non Clearfield® canola |                |
| • Durum wheat            | • Oats                   |                |
| • Field corn             | • Spring barley          |                |

*If drought conditions exist in the first season after application, do not grow non-Clearfield canola, durum, flax or sunflowers.*

### GRAZING AND HARVEST

Do not harvest treated crop within 60 days after application.

# Ares™ SN

The performance standard in weed control for Clearfield® canola.

## HERBICIDE

### WHY USE ARES™ SN?

- **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-nettle<sup>2</sup>
- Lamb's-quarters<sup>2</sup>
- Redroot pigweed
- 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 canary seed
- Volunteer barley

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

# Surjet™

## ADJUVANT

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.

<sup>1</sup> For spring germinating Japanese brome control apply at 1 to 4-leaf stage.

<sup>2</sup> Group 2 susceptible biotypes will not be controlled.

<sup>3</sup> A tank mix with Facet® L will improve control of Group 2 resistant biotypes.

## APPLICATION GUIDELINES

<b>CROPS</b> Clearfield® Canola	<b>PACKAGING</b>	<b>Case:</b> • Ares™ SN: 1 x 9.8 L jug • Surjet Adjuvant: 1 x 8.1 L jug
	<b>RATES &amp; ACRES TREATED</b>	<b>Rate:</b> 244 ml/ac <b>Acres:</b> 40 ac/case
	<b>WATER VOLUME</b>	• Ground 40 L/ac (10 US gal/ac) • Aerial NOT registered
	<b>TIMING</b>	<b>Crop stage:</b> 2 to 7-leaf stage <b>Weed stage:</b> 1 to 6-leaf stage for grassy weeds and cotyledon to 4-leaf stage for broadleaf weeds
	<b>RAINFAST</b>	2 hours
	<b>TANK MIX HERBICIDES</b>	Lontrel™ XC Facet® L



DOWNLOAD THE 2024 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:

- Canary seed
- Chickpeas
- Field peas
- Field corn
- Clearfield® canola
- Clearfield® canola-quality Brassica juncea
- Lentils (including Clearfield® lentils)
- Spring wheat (including Clearfield® varieties)
- Spring barley

#### The following crops may be grown safely two years following an application:

- Canola
- Durum wheat
- Flax
- Sunflower

### GRAZING AND HARVEST

Do not harvest treated crop within 60 days after application.



# Avenza™

## HERBICIDE

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

### WHY USE AVENZA™ 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™ HERBICIDE + 235 ml/ac OF MCPA ESTER 600 (5 oz/ac)

#### BROADLEAF WEEDS CONTROLLED

- Annual sow thistle
- Annual sunflower<sup>2</sup>
- Ball mustard
- Burdock
- Cleavers
- Cocklebur
- Common chickweed<sup>2</sup>
- 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
- Prickly lettuce
- Ragweed
- Redroot pigweed<sup>2</sup>
- Round-leaved mallow<sup>2</sup>
- Russian pigweed
- 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 resistant biotypes, including Clearfield<sup>®</sup>)
- 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 canary seed
- Wild oats
- Yellow foxtail

#### PERENNIAL WEEDS CONTROLLED

- Canada thistle
- Dandelion
- Perennial sow thistle

<sup>1</sup> Suppression only when tank mixed with MCPA Ester.

<sup>2</sup> Weed controlled through multiple effective modes of action when tank mixed with MCPA Ester at 5 oz per acre.

### APPLICATION GUIDELINES

<b>CROPS</b> Barley Spring wheat Winter wheat	<b>PACKAGING</b> Case: • Avenza A: 1 x 8.1 L jug • Avenza B: 1 x 10 L jug <b>240 ac Bulk Pack:</b> • Avenza A: 97.2 L • Avenza B: 120 L <b>160 ac Bulk Pack: (Last made in 2021)</b> • Avenza A: 64.8 L • Avenza B: 80 L
	<b>RATES</b> • Avenza A: 405 ml/ac • Avenza B: 500 ml/ac
	<b>ACRES TREATED</b> • 20 ac/case • 240 ac/bulk pack (480 ac/pallet) • 160 ac/bulk pack (320 ac/pallet)
	<b>WATER VOLUME</b> Ground: 20-40 L/ac (5-10 US gal/ac)
	<b>TIMING</b> <b>Crop stage:</b> 3-leaf to just prior to flag leaf emergence
	<b>RAINFAST</b> 2 hours
	<b>TANK MIX HERBICIDES</b> MCPA Ester 600



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

#### CROP ROTATION

- Alfalfa
- Barley
- Canola
- Corn
- Dry Bean
- Faba beans
- Flax
- Lentils
- Mustard
- Oats
- Peas
- Potatoes (not 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.



AVAILABLE IN BULK

# Cirpreme™ XC

with Arylex™ active

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

## HERBICIDE

### WHY USE CIRPREME™ XC?

- **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 (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
- Kochia<sup>2</sup>
- 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\*<sup>1</sup>
- Cleavers\*<sup>1</sup>
- 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\*<sup>1</sup>
- Round-leaved mallow\*
- Russian pigweed\*
- Scentless chamomile
- Shepherd's purse\*

- Smartweed\*
- Stinkweed\*<sup>1</sup>
- Stork's-bill\*
- Velvetleaf
- Vetch

- Volunteer alfalfa
- Volunteer canola (all HT varieties)
- Volunteer flax
- Volunteer sunflower\*
- Wild buckwheat\*
- Wild mustard\*<sup>1</sup>
- Wild radish

#### GRASS WEEDS CONTROLLED

- Barnyard grass

#### PERENNIAL WEEDS CONTROLLED

- Canada thistle
- Dandelion
- Perennial sow thistle

#### WEEDS SUPPRESSED

- Kochia<sup>2</sup>
- Night-flowering catchfly
- White cockle

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

\*Controlled by multiple effective modes of action.

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

<sup>2</sup> Light to moderate infestations (up to 150 plants/m<sup>2</sup>;

up to 15 cm in height), including Group 2 resistant biotypes.

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

## APPLICATION GUIDELINES

<b>CROPS</b>  Barley  Durum wheat  Spring wheat  Winter wheat	<b>PACKAGING</b>	• Cirpreme A: 1 x 0.8 kg jug • Lontrel™ XC: 1 x 4.1 L jug
	<b>RATES</b>	• Cirpreme A: 10 g/ac • Lontrel XC: 51 ml/ac
	<b>ACRES TREATED</b>	80 ac/case
	<b>TIMING</b>	<b>Crop stage:</b> 3-leaf to just prior to flag leaf emergence
	<b>RAINFAST</b>	4 hours
	<b>TANK MIX HERBICIDES</b>	• Simplicity™ • Simplicity™ GoDRI™ • Axial® • Everest®



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

The year following application, fields can be seeded to:

- Barley
- Forage grasses
- Flax
- Oats
- Peas<sup>4</sup>
- Mustard
- Soybeans<sup>4</sup>
- Wheat

### 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).



## THE ENLIST™ WEED CONTROL SYSTEM WILL CHANGE HOW YOU THINK ABOUT WEED MANAGEMENT IN SOYBEANS.

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

### INTRODUCING THE ENLIST WEED CONTROL SYSTEM

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

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

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

### ENLIST E3™ SOYBEANS

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

#### Why use Enlist E3 soybeans?

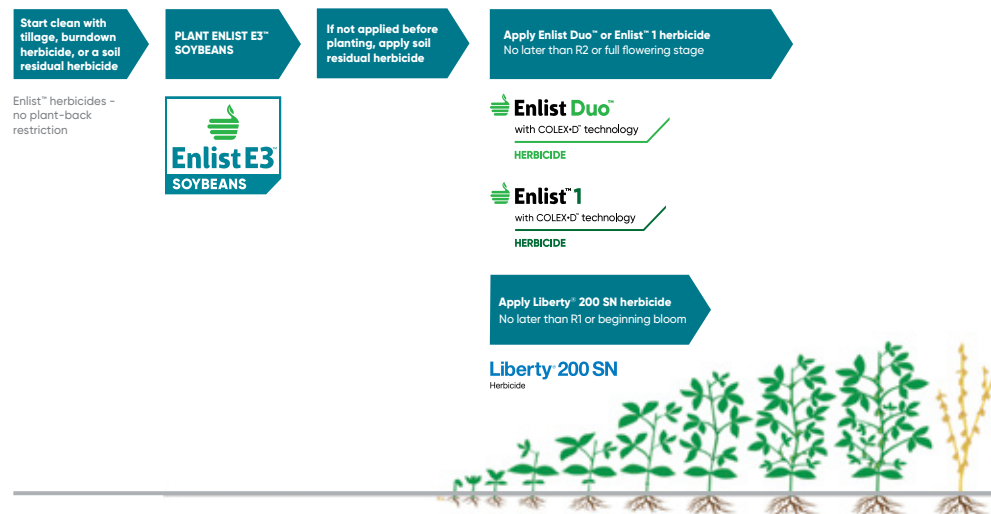
- Enlist E3 soybeans are tolerant to 2,4-D, glyphosate and glufosinate herbicides, which are part of a strong resistance management strategy
- Excellent crop tolerance enabling applications up to the R2 growth stage

### THE PROGRAM APPROACH

is 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**



### APPLYING ENLIST HERBICIDES:

- Boom height at 60cm or less
- Use nozzles that deliver coarse to extremely coarse spray droplets
- Optimum spray volume at 10-15 GPA
- Spray when winds are between 3-16 km/h
- Do not spray in winds that exceed 25 km/h
- Do not spray during a temperature inversion





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

### WHY USE ENLIST™ 1?

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

### ENLIST E3™ SOYBEANS (0.73 L/AC)

<b>WEEDS CONTROLLED</b>	• Common purslane	• Hoary cress	• Pineappleweed
• Annual sow thistle	• Common ragweed	• Knotweed ( <i>before 4-leaf</i> )	• Redroot pigweed
• Annual sunflower	• Common tansy	• Kochia	• Russian pigweed
• Biennial wormwood <sup>2</sup>	• Daisy fleabane	• Lady's-thumb	• Russian thistle
• Blue lettuce <sup>2</sup>	• Dandelion	• Lamb's-quarters	• Shepherd's purse
• Bluebur	• False flax	• Leafy spurge <sup>2</sup>	• Sweet clover
• Burdock ( <i>before 4-leaf</i> )	• Field bindweed <sup>2</sup>	• Mouse-eared chickweed <sup>2</sup>	• Tartary buckwheat
• Burdock <sup>2</sup>	• Field horsetail	• Mustards ( <i>except green tansy</i> )	• Velvetleaf
• Canada thistle <sup>2</sup>	• Field peppergrass	• Oak leaf goosefoot	• Vetch
• Cocklebur	• Flixweed	• Pennsylvania smartweed	• Volunteer canola <sup>1</sup>
• Common chickweed	• Giant ragweed	• Perennial sow thistle <sup>2</sup>	• Wild buckwheat
• Common plantain	• Goat's-beard		• Wild radish
	• Green smartweed		
	• Hairy galinsoga		
	• Hedge bindweed		

<sup>1</sup> Including glyphosate-tolerant and Clearfield canola varieties.  
<sup>2</sup> Top growth control only.

### APPLICATION GUIDELINES

<b>CROPS</b> Enlist™ corn Enlist E3™ soybeans	<b>PACKAGING</b>	Case: 2 x 10.2 L Tote: 547 L
	<b>RATES</b>	Enlist 1: 0.3 to 0.73 L/ac Hard-to-Control weeds: 0.73 L/ac
	<b>ACRES TREATED</b>	<b>0.73 L/ac rate:</b> • 28 ac/case • 750 acres/tote • Do not exceed 1.46 L/ac per use season.
	<b>WATER VOLUME</b>	• 10-15 gal/ac
	<b>TIMING</b>	• Enlist E3 soybeans tank-mix with glyphosate up to R2 (full flower) • Enlist E3 soybeans tank-mix with Liberty® 200 SN (glufosinate) up to R1 (beginning bloom) • Enlist corn up to V8 or 120 cm in height
	<b>RAINFAST</b>	2 hours
	<b>TANK MIX HERBICIDES</b>	<b>Registered tank mixes:</b> • Glyphosate at 360 g ai/ac or 1 REL (group 9) <b>Supported tank mixes:</b> • Liberty® 200 SN (glufosinate – group 10) <b>Control of volunteer Enlist corn in Enlist E3 soybeans:</b> • Select™ • Centurion® • Poast® Ultra Consult the Enlist Product Use Guide available at <a href="http://EnlistCanada.ca">EnlistCanada.ca</a> .

### 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.

#### PRE-HARVEST INTERVAL

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

Do not graze treated Enlist E3 soybeans.

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



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

### WHY USE ENLIST DUO™?

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

### ENLIST E3™ SOYBEANS (1.74 L/AC)

#### WEEDS CONTROLLED

- |   |  |   |  |
|---|--|---|--|
| <ul style="list-style-type: none"> <li>• Annual sow thistle</li> <li>• Annual sunflower</li> <li>• Barnyard grass</li> <li>• Biennial wormwood<sup>2</sup></li> <li>• Blue lettuce<sup>2</sup></li> <li>• Bluebur</li> <li>• Burdock (before 4-leaf)</li> <li>• Burdock<sup>2</sup></li> <li>• Canada fleabane</li> <li>• Canada thistle<sup>3,5</sup></li> <li>• Cleavers</li> <li>• Cocklebur</li> <li>• Common chickweed</li> <li>• Common milkweed<sup>3,4</sup></li> <li>• Common plantain</li> <li>• Common purslane</li> <li>• Common ragweed</li> <li>• Common tansy</li> </ul> | <ul style="list-style-type: none"> <li>• Corn spurry</li> <li>• Cow cockle</li> <li>• Daisy fleabane</li> <li>• Dandelion</li> <li>• Dog mustard</li> <li>• Eastern black flowering nightshade</li> <li>• Fall panicum</li> <li>• False flax</li> <li>• Field bindweed<sup>3</sup></li> <li>• Field horsetail</li> <li>• Field peppergrass</li> <li>• Flixweed</li> <li>• Giant foxtail</li> <li>• Giant ragweed</li> <li>• Goat's-beard</li> <li>• Green foxtail</li> <li>• Green smartweed</li> <li>• Hairy galinsoga</li> <li>• Hedge bindweed</li> <li>• Hemp-nettle</li> <li>• Hoary cress</li> </ul> | <ul style="list-style-type: none"> <li>• Knotweed (before 4-leaf)</li> <li>• Kochia</li> <li>• Lady's-thumb</li> <li>• Lamb's-quarters</li> <li>• Large crabgrass</li> <li>• Leafy spurge<sup>2</sup></li> <li>• Mouse-eared chickweed<sup>2</sup></li> <li>• Mustards (except green tansy)</li> <li>• Narrow-leaved hawk's-beard</li> <li>• Nightflowering catchfly</li> <li>• Oak leaf goosefoot</li> <li>• Palmer amaranth<sup>3</sup></li> <li>• Pennsylvania smartweed</li> <li>• Perennial sow-thistle<sup>3,5</sup></li> <li>• Pineappleweed</li> <li>• Quackgrass</li> <li>• Redroot pigweed</li> </ul> | <ul style="list-style-type: none"> <li>• Roundleaf mallow<sup>3</sup></li> <li>• Russian pigweed</li> <li>• Russian thistle</li> <li>• Shepherd's purse</li> <li>• Smooth crabgrass</li> <li>• Smooth pigweed</li> <li>• Stinkweed</li> <li>• Sweet clover</li> <li>• Tartary buckwheat</li> <li>• Velvetleaf</li> <li>• Vetch</li> <li>• Volunteer barley</li> <li>• Volunteer canola<sup>1</sup></li> <li>• Volunteer wheat</li> <li>• Waterhemp</li> <li>• Wild buckwheat</li> <li>• Wild oats</li> <li>• Wild proso millet</li> <li>• Wild radish</li> <li>• Wild tomato</li> <li>• Yellow nutsedge<sup>3,6</sup></li> </ul> |
|---|--|---|--|

<sup>1</sup> Including glyphosate-tolerant and Clearfield® canola varieties.

<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 growing.

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

### APPLICATION GUIDELINES

<b>CROPS</b>  Enlist™ corn  Enlist E3™ soybeans  Burndown before field corn, wheat (spring, winter, durum), barley, rye	<b>PACKAGING</b>	Case: 2 x 8.7 L Tote: 556.8 L
	<b>RATES</b>	Enlist™ field corn and Enlist E3™ soybeans: 1.18 - 1.74 L/ac Burndown ahead of corn and cereal crops: 0.89 - 1.74 L/ac
	<b>ACRES TREATED</b>	<b>1.74 L/ac rate:</b> • 10 ac/case • 320 ac/tote
	<b>WATER VOLUME</b>	10-15 gal/ac
	<b>TIMING</b>	<b>Crop stage:</b> • 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)
	<b>RAINFAST</b>	2 hours
<b>TANK MIX HERBICIDES</b>	Consult the Enlist Product Use Guide available at <a href="http://EnlistCanada.ca">EnlistCanada.ca</a> .	

### 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

**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.

# Exhilarate™

Arylex™ active

## HERBICIDE

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



### WHY USE EXHILARATE™?

- **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</sup>
- Chickweed\*<sup>2</sup>
- Cleavers\*<sup>2</sup>
- Common ragweed<sup>1</sup>
- Cow cockle\*
- Dandelion
- Flixweed
- Hemp-nettle<sup>2</sup>
- Henbit
- Lamb's-quarters<sup>2</sup>
- Narrow-leaved hawk's beard
- Redroot pigweed
- Round-leaved mallow\*
- Shepherd's purse
- Smartweed
- Stinkweed
- Stork's-bill
- Velvetleaf
- Volunteer alfalfa
- Volunteer canola (all herbicide tolerant biotypes)
- Volunteer flax
- Wild buckwheat
- Wild mustard

#### GRASS WEEDS CONTROLLED

- Barnyard grass

#### WEEDS SUPPRESSED

- Canada thistle
- Kochia<sup>2</sup>
- Night-flowering catchfly
- Perennial sow thistle
- Scentless chamomile
- White cockle

## APPLICATION GUIDELINES

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



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

- Alfalfa
- Barley
- Canola
- Corn
- Dry bean
- Faba beans
- Field peas
- Flax
- Juncea canola
- Oats
- Oriental, brown and yellow mustard
- Spring wheat
- Sunflower
- Potatoes (except seed potatoes)
- 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.

\*Controlled by multiple effective modes of action.  
<sup>1</sup>Including Group 2 and Group 9 resistant biotypes.  
<sup>2</sup>Including Group 2 resistant biotypes.



# Liquid Achieve™ SC

Better value control of grass weeds in barley and wheat.

## HERBICIDE

### WHY USE LIQUID ACHIEVE™ SC?

- Effective control of wild oats, persian darnel, barnyard grass and green/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 herbicide.

### LIQUID ACHIEVE SC AND CARRIER RATE CHARTS:

Water volume	Liquid Achieve SC Rate 200 ml/ac 8 L jug or 96 L drum		Carrier Rate 0.5% v/v 8 L jug
	40 ac/jug	480 ac/drum	
<b>4,542 Litre Tank (1,200 US Gallon Tank)</b>			
5 US gal/ac	240 acres	6 jugs	0.50 drum
10 US gal/ac	120 acres	3 jugs	0.25 drum
<b>3,785 Litre Tank (1,000 US Gallon Tank)</b>			
5 US gal/ac	200 acres	5 jugs	0.42 drum
10 US gal/ac	100 acres	2.5 jugs	0.21 drum
<b>3,028 Litre Tank (800 US Gallon Tank)</b>			
5 US gal/ac	160 acres	4 jugs	0.33 drum
10 US gal/ac	80 acres	2 jugs	0.17 drum

Intake™ 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.

## APPLICATION GUIDELINES

<b>CROPS</b> Barley Durum wheat Fall rye Spring rye Spring wheat Triticale Winter wheat  <i>Cereal crops underseeded to legume forages:</i>  Alfalfa Bird's foot trefoil Clover Sainfoin	<b>PACKAGING</b> Case: 2 x 8 L jugs Pallet: 5 x 96 L drums
	<b>RATES</b> 200 ml/ac
	<b>ACRES TREATED</b> • 40 ac/jug • 480 ac/drum
	<b>WATER VOLUME</b> • Ground: 20-40 L/ac (5-10 US gal/ac) • Aerial: 12-18 L/ac (3-5 gal/ac)
	<b>TIMING</b> <b>Crop stage:</b> 2-leaf to just prior to flag leaf emergence <b>Weed stage:</b> Wild oats 1 to 6-leaf; other grasses 1 to 4-leaf
	<b>RAINFAST</b> 1 hour
	<b>TANK MIX HERBICIDES</b> • Attain™ XC • Buctril® M • Curtail® M • Infinity® • Infinity® FX • Lontrel™ • MCPA Ester 600 • Mextrol® • OcTTain™ XL • Pardner™ • Pixxaro™ • Prestige™ XL • Prominex™ • Thumper® • Trophy® • 2,4-D Ester 700



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### 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.



AVAILABLE IN BULK

# Lontrel™ XC

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

## HERBICIDE

### WHY USE LONTREL™ XC?

- **Thistle control:** Translocation throughout the plant for effective control for both Canada thistle and sow thistle.
- **Second year benefit:** up to a **73% thistle stand reduction** the year after application.
- **Flexibility:** choose a rate that matches the size of your thistle problem
- Improved, stronger, more convenient formulation.
- **Registered in Corn and Canola.**

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

- Common groundsel
- Ragweed
- Scentless chamomile
- Tufted vetch
- Vetch
- Volunteer alfalfa
- Wild buckwheat

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

- Alsike clover
- Canada thistle
- Perennial sow thistle (*top growth*)
- Red clover
- White clover

#### WEEDS SUPPRESSED

- Ox-eyed daisy
- Sheep sorrel

### GRAZING AND HARVEST

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

<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.

## APPLICATION GUIDELINES

<b>CROPS</b> Cereals Corn Grasses Oilseeds Other <i>(refer to product label)</i>	<b>PACKAGING</b>	Case: 4 x 2.67 L
	<b>RATES &amp; ACRES TREATED</b>	<ul style="list-style-type: none"> <li>• Acres: 13-40 ac/jug</li> <li>• Under cool or dry conditions, control may be severely reduced</li> </ul>
	<b>WATER VOLUME</b>	<ul style="list-style-type: none"> <li>• Ground 40-80 L/ac (10-21 US gal/ac)</li> <li>• Aerial not registered</li> </ul>
	<b>TIMING</b>	<b>Canola stage:</b> 2 to 6-leaf <b>Cereal stage:</b> 3 to flag leaf <b>Corn stage:</b> Emergence to 8-leaf (VE-V6) <b>Weed stage:</b> Canada thistle rosette to pre-bud
	<b>RAINFAST</b>	4 hours
	<b>TANK MIX HERBICIDES</b>	Can be tank mixed with most commonly used grass weed herbicides, including: <ul style="list-style-type: none"> <li>• Ares™ SN</li> <li>• Amity™ WDG</li> <li>• Odyssey®</li> <li>• Poast® Ultra</li> <li>• Select®</li> <li>• Compatible with all forms of glyphosate</li> </ul>



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

- Barley
- Canola
- Flax
- Forage grasses
- Mustard
- Oats
- Rye
- Summerfallow
- Wheat

*Soybeans, field peas (crop rotation) – Fields previously treated with Lontrel XC 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).*



Have you relied on Eclipse XC 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

# OcTtain™ XL

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

## HERBICIDE

### WHY USE OCTTAIN™ XL?

- **Performance and value.** The standard for kochia (including Group 2 and 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
- Cleavers<sup>3</sup>
- Cocklebur
- Dandelion<sup>2,4</sup>
- Docks<sup>4</sup>
- Dog mustard<sup>4</sup>
- Field bindweed<sup>1,4</sup>
- Field horsetail<sup>1</sup>
- Field peppergrass<sup>4</sup>
- Flixweed

- Goat's-beard
- Gumweed<sup>4</sup>
- Hairy galinsoga<sup>4</sup>
- Hedge bindweed<sup>4</sup>
- Hemp nettle
- Hoary cress<sup>1</sup>
- Kochia<sup>3</sup>
- Lamb's-quarters
- Leafy spurge<sup>1,4</sup>
- Mustards (except green and grey tansy)
- Oak-leaved goosefoot<sup>4</sup>
- 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 thistle<sup>1</sup>

<sup>1</sup> Top growth control only.

<sup>2</sup> Spring rosettes.

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

<sup>4</sup> Requires the addition of 86 ml/ac (2 oz/ac) of 2,4-D Ester 700.

<sup>5</sup> All herbicide-tolerant varieties.

## APPLICATION GUIDELINES

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



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### CROP ROTATION

- Alfalfa
- Barley
- Canola
- Corn
- Dry beans
- Faba beans
- Flax
- Forage grasses
- Lentils
- Mustard
- Oats
- Peas
- 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.



AVAILABLE IN BULK



NEW

# OnDeck™

## 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™?

- **Unique combination** of Group 27 and 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, as well as control of green and yellow foxtail.
- **Complete rotational freedom.** Free to seed any major crop next season.

#### BROADLEAF WEEDS CONTROLLED

- Chickweed
- Cleavers
- Hemp-nettle
- Kochia<sup>2</sup>
- Smartweed
- Lamb's Quarters
- Redroot pigweed
- Volunteer canola
- Wild buckwheat
- Wild mustard

#### GRASS WEEDS CONTROLLED

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

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

### APPLICATION GUIDELINES

<b>CROPS</b> Barley Durum wheat Spring wheat Winter wheat	<b>PACKAGING</b> Case: 2 x 6.475 L jugs Tote: 414.4 L
	<b>RATES</b> Standard Rate (Recommended): 324 ml/ac High Rate: 435 ml/ac
	<b>ACRES TREATED</b> • Standard Rate (Recommended): 20 ac/jug, 40 ac/case, 1280 ac/tote • High Rate: 15 ac/jug, 30 ac/case, 956 ac/tote
	<b>WATER VOLUME</b> • Recommended: 10 US gal/ac • Ground Range: 5-20 US gal/ac (50-200 L/ha) • Aerial: Minimum 3 US gal/ac
	<b>TIMING</b> Crop stage: 1-leaf to jointing (1st node stage, BBCH31) Weed stage: 1 to 6-leaf
	<b>TANK MIX HERBICIDES</b> • Simplicity™ GoDRI™ • Simplicity™ • Trondus® Herbicide* • Axial® Herbicide* • Horizon® NG Herbicide • Everest® 2.0 Herbicide** • MCPA Ester 600 • 2,4-D Ester 700®



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

- |            |                                   |                                     |                         |
|------------|-----------------------------------|-------------------------------------|-------------------------|
| • Alfalfa  | • Fall rye                        | • Mustard (oriental, brown, yellow) | • Potato (not for seed) |
| • Canola   | • Grass grown for seed and forage | • Oats                              | • Soybean               |
| • Dry bean | • Lentils                         | • Peas (field, edible)              | • Sunflower             |

#### GRAZING AND HARVEST

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

\*Axial or Trondus Herbicide may be substituted with any equivalent pinoxaden product.  
\*\*Everest 2.0 may be substituted with any equivalent flucarbazone product.

# Pixxaro™

Arylex™ active

## HERBICIDE

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

### WHY USE PIXXARO™?

- **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
- Chickweed<sup>1</sup>
- Cleavers<sup>1</sup>
- Cocklebur
- Flixweed
- Hemp-nettle<sup>1</sup>

- Henbit
- Kochia<sup>2</sup>
- Lamb's-quarters
- Night shade species (*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
- Vetch
- Volunteer alfalfa
- Volunteer canola (*all herbicide tolerant biotypes*)
- Volunteer flax
- Wild buckwheat
- Wild mustard<sup>1</sup>
- Wild radish

#### GRASS WEEDS CONTROLLED

- Barnyard grass

#### WEEDS SUPPRESSED

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

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

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

## APPLICATION GUIDELINES

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



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

- Alfalfa
- Barley
- Canola
- Corn
- 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.



# Pixxaro™ A

Arylex™ active

## HERBICIDE

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

### WHY USE PIXXARO™ A?

- **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:**
- American dragonhead
  - Barnyard grass
  - Canada fleabane
  - Chickweed
  - Cleavers<sup>1</sup> (1-9 whorl)
  - Common ragweed
  - Cow cockle
  - Flixweed
  - Giant ragweed
  - Hemp-nettle
  - Henbit (up to bud stage and 15 cm in height)
  - Kochia<sup>2</sup> (up to 15 cm in height)
  - Lamb's-quarters
  - Redroot pigweed
  - Round leaved mallow (up to 6 leaf stage)
  - Shepherd's-purse
  - Stork's bill
  - Volunteer alfalfa (up to 25 cm in height)
  - Volunteer flax (up to 15 cm in height)
  - Wild buckwheat

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

- WEEDS CONTROLLED:**
- 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
  - Flixweed
  - Giant ragweed
  - Hemp-nettle
  - Henbit (up to bud stage and 15 cm in height)
  - Kochia<sup>2</sup> (up to 15 cm in height)
  - Lamb's-quarters
  - Mustards (except dog and tansy)
  - 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 A AND 2,4-D ESTER 700 AT 215ML/AC (5 OZ):

- WEEDS CONTROLLED:**
- 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
  - Flixweed
  - Giant ragweed
  - Goat's beard
  - Hemp-nettle
  - Henbit (up to bud stage and 15 cm in height)
  - Kochia<sup>2</sup> (up to 15 cm in height)
  - Lamb's-quarters
  - Mustards (except dog and tansy)
  - Prickly lettuce
  - Redroot pigweed
  - Round leaved mallow (up to 6 leaf stage)
  - Russian thistle
  - 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
- Perennial sow thistle
- Smartweed

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

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

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

## APPLICATION GUIDELINES

<b>CROPS</b> Barley Durum wheat Spring wheat Winter wheat	<b>PACKAGING</b>	<b>Case:</b> • 2 x 9.8 L jugs
	<b>RATES</b>	• 122.5 ml/ac
	<b>ACRES TREATED</b>	• 160 ac/case
	<b>WATER VOLUME</b>	Ground 20-40 L/ac (5-10 US gal/ac)
	<b>TIMING</b>	<b>Crop stage:</b> 3-leaf to just prior to flag leaf emergence <b>Weed stage:</b> 1 to 8-leaf (or larger; see label)
	<b>RAINFAST</b>	1 hour
	<b>TANK MIX HERBICIDES</b>	• Axial® • Everest® • Horizon® • Liquid Achieve™ • MCPA Ester 600 • Puma® Advance • Simplicity™ • Simplicity™ GoDRI™ • Traxos® • 2, 4-D Ester 700



DOWNLOAD THE 2024 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.



# Prestige™ XL

Maximize potential.  
Every acre, clean.

## HERBICIDE

### WHY USE PRESTIGE™ XL?

- 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
- Chickweed<sup>3,4</sup>
- Cleavers<sup>3</sup>
- Cocklebur
- Common groundsel
- Field horsetail<sup>5</sup>
- Flixweed
- Hemp-nettle
- Kochia<sup>3</sup>
- Lamb's-quarters
- Plantain<sup>5</sup>
- Prickly lettuce
- Ragweed
- Redroot pigweed
- Round-leaved mallow
- Russian pigweed

- 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 thistle<sup>1</sup>

### 710 ml/ac (LOW RATE)

#### BROADLEAF WEEDS CONTROLLED

- Annual sunflower
- Burdock
- Cleavers<sup>3</sup>
- Cocklebur
- Field horsetail<sup>5</sup>
- Flixweed
- Kochia<sup>3</sup>
- Lamb's-quarters
- Plantain<sup>5</sup>
- Prickly lettuce
- Ragweed
- Shepherd's purse
- Stinkweed

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

#### PERENNIAL WEEDS CONTROLLED

- Canada thistle<sup>1</sup>  
(low infestations)

#### WEEDS SUPPRESSED

- Volunteer canola<sup>6</sup>

**THIS PRESTIGE XL FORMULATION REQUIRES THE ADDITION OF 0.25% V/V AMMONIA TO BE MIXED WITH SIMPLICITY™ GODRI™**  
If Bicarbonates are >400 ppm, add AMS to the tank first at 2% v/v. Go to [PrestigeSimplicitySupport.Corteva.ca](http://PrestigeSimplicitySupport.Corteva.ca) or call 1-800-667-3852 for further details.

<sup>1</sup> Season-long control, with some regrowth in the fall (top growth control).  
<sup>2</sup> Spring rosettes only.  
<sup>3</sup> Including Group 2 resistant biotypes.  
<sup>4</sup> Controls emerged weeds only.

<sup>5</sup> Top growth only.  
<sup>6</sup> All herbicide-tolerant canola varieties.

## APPLICATION GUIDELINES

<b>CROPS</b> Barley Canary seed Durum wheat Forage grasses (see label for complete list.) Oats Spring wheat Winter wheat	<b>PACKAGING</b> Case: 2 x 9.5 L jugs Drum: 113.6 L drum
	<b>RATES</b> Low rate: 710 ml/ac High rate: 950 ml/ac
	<b>ACRES TREATED</b> Low rate: • 13.5 ac/jug • 160 ac/drum High rate: • 10 ac/jug • 120 ac/drum
	<b>WATER VOLUME</b> • Ground 20-40 L/ac (5-10 US gal/ac) • Aerial 12-20 L/ac (3-5 US gal/ac)
	<b>TIMING</b> Crop stage: 3-leaf to just prior to flag leaf emergence Weed stage: 1 to 6-leaf stage
	<b>RAINFAST</b> 4 hours
	<b>TANK MIX HERBICIDES</b> • Axial® • Everest® • Horizon • Liquid Achieve™ SC • Puma® Advance • Simplicity™ • Simplicity™ GoDRI™



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

- Barley
- Canola
- Flax
- Mustard
- Oats
- Field Peas<sup>7</sup>
- Rye
- Sugar beets
- 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.



<sup>7</sup> 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).

AVAILABLE IN BULK

# Prism™ SG

## HERBICIDE

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

### WHY USE PRISM™ SG?

- 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

#### WEEDS SUPRESSED

- Lamb's-quarters

### CROP ROTATION

#### 10 MONTHS AFTER APPLICATION

- Barley
- Canola
- Chickpeas
- Corn (*sweet or seed*)
- Dry beans
- Faba beans
- Field peas
- Flax

- Lentils
- Oats
- Potatoes
- Red clover
- Sorghum
- Soybeans
- Spring wheat (*including durum*)
- Sunflowers
- White beans

#### FOUR MONTHS AFTER APPLICATION

- Winter wheat

#### ANY TIME

- Field corn

## APPLICATION GUIDELINES

<b>CROPS</b> Potatoes	<b>PACKAGING</b>	12 x 480 g bottles
	<b>RATES</b>	24 g/ac
	<b>ACRES TREATED</b>	20 ac/bottle
	<b>WATER VOLUME</b>	40 L/ac (10 US gal/ac)
	<b>TIMING</b>	<ul style="list-style-type: none"> <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>
	<b>RAINFAST</b>	4 hours
<b>TANK MIX HERBICIDES</b>	Tricor 75DF	



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### APPLICATION TIMING

Weeds which emerge after application of Prism SG 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.

### PRE-HARVEST INTERVAL

30 days

Always read and follow label directions.

# Prominex™

Arylex™ active

## HERBICIDE

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

### WHY USE PROMINEX™ IN WHEAT AND BARLEY?

- **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 fleabane<sup>2</sup>
- Chickweed<sup>2</sup>
- Cleavers<sup>1</sup>
- Common ragweed<sup>2</sup>
- Cow cockle
- Flixweed<sup>1</sup>

- Giant ragweed<sup>2</sup>
- Hemp-nettle<sup>1</sup>
- Henbit
- Kochia<sup>2</sup>
- Lamb's-quarters
- Nightshade species (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 buckwheat
  - 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

#### WEEDS 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
- Bluebur
- Burdock

- Cocklebur
- False ragweed
- Goat's beard
- Plantain
- Prickly lettuce

- Russian thistle
- Stinkweed
- Volunteer canola
- Wild radish
- Wild sunflower

<sup>1</sup> Including Group 2 resistant biotypes.  
<sup>2</sup> Including Groups 2 & 9 resistant biotypes.

## APPLICATION GUIDELINES

<b>CROPS</b> Barley Durum wheat Spring wheat Winter wheat	<b>PACKAGING</b> Case: 2 x 8.3 L jugs Drum: 99.4 L	
	<b>RATE</b> 415 ml/ac	
	<b>ACRES TREATED</b> • 20 ac/jug • 240 ac/drum	
	<b>TIMING</b> Crop stage: 3-leaf to just prior to flag leaf emergence	
	<b>RAINFAST</b> 4 hours	
<b>TANK MIX HERBICIDES</b>	• Axial® • Everest® • Horizon • Liquid Achieve™ SC • Puma® Advance	• Simplicity™ • Simplicity™ GoDRI™ • Traxos® • Trondus®



DOWNLOAD THE 2024 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



<sup>3</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).



# Rexade™

Arylex™ active

## HERBICIDE

The complete wheat herbicide.



### WHY USE REXADE™?

- **Exceptional** grass and broadleaf weed control.
- **Convenience.** Complete, 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
- Chickweed<sup>2</sup>
- Cleavers<sup>3</sup>
- Cocklebur
- Common ragweed<sup>4</sup>
- Corn spurry
- Cow cockle<sup>2</sup>
- 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 radish<sup>1</sup>

#### GRASS WEEDS CONTROLLED

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

#### WEEDS SUPPRESSED

- Annual sow thistle
- Canada thistle
- Dandelion
- Downy brome
- Green foxtail
- Kochia<sup>1,3</sup>
- Night-flowering catchfly

1,2 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.

## APPLICATION GUIDELINES

<b>CROPS</b> Durum wheat Spring wheat Winter wheat	<b>PACKAGING</b> <ul style="list-style-type: none"> <li>• Rexade A: 1 x 1.62 kg jug</li> <li>• Rexade B: 1 x 8.58 L jug</li> </ul>
	<b>RATES</b> <ul style="list-style-type: none"> <li>• Rexade A: 40.5 g/ac</li> <li>• Rexade B: 215 ml/ac</li> </ul>
	<b>ACRES TREATED</b> <p>40 ac/case</p>
	<b>TIMING</b> <p><b>Crop stage:</b> 2 leaf (fully expanded) to flag leaf</p>
	<b>RAINFAST</b> <p>2 hours</p>



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

- Barley
- Canola
- Peas
- Flax
- Wheat
- Oats
- Mustard (brown and yellow)
- Soybeans
- Sunflowers
- Potatoes (except for seed)

### 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.



# Rezuvant™ XL

Arylex™ active

## HERBICIDE

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

### WHY USE REZUVANT™ XL?

- **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**. Tankmix with MCPA Ester or 2,4-D Ester to fine tune your broadleaf weed control.

### REZUVANT XL ALONE

#### BROADLEAF WEEDS 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

#### GRASS WEEDS CONTROLLED

- Barnyard grass
- Green foxtail
- Proso millet
- Volunteer oats
- Volunteer canary seed
- Wild oats
- Yellow foxtail

#### WEEDS SUPPRESSED

- Annual sow thistle
- Wild mustard

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

#### REZUVANT XL ALONE

##### WEEDS PLUS:

- Annual sow thistle
- Ball mustard
- Burdock
- Cocklebur

- Plantain
- Prickly lettuce
- Ragweed (*common, false and giant*)
- Stinkweed
- Vetch
- Volunteer canola
- Wild mustard
- Wild radish
- Wild sunflower

### REZUVANT XL + 215 ml/ac 2,4-D ESTER 700

#### REZUVANT XL ALONE WEEDS PLUS:

- Bluebur
- Burdock
- Cocklebur
- Field horsetail
- Stinkweed

- Goat's beard
- Prickly lettuce
- Hoary cress
- Plantain
- Russian knapweed
- Russian thistle
- Annual sunflower
- Sweet clover
- Vetch
- Wild radish

## APPLICATION GUIDELINES

<b>CROPS</b> Barley Spring wheat Winter wheat	<b>PACKAGING</b> Case: 2 x 97 L jugs Drum: 116.4 L
	<b>RATES</b> 486 ml/ac
	<b>ACRES TREATED</b> • 40 ac/case (20 ac/jug) • 240 ac/drum
	<b>WATER VOLUME</b> Ground 20-40 L/ac (5-10 US gal/ac)
	<b>TIMING</b> Crop stage: 3-leaf to just prior to flag leaf emergence
	<b>RAINFAST</b> 1 hour
<b>TANK MIX HERBICIDES</b> MCPA Ester 600 2,4-D Ester 700	



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### CROP ROTATION

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

### GRAZING AND HARVEST

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



AVAILABLE IN BULK

# Simplicity™

## HERBICIDE

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

### WHY USE SIMPLICITY™?

- **Superior performance.** 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.
- **Rotational freedom** to all major crops the following year.

#### BROADLEAF WEEDS CONTROLLED

- Chickweed<sup>1</sup>
- Cleavers<sup>1</sup>
- 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<sup>®</sup>)

#### 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

<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.

### APPLICATION GUIDELINES

<b>CROPS</b> Durum wheat Spring wheat Winter wheat	<b>PACKAGING</b> Case: • Simplicity: 2 x 8 L jugs • Water Conditioner: 2 x 1.5 L jugs
	<b>RATES</b> • Simplicity: 200 ml/ac • Water Conditioner: 37.5 ml/ac
	<b>ACRES TREATED</b> 40 ac/jug (80 ac/case)
	<b>WATER VOLUME</b> • Ground 12-40 L/ac (3-10 US gal/ac) • Aerial minimum 12 L/ac (3 US gal/ac)
	<b>TIMING</b> <b>Crop stage:</b> 3-leaf to just prior to flag leaf emergence <b>Weed stage:</b> • 1 to 4-leaf, two tillers stage of wild oats • 1 to 5-leaf stage of broadleaf weeds
	<b>RAINFAST</b> 2 hours
	<b>TANK MIX HERBICIDES<sup>3</sup></b>

- Attain™ XC
- Buctril® M
- Cirpreme™ XC
- Curtail® M
- Exhilarate™
- MCPA Ester 600
- OcTain™ XL
- Prestige™ XL
- Prominex™
- Pixxaro™
- Refine Extra®
- Stellar™ XL
- Thumper®
- Tilt® fungicide



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#### CROP ROTATION

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

#### 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.





# Simplicity™

Simplicity™ 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

0%      20%      40%      60%      80%      100%



Source: Corteva Agriscience Field Research Data (2006 to 2019).



Source: Corteva Agriscience Field Research Data (2009 to 2019).

<sup>1</sup> Based on Corteva Agriscience research trials.

## APPLICATION GUIDELINES

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



DOWNLOAD THE 2024 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
- 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 noted.

Always read and follow label directions.

# Simplicity™ 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™?

- **Superior performance.** 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.

#### BROADLEAF WEEDS CONTROLLED

- Chickweed
- Cleavers\*
- Corn spurry
- Cow cockle
- Flixweed
- Hemp-nettle
- Redroot pigweed
- Round-leaved mallow
- Shepherd's purse
- Smartweed\*
- Stinkweed
- Volunteer canola (excluding Clearfield\*)

#### 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>1</sup>
- Persian darnel
- Russian thistle
- White cockle
- Wild buckwheat

**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

\*Not including group 2 resistant.  
<sup>1</sup> Corteva Agriscience research trials indicate that application to small stage, actively growing plants provides an increased level of control.

### APPLICATION GUIDELINES

<b>CROPS</b> Durum wheat Spring wheat Winter wheat Fall Rye Spring Rye Triticale	<b>PACKAGING</b>	4 x 2.24 kg jugs
	<b>RATES</b>	28 g/ac
	<b>ACRES TREATED</b>	80 ac/jug (320 ac/case)
	<b>WATER VOLUME</b>	• Ground 12-40 L/ac (3-10 US gal/ac) • Aerial minimum 12 L/ac (3 US gal/ac)
	<b>TIMING</b>	<b>Crop stage:</b> 2 leaf (fully expanded) to flag leaf <b>Weed stage:</b> • 1 to 4-leaf, two tillers stage of wild oats • 1 to 5-leaf stage of broadleaf weeds
	<b>RAINFAST</b>	2 hours
	<b>TANK MIX HERBICIDES<sup>3</sup></b>	• Attain™ XC • Buctril® M • Cirpreme™ XC • Curtail® M • Exhilarate™ • MCPA Ester 600 • OcTTain™ XL
		• Prestige™ XL • Prominex™ • Pixxaro™ • Refine Extra® • Stellar™ XL • Thumper® • Tilt® fungicide



**DOWNLOAD THE 2024 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.



# Simplicity™ GoDRI™

HERBICIDE

Simplicity™ GoDRI™  
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.
- Convenient GoDRI™ herbicide formulation for fast, easy mixing and handling.

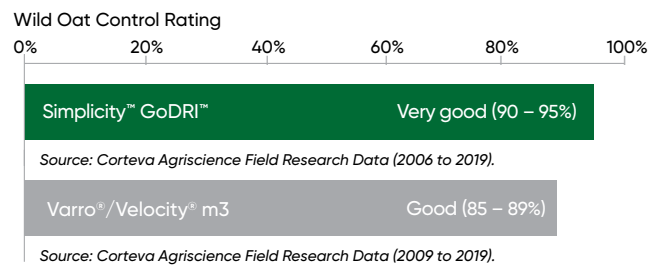
For early season applications in low to moderate wild oat populations that are typical in the brown soil zones of Southern Alberta and Southern Saskatchewan.

### WILD OAT RATE

#### GRASS WEEDS CONTROLLED

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

### WILD OAT PERFORMANCE



**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

<sup>1</sup>Based on Corteva Agriscience research trials.

## APPLICATION GUIDELINES

<b>CROPS</b> Durum wheat Spring wheat Winter wheat Fall Rye Spring Rye Triticale	<b>PACKAGING</b>	4 x 2.24 kg jugs
	<b>RATES</b>	21 g/ac
	<b>ACRES TREATED</b>	106 ac/jug (424 ac/case)
	<b>WATER VOLUME</b>	<ul style="list-style-type: none"> <li>• Ground 12-40 L/ac (3-10 US gal/ac)</li> <li>• Aerial minimum 12 L/ac (3 US gal/ac)</li> </ul>
	<b>TIMING</b>	<b>Crop stage:</b> 2 leaf (fully expanded) to flag leaf <b>Weed stage:</b> 1 to 4-leaf
	<b>RAINFAST</b>	2 hours
	<b>TANK MIX HERBICIDES<sup>3</sup></b>	<ul style="list-style-type: none"> <li>• Attain™ XC</li> <li>• Buctril® M</li> <li>• OcTTain™ XL</li> <li>• Prestige™ XL</li> <li>• Prominex™</li> <li>• Stellar™ XL</li> <li>• Thumper®</li> <li>• Tilt® fungicide</li> </ul>



**DOWNLOAD THE 2024 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.





# Sortan™ IS

Cleaner fields, higher yields.

## HERBICIDE

### WHY USE SORTAN™ IS?

- **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 glyphosate tolerant)
- Wild buckwheat<sup>1</sup>

#### 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\*<sup>1</sup>
- Volunteer wheat
- Yellow foxtail\*

### 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.

## APPLICATION GUIDELINES

<b>CROPS</b> Silage Corn Grazing Corn Grain Corn	<b>PACKAGING</b>	4 x 1.2 kg jugs
	<b>RATES</b>	<ul style="list-style-type: none"> <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>
	<b>ACRES TREATED</b>	<ul style="list-style-type: none"> <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>
	<b>WATER VOLUME</b>	Minimum 40 L/ac (9 US gal/ac)
	<b>TIMING</b>	<ul style="list-style-type: none"> <li>• Pre-emergent application: before emergence of weeds</li> <li>• Post-emergent application: Up to 5-leaf stage (or 3 visible collars)</li> </ul>
	<b>RAINFAST</b>	2-4 hours
	<b>TANK MIX HERBICIDES</b>	Tank mix with 1 L equivalent of glyphosate



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

#### 10 MONTHS AFTER APPLICATION

- Barley
- Canola
- Chickpeas
- Corn (field, seed, or sweet)

- Dry beans
- Faba beans
- Field peas
- Flax
- Lentils
- 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.

\* Suppression only.  
1 Control when tankmixed with glyphosate.

# Stellar™ XL

Stellar performance.  
Made easy.

## HERBICIDE

### WHY USE STELLAR™ XL?

- 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-quarters
- Plantain
- Prickly lettuce
- Redroot pigweed
- Russian pigweed
- Shepherd's purse<sup>3</sup>

- Smartweed
- Stinkweed<sup>3</sup>
- Vetch
- Volunteer canola<sup>2</sup>
- Volunteer flax
- Wild buckwheat
- Wild mustard<sup>3</sup>
- Wild radish

#### WEEDS SUPPRESSED

- Stork's-bill

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

<sup>1</sup>Including Group 2 resistant biotypes.  
<sup>2</sup>All herbicide-tolerant canola varieties.

<sup>3</sup>Controlled by multiple effective modes of action.

## APPLICATION GUIDELINES

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



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

- Alfalfa
- Barley
- Canola
- Corn
- Fababeans
- Field beans
- Flax
- Lentils
- Mustard
- Oats
- Peas
- Potato
- Soybean
- Sunflower
- Wheat

### GRAZING AND HARVEST

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



AVAILABLE IN BULK

# Steadfast™ 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

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

### APPLICATION GUIDELINES

<b>CROPS</b> Grain corn	<b>PACKAGING</b>	6 x 540 g bottles
	<b>RATES</b>	27 g/ac
	<b>ACRES TREATED</b>	• 20 ac/bottle
	<b>WATER VOLUME</b>	• Ground 20-40 L/ac (5-10 US gal/ac)
	<b>TIMING</b>	<b>Crop stage:</b> Hybrid field corn: 1-6 leaves (4 visible collars = V4)
	<b>RAINFAST</b>	2 hours
	<b>TANK MIX HERBICIDES</b>	<ul style="list-style-type: none"> <li>• <b>Non-GMO field corn:</b> Steadfast IS can be tank-mixed with registered broadleaf herbicides to ensure cross-spectrum control of grass and broadleaf weeds</li> <li>• <b>Glyphosate Tolerant Corn:</b> Tank-mix with a registered glyphosate</li> </ul>



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

#### 4 MONTHS AFTER APPLICATION:

- Winter wheat

#### 10 MONTHS AFTER APPLICATION:

- Spring wheat (including durum)
- Oats
- Barley
- Canola
- Soybeans
- Dry Beanst
- White beans
- Chickpeas
- Potatoes,
- Corn (sweet or seed)

- Field peas
- Lentils
- Flax

#### ANYTIME AFTER APPLICATION:

- Field corn

### ADJUVANTS:

**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)



# Tandem™

## HERBICIDE

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

### WHY USE TANDEM™?

- **Tougher.** Control of wild oats, Japanese brome, chickweed, cleavers, hemp-nettle, kochia, wild buckwheat and many more.
- **Flexibility.** Wide window of application, excellent crop safety, and rotational freedom.

### TANDEM ALONE

#### BROADLEAF WEEDS CONTROLLED

- Chickweed<sup>1,4</sup>
- Cleavers<sup>1,4</sup>
- Corn spurry
- Cow cockle
- Flixweed
- Hemp-nettle

- Kochia<sup>4</sup>
- Redroot pigweed
- Round-leaved mallow<sup>1</sup>
- Shepherd's purse
- Smartweed
- Stinkweed
- Volunteer canola<sup>2</sup>
- 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 foxtail<sup>5</sup>
- Russian thistle
- Stork's-bill
- Wild buckwheat

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

#### ALL TANDEM ALONE WEEDS PLUS:

- Bluebur
- Burdock
- Cocklebur

- Flixweed<sup>1</sup>
- Goat's-beard
- Lamb's-quarters<sup>1</sup>
- Plantain
- Prickly lettuce

- Ragweed
- Redroot pigweed<sup>1</sup>
- Smartweed<sup>1</sup>
- Stinkweed<sup>1</sup>
- Sweet clover

- Volunteer sunflower
- Wild buckwheat
- Wild mustard<sup>1</sup>
- Wild radish

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

#### ALL TANDEM ALONE WEEDS PLUS:

- Burdock
- Cocklebur
- Lamb's-quarters<sup>1</sup>

- Prickly lettuce
- Ragweed
- Shepherd's purse<sup>1</sup>
- Smartweed<sup>1</sup>

- Stinkweed<sup>1</sup>
- Vetch
- Volunteer sunflower
- Wild buckwheat

- Wild mustard
- Wild radish

<sup>1</sup> Controlled by multiple effective modes of action.  
<sup>2</sup> Clearfield volunteer canola is controlled with the addition of MCPA or 2,4-D.

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

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

<sup>5</sup> Corteva Agriscience research trials indicate that

application to small stage, actively growing plants provides an increased level of control.  
<sup>6</sup> Spring rosettes.

## APPLICATION GUIDELINES

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



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

- Barley
- Canola
- Chickpeas
- Corn
- Dry beans
- Flax
- Lentils
- Mustard
- Oats
- Peas
- Potatoes
- Soybeans
- Sunflower
- 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 thistle
- Burdock
- Canada thistle
- Cocklebur
- Common groundsel
- Dandelion<sup>6</sup>
- Field horsetail<sup>6</sup>
- Lamb's-quarters
- Perennial sow thistle
- Plantain<sup>5</sup>
- Prickly lettuce
- Ragweed
- Russian pigweed
- Scentless chamomile
- Sunflower (annual and volunteer)
- Tartary buckwheat
- Vetch
- Volunteer sunflower
- Wild buckwheat
- Wild mustard
- Wild radish

# Tridem™

## HERBICIDE

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

### WHY USE TRIDEM™ IN WHEAT?

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

### TRIDEM + 215 ml/ac OF 2,4-D ESTER 700 (5 oz/ac)

#### BROADLEAF WEEDS

- Annual sow thistle
- Bluebur
- Burdock
- Cleavers<sup>1</sup>
- Cocklebur
- Common chickweed<sup>1</sup>
- Cow cockle
- Daisy fleabane
- False flax
- Flixweed
- Goat's-beard

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

- 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

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



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

#### CROP ROTATION

- Alfalfa
- Barley
- Canola
- Corn
- Dry common beans (*phaseolus vulgaris*)
- Fababeans
- Flax
- Lentils
- Mustard (brown, oriental and/or yellow)
- Oats
- Peas
- Potatoes (except seed potatoes)
- Soybeans
- Sunflower
- Wheat

#### GRAZING AND HARVEST

Do not harvest grain within 60 days of application.



AVAILABLE IN BULK

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



# RANGE & PASTURE HERBICIDES



# Grazon™ XC

## HERBICIDE

Proven and effective extended control of a variety of broadleaf weeds and trees.

### WHY USE GRAZON™ XC HERBICIDE?

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

#### WEEDS CONTROLLED

- Burdock
- Canada thistle
- Common ragweed
- Common yarrow
- Dandelion
- Dock
- Fleabane
- Goldenrod

- Leafy spurge
- Plantain
- Prickly lettuce
- Red clover
- Sweet 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™

## ADJUVANT

Gateway™ adjuvant is a non-ionic surfactant designed for use with Grazon XC and Reclaim™ II herbicides.

**Rate:** 0.25% v/v for ground application and 1% v/v for aerial application is recommended with Grazon XC to achieve optimal control of tree species as well as leafy spurge and toadflax.

## APPLICATION GUIDELINES

<b>USAGES</b>  Permanent Pastures  Rangeland	<b>PACKAGING</b>	Case: 2 x 10 L jugs
	<b>RATES &amp; ACRES TREATED</b>	<p><b>Broadleaf weed control:</b> 1.9 L/ac  <b>Tree control:</b> 2.5 L/ac + Gateway™ adjuvant* (height restrictions apply, please contact Corteva Agriscience™ for more information)</p> <ul style="list-style-type: none"> <li>• Backpack applications to small areas: 67 ml of Grazon™ XC herbicide in 10 L of water (0.67% solution) for weed and shrub control</li> <li>• For all applications, coverage of the targeted foliage is very important</li> </ul>
	<b>WATER VOLUME</b>	<ul style="list-style-type: none"> <li>• Ground: minimum 80 L/ac (20 US gal/ac)</li> <li>• Aerial: minimum 20 L/ac (5 US gal/ac)</li> </ul>
	<b>TIMING</b>	<ul style="list-style-type: none"> <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>
	<b>RAINFAST</b>	4 hours
	<b>TANK MIX HERBICIDES</b>	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™ II herbicide. Please contact a Corteva Agriscience representative for rate recommendations and timing.

Always read and follow label directions.



# Reclaim™ II

## HERBICIDE

Reclaim™ II herbicide delivers the most trusted, extended control of broadleaf weeds and brush.

### WHY USE RECLAIM™ II HERBICIDE?

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

#### WEEDS CONTROLLED

- |                      |                              |                             |                                 |
|----------------------|------------------------------|-----------------------------|---------------------------------|
| • Absinth wormwood   | • Curly dock                 | • Oak-leaved goosefoot      | • Stinkweed                     |
| • Annual sow thistle | • Dandelion                  | • Stork's-bill              | • Sweet clover                  |
| • Annual sunflower   | • Dog mustard                | • Ox-eye daisy              | • Tall buttercup                |
| • Ball mustard       | • Field bindweed             | • Pasture sage              | • Tartary buckwheat             |
| • Biennial wormwood  | • Field peppergrass          | • Perennial pepperweed      | • Tumbleweed                    |
| • Bluebur            | • Field scabious             | • Perennial sow thistle     | • Vetch                         |
| • Bull thistle       | • Fireweed                   | • Plantain                  | • Volunteer alfalfa             |
| • Burdock            | • Flixweed                   | • Plumeless thistle         | • Volunteer canola              |
| • Canada fleabane    | • Goat's-beard               | • Prairie sage              | • Western ragweed               |
| • Canada goldenrod   | • Green smartweed            | • Prickly lettuce           | • Wild buckwheat                |
| • Canada thistle     | • Gumweed                    | • Prostrate pigweed         | • Wild mustard                  |
| • Chickweed          | • Hairy galinsoga            | • Pussytoes                 | • Wild radish                   |
| • Clover             | • Hawkweed                   | • Ragweed (common, western) | • Wild strawberry               |
| • Cocklebur          | • Hedge bindweed             | • Redroot pigweed           | • Yellow star thistle           |
| • Common groundsel   | • Hemp-nettle                | • Russian knapweed          |                                 |
| • Common ragweed     | • Hoary cress                | • Russian thistle           | <b>SHRUBS CONTROLLED</b>        |
| • Common tansy       | • Horse nettle               | • Scentless chamomile       | • Shrubby cinquefoil            |
| • Corn spurry        | • Lady's-thumb               | • Shepherd's purse          | • Prairie wild rose             |
| • Cow cockle         | • Lamb's-quarters            | • Spotted knapweed          | • Silverberry (wolf willow)     |
| • Cudweed            | • Musk thistle               |                             | • Western snowberry (buckbrush) |
|                      | • Narrow-leaved hawk's beard |                             |                                 |

# Gateway™

## ADJUVANT

Gateway™ adjuvant is a non-ionic surfactant designed for use with Grazon™ XC and Reclaim II herbicides.

**Rate:** 0.2% v/v for ground application and 1% v/v for aerial application is required with Reclaim II to achieve optimal control.

### APPLICATION GUIDELINES

<b>USAGES</b> Permanent Pastures Rangeland	<b>PACKAGING</b> Case: 20 ac/case
	<b>RATES &amp; ACRES TREATED</b> <ul style="list-style-type: none"> <li>• Reclaim™ II A: 93 g/ac</li> <li>• Reclaim™ II B: 0.7 L/ac</li> </ul> Reclaim II requires the addition of a non-ionic surfactant such as Gateway™ adjuvant.
	<b>WATER VOLUME</b> <ul style="list-style-type: none"> <li>• Ground: minimum 80 L/ac (20 US gal/ac)</li> <li>• Aerial: minimum 20 L/ac (5 US gal/ac)</li> </ul>
	<b>TIMING</b> <ul style="list-style-type: none"> <li>• 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).</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>• 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.</li> </ul>
	<b>RAINFAST</b> 4 hours
	<b>HERBICIDE TANK MIX HERBICIDES</b> <p>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.</p>

### 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.

NEW

# Restore™ NXT

Rinskor™ active

## HERBICIDE

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

### WHY USE RESTORE™ NXT HERBICIDE WITH RINSKOR™ ACTIVE?

- **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
- Annual sowthistle
- Bitter sneezeweed
- Bull thistle
- Canada fleabane
- Canada thistle
- Cleavers
- Clover
- Common broomweed
- Common ragweed
- Common waterhemp
- Cudweed
- Curly dock

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

- Scentless chamomile
- Scotch thistle
- Spotted knapweed
- Tall buttercup
- Tall ironweed
- Tansy ragwort
- Tropic croton
- Tropical soda apple
- Velvetleaf
- Western ragweed
- Wild caraway
- Wild chervil
- Wild parsnip
- Yellow star thistle

#### WEEDS SUPPRESSED

- Canada goldenrod
- Common yarrow
- Common tansy
- Dandelion
- Diffuse knapweed
- Japanese knotweed
- Sulphur cinquefoil
- Russian knapweed

# Gateway™

## ADJUVANT

Gateway™ adjuvant is a non-ionic surfactant designed for use with Restore NXT herbicide.

**Rate:** 0.25-0.5% v/v for ground application and 0.25-0.5% v/v for aerial application is required with Restore NXT.

### APPLICATION GUIDELINES

<b>USAGES</b>  Permanent Pastures  Rangeland	<b>PACKAGING</b>	Case: 2 x 10 L jugs
	<b>RATES &amp; ACRES TREATED</b>	<ul style="list-style-type: none"> <li>• 0.6 L/ac</li> <li>• Restore™ NXT requires the addition of a non-ionic surfactant such as Gateway™ adjuvant.</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>
	<b>WATER VOLUME</b>	<ul style="list-style-type: none"> <li>• Ground: minimum 80 L/ac (20 US gal/ac)</li> <li>• Aerial: minimum 20 L/ac (5 US gal/ac)</li> </ul>
	<b>TIMING</b>	<ul style="list-style-type: none"> <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>
	<b>RAINFAST</b>	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.

Always read and follow label directions.

# Restore™ II

## HERBICIDE

An easy-to-use, broad spectrum product for the control of invasive broadleaf weeds.

### 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	• Field bindweed	• Peppergrass	• Tropic croton
• Annual sow thistle	• Fleabane ( <i>daisy, hairy</i> )	• Perennial sow thistle	• Tropical soda apple
• Biennial wormwood	• Flixweed	• Pineapple weed	• Velvetleaf
• Bitter sneezeweed	• Fuller's teasel	• Plumeless thistle	• Volunteer canola
• Blue lettuce	• Goat's-beard	• Prickly lettuce	• Wild radish
• Bluebur	• Groundsel	• Prostrate pigweed	• Wild sunflower
• Bull thistle	• Gumweed	• Ragweed ( <i>common, western</i> )	• Yellow rocket
• Burdock	• Hawkweed	• Redroot pigweed	• Yellow star thistle
• Buttercup ( <i>hairy, tall</i> )	• Heal-all	• Russian pigweed	
• Canada fleabane	• Hedge bindweed	• Russian thistle	
• Canada goldenrod	• Hoary cress	• Scentless chamomile	
• Canada thistle	• Horsenettle	• Sheep sorrel	
• Cocklebur	• Knotweed	• Shepherd's purse	
• Common broomweed	• Lamb's-quarters	• Smartweed ( <i>green, Pennsylvania</i> )	
• Common chickweed	• Mouse-eared chickweed	• Spotted knapweed	
• Common plantain	• Musk or nodding thistle	• Stinging nettle	
• Common purslane	• Mustards ( <i>except Dog &amp; Tansy</i> )	• Stinkweed	
• Cudweed	• Narrow-leaved hawk's beard	• Sulphur cinquefoil	
• Curled dock	• Oak-leaved goosefoot	• Sweet clover	
• Dandelion	• Ox-eye daisy	• Tall ironweed	
• False flax		• Tansy ragwort	
		• Tartary buckwheat	

### APPLICATION GUIDELINES

<b>USAGES</b>  Permanent Pastures  Rangeland	<b>PACKAGING</b>	<b>Case:</b> 2 x 9.71 L jugs
	<b>RATES &amp; ACRES TREATED</b>	• 1 L/ac • Backpack applications to small areas: 24 ml of Restore™ II in 10 L of water (0.24% solution)
	<b>WATER VOLUME</b>	• Ground: minimum 80 L/ac (20 US gal/ac) • Aerial: minimum 20 L/ac (5 US gal/ac)
	<b>TIMING</b>	• 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). • Apply when the primary target weed is actively growing, after emergence and prior to flowering. • Environmental stresses, such as severe drought or extended periods of heat, may decrease efficacy. • Restore™ II 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.
	<b>RAINFAST</b>	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.

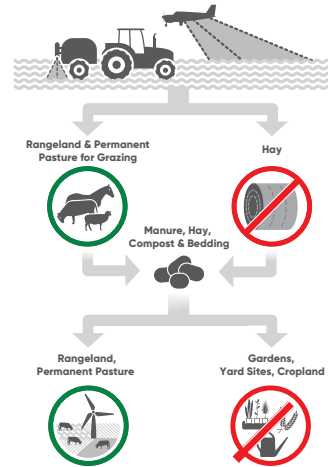
Always read and follow label directions.

## STEWARDSHIP & BEST PRACTICES

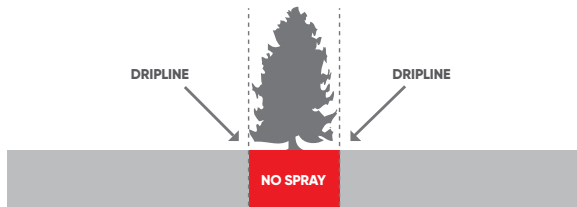
Corteva Agriscience™ Range & Pasture products are effective tools in managing weeds, brush and trees in permanent pasture and grazed rangeland. Understanding precautions, restrictions and how to steward range and pasture products properly is important to ensure satisfactory results and to protect desirable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

### HAY, SOIL AND MANURE MANAGEMENT

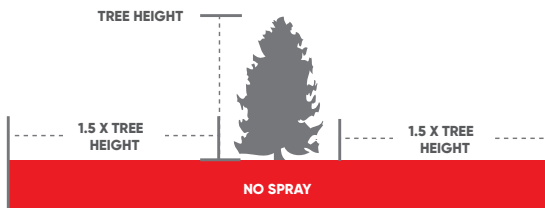
- Soil from treated areas should never be moved to areas where sensitive plants may be planted within five years.
- Manure from livestock consuming treated grass should never be used for compost or around susceptible plants.
- Clippings from grass which have been treated with Corteva Agriscience Range & 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. 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 herbicides, 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 is 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 pasture 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 discoloration and stunting of growth, in the season of application may result.



# FUNGICIDES





# Acapela™

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 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

- Pasmio (*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 rot – white mould\*

##### SOYBEANS

- Asian soybean rust
- Frogeye leafspot
- Sclerotinia rot – white mould\*
- Septoria brown spot

##### POTATOES

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



\*Suppression only.

## APPLICATION GUIDELINES

<b>CROPS</b>  Canola  Cereals  Corn  Flax  Potatoes  Pulse crops (peas, lentils, chickpeas, dry beans)  Soybeans	<b>PACKAGING</b> <ul style="list-style-type: none"> <li>• 9.6 L jug</li> <li>• 115.2 L drum</li> </ul>
	<b>RATES &amp; ACRES TREATED</b> <ul style="list-style-type: none"> <li>• <b>Canola:</b> 0.32 L/ac (30 ac/jug or 360 ac/drum)</li> <li>• <b>Cereals:</b> 0.19 L/ac (50 ac/jug or 600 ac/drum)</li> <li>• <b>Corn:</b> <ul style="list-style-type: none"> <li>- Northern corn leaf blight: 0.21 to 0.32 L/ac (30 to 45 ac/jug)</li> <li>- Tar spot: 0.32L/ac (30 ac/jug)</li> </ul> </li> <li>• <b>Flax:</b> Pasmio (<i>Septoria linicola</i>) 0.24 L/ac (40 ac/jug or 480 ac/drum)</li> <li>• <b>Pulse crops:</b> (Peas, lentils, chickpeas, dry beans)                             <ul style="list-style-type: none"> <li>- Anthracnose, Ascochyta blight: 0.24 L/ac (40 ac/jug or 480 ac/drum)</li> <li>- Sclerotinia rot – white mould: 0.35 L/ac (27 ac/jug or 325 ac/drum)</li> </ul> </li> <li>• <b>Soybeans:</b> <ul style="list-style-type: none"> <li>- Sclerotinia rot – white mould: 0.35 L/ac (27 ac/jug)</li> <li>- Asian soybean rust, frogeye leafspot, septoria brown spot: 0.24 to 0.35 L/ac (27 to 40 ac/jug)</li> </ul> </li> <li>• <b>Potatoes:</b> <ul style="list-style-type: none"> <li>- Early blight and white mold: 0.24 - 0.40 L/ac</li> <li>- Late blight: 0.18 - 0.40 L/ac</li> </ul> </li> </ul>
	<b>WATER VOLUME</b> <ul style="list-style-type: none"> <li>• 10–15 US gal/ac<sup>1</sup></li> <li>• Aerial minimum of 50 L/ha (4.5 US gal/ac)</li> </ul>
	<b>TIMING</b> <ul style="list-style-type: none"> <li>Refer to the Acapela label for complete use instructions.</li> </ul>
	<b>RAINFAST</b> <ul style="list-style-type: none"> <li>1 hour</li> </ul>



DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

Any crop the following year.

### IMPORTANT PRECAUTIONS

1. Do not apply to cereals after flowering (Feekes 10.5.1 or Zadoks 60)
2. Maximum seasonal use rate is 2.64 L/ha



NEW

# Viatude™

Onmira™ active

## 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.
- New canola protection that is reliable, powerful and approved by farmers like you.

### DISEASES CONTROLLED

#### CANOLA

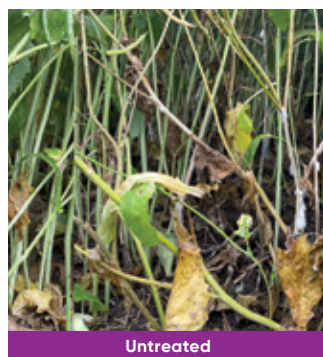
- Sclerotinia

#### SOYBEAN

- White mould



Viatude™



Untreated

Viatude delivered an additional

**3.5\*** BU/Ac

compared to untreated crop.

\*Under low-to-moderate moisture conditions.

\*Suppression only.

### APPLICATION GUIDELINES

<b>CROPS</b>  Canola  Soybeans	<b>PACKAGING</b>	• Case: 2 x 8.91 L jugs • Drum: 95.04 L drum
	<b>RATES ACRES TREATED</b>	<b>Rate:</b> - 297 ml/ac <b>Acres:</b> - 30 ac/jug - 60 ac/case - 320 ac/drum
	<b>WATER VOLUME</b>	• 10-15 US gal/ac <sup>1</sup>
	<b>TIMING</b>	Canola: Begin applications before or at onset of infection. 20 - 30% bloom (no later than 50% bloom)
	<b>RAINFAST</b>	2 hours
	<b>TANK MIX</b>	Follow the label recommendations from product labels of tank mix partners



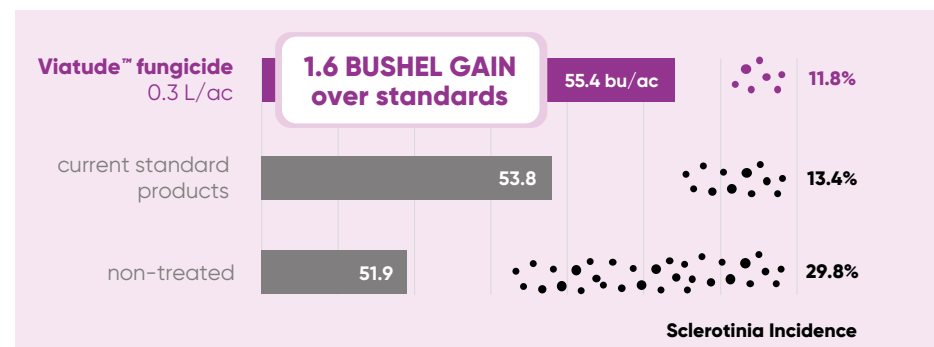
DOWNLOAD THE 2024 FIELD GUIDE APP FOR PRODUCT SPECIFIC TANK MIX INSTRUCTIONS.

### CROP ROTATION

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

### PRE-HARVEST INTERVAL

The PHI is 36 days.



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

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

NEW

# Zetigo™ PRM

Adavelt™ active

FUNGICIDE

Introducing Zetigo™ PRM, a dual mode of action fungicide with Adavelt™ active, a brand new Group 21 active ingredient.

## WHY USE ZETIGO™ PRM FUNGICIDE?

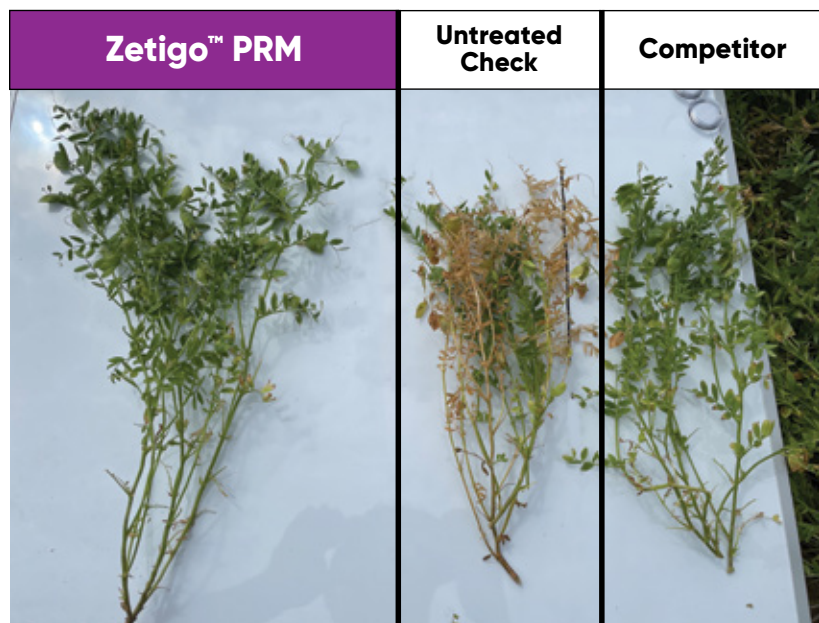
- **Brand-new mode of action:** Contains a new, novel mode of action. The only Group 21 fungicide available in pulses!
- **Multiple Effective Modes of Action:** delivers true resistance management, this new active ingredient helps to preserve critical fungicide actives for an effective fungicide rotation.
- **Excellent Control:** Ideal for high incidence of anthracnose in lentils, 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

Zetigo PRM provides powerful disease control and elevated resistance management in pulses.



2022 Western Canadian field trials. Comparison in lentils.

## APPLICATION GUIDELINES

<b>CROPS</b> Lentils Pulses*	<b>PACKAGING</b> <ul style="list-style-type: none"> <li>• Case: 2 x 927 L jugs</li> <li>• Drum: 103.69 L drum</li> </ul>
	<b>RATES ACRES TREATED</b> <ul style="list-style-type: none"> <li><b>Rate:</b> <ul style="list-style-type: none"> <li>- 324 ml/ac</li> </ul> </li> <li><b>Acres:</b> <ul style="list-style-type: none"> <li>- 30 ac/jug</li> <li>- 60 ac/case</li> <li>- 320 ac/drum</li> </ul> </li> </ul>
	<b>WATER VOLUME</b> <ul style="list-style-type: none"> <li>• 10 US gal/ac<sup>1</sup></li> </ul>
	<b>TIMING</b> <ul style="list-style-type: none"> <li>Best practice before onset of disease, generally at first flower and prior to row closure.</li> </ul>
	<b>RAINFAST</b> <ul style="list-style-type: none"> <li>2 hours</li> </ul>
	<b>TANK MIX</b> <ul style="list-style-type: none"> <li>Follow the label recommendations from product labels of tank mix partners</li> </ul>



DOWNLOAD THE 2024 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

PHI is 21 days.



Where pathogen resistance to SDHIs, strobilurins and triazoles is a concern, Adavelt™ active offers a powerful solution.



Classified in FRAC Group 21, Adavelt binds to a different site (Q1) than common Group 11 strobilurins (Qo), Group 7 SDHIs and Group 3 DMI fungicides



Redefines fungicide programs under increased pest resistance and tolerance to existing products.

Adavelt™ active is the first introduction of picolinamide chemistry in many crops (except for cereals and bananas where

\*Zetigo PRM fungicide application to add additional crops to the current label, chickpea and field pea crops, has been submitted. It's currently under review by PMRA, submission approval is expected by May 2024.

\*These crop additions are currently being assessed for registration under the Pest Control Products Act. It cannot be manufactured, imported, distributed, or used in Canada at this time, unless explicit authorization has been obtained from Health Canada to use this product for the purpose of conducting research under the Pest Control Products Regulations

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



# INSECTICIDES



# Delegate™

Jemvelva™ active

Harness nature's strength for sustainable farming.

## INSECTICIDE

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

- **Performance.** Delegate™ insecticide with Jemvelva™ active (spinetoram) 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

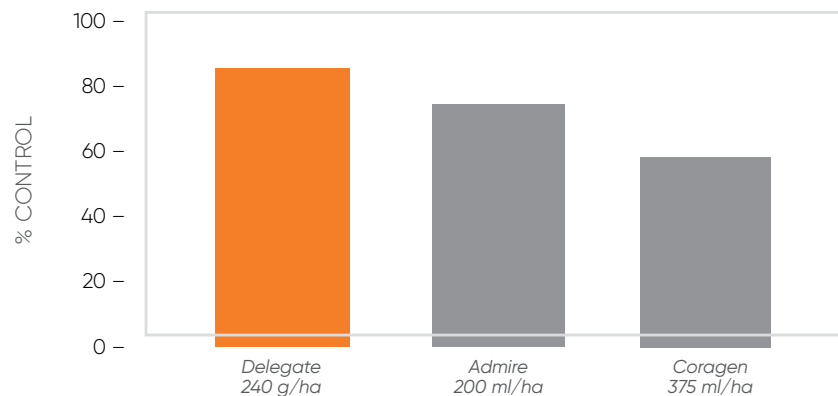
- Armyworm

#### WHEAT

- Armyworm

DELEGATE IS REGISTERED FOR AERIAL APPLICATION ON POTATOES

### SPEED OF KNOCKDOWN OF COLORADO POTATO BEETLE 2 DAYS AFTER APPLICATION



## APPLICATION GUIDELINES

<b>CROPS</b>  Corn  Potatoes  Soybeans  Wheat	<b>PACKAGING</b> 6 x 840 g bottles
	<b>RATES</b> <ul style="list-style-type: none"> <li>• <b>Corn:</b> <ul style="list-style-type: none"> <li>- Western bean cutworm: 50-85 g/ac</li> <li>- European corn borer: 50-85 g/ac</li> </ul> </li> <li>• <b>Potatoes:</b> <ul style="list-style-type: none"> <li>- Colorado potato beetle: 65-97 g/ac</li> <li>- European corn borer: 65 g/ac</li> </ul> </li> <li>• <b>Soybeans &amp; Wheat:</b> <ul style="list-style-type: none"> <li>- Armyworm: 40-80 g/ac</li> </ul> </li> </ul>
	<b>TIMING</b> <ul style="list-style-type: none"> <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 pressure or for larger larvae. Ensure sufficient water volume for complete coverage of the plant foliage.</li> </ul>
	<b>RAINFAST</b> 2 hours
	<b>TANK MIXES</b> Delegate 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

No restrictions

### 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

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

Always read and follow label directions.



# NITROGEN MANAGEMENT





# biologicals

## EMBRACE A BALANCED FUTURE

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

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

## WHAT IS A BIOLOGICAL?

Biologicals are crop treatments that are either living or derived from naturally-occurring materials and help protect plants from pests, disease, and environmental stress.

## DIFFERENT TYPES OF BIOLOGICAL PRODUCTS

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



Biocontrol blends nature and science for balanced plant protection from insects and diseases. Enhance your control with a natural solution.



With biostimulants, farmers can enhance plant resilience and growth. These crop solutions naturally improve plant vitality and vigor for a healthy harvest.



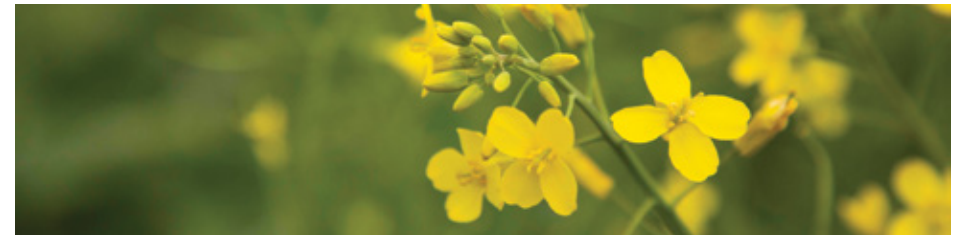
Discover a class of pheromones that you can use confidently. These products deliver more tailored, flexible application to manage target pests.

## WHY CHOOSE BIOLOGICALS FROM CORTEVA AGRISCIENCE?



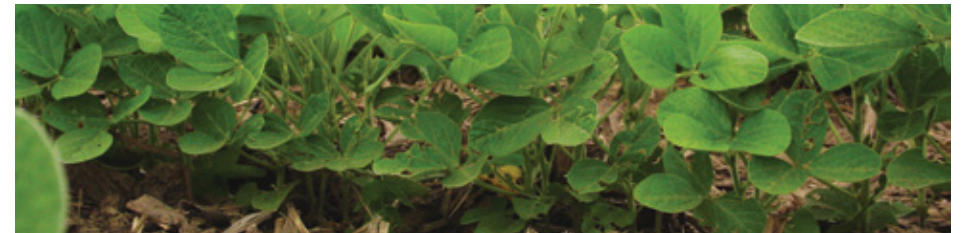
### PROVEN, PREDICTABLE PERFORMANCE

Our biologicals go through years of testing to ensure they consistently deliver, giving you peace of mind about your crop protection and confidence in a strong harvest.



### COMPLEMENT EVOLVING FARMING PRACTICES

Biological products offer cutting-edge, complementary solutions to persistent challenges, like resistance management and environmental impact, so you can leverage resources more effectively.



### MEET CHANGING MARKET EXPECTATIONS

Look toward the future with products that will help you keep your operation viable, enhance marketability, meet consumer preferences, and boost ROI and profitability on your farm.

NEW FORMULATION



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

WHY USE UTRISHA™ N NUTRIENT EFFICIENCY BIOSTIMULANT?

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

WHAT IS UTRISHA N?

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

HOW UTRISHA N WORKS

1. Utrisha N enters the plant through the stomata and colonizes in the leaf cells.
2. It then converts N<sub>2</sub> from the air into ammonium, resulting in a constant supply of nitrogen to the plant.

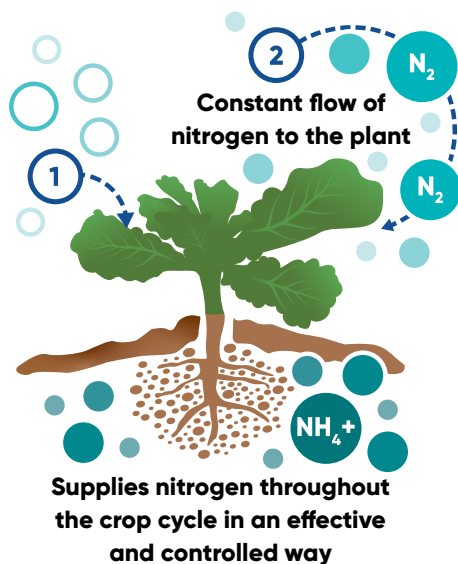
No plant energy is required for this process.

ENHANCES NITROGEN USE EFFICIENCY

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

SEE THE PROOF

See how Utrisha N Nitrogen Efficiency Biostimulant can increase your yield potential.



APPLICATION GUIDELINES

CROPS Canola Cereals Soybeans Corn	PACKAGING	Case: 2 x 5.39 kg bags
	RATES	135 g/ac
	ACRES TREATED	40 ac/bag
	WATER VOLUME	Minimum 10 GPA
	TIMING	<ul style="list-style-type: none"> <li>• <b>Canola:</b> 4 leaf stage until pre-senescence</li> <li>• <b>Cereals:</b> 4 leaf stage until pre-senescence</li> <li>• <b>Corn:</b> 4 leaf stage until pre-senescence</li> <li>• <b>Soybeans:</b> 3 leaf stage until pre-senescence</li> </ul>
	RAINFAST	1 hour

APPLICATION RECOMMENDATIONS

- Apply in healthy crops unaffected by poor nutrition or other biotic/abiotic stresses
- Apply with sufficient plant biomass, when the crop presents good soil coverage
- Use water with a total chlorine content <2 ppm
- Use water with a pH between 5 and 8
- For information on use in horticulture crops, please refer to our Horticulture Crop Protection Guide



Untreated



Utrisha™ N

Source: Lenore, MB

**PROTECT YOUR NITROGEN FOR BETTER YIELDS.**

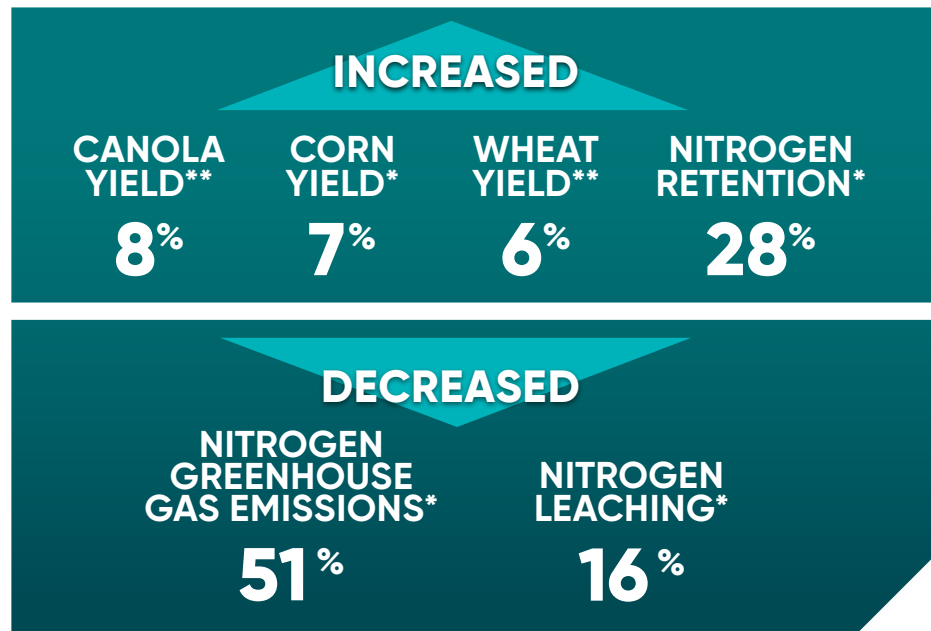
**Optinyte™ technology**

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

**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**



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

\*\*Based on Corteva Agriscience Canada research trials.

Nitrogen stabilizers slow the conversion of ammonium to nitrates, reducing leaching and denitrification. They 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™**

**Optinyte™ technology**

**NITROGEN STABILIZER**

**APPLICATION GUIDELINES**

<b>CROPS</b> Canola Corn Wheat	<b>PACKAGING</b>	950 L tote
	<b>RATES</b>	0.95 L/ac
	<b>ACRES TREATED</b>	1000 ac/tote
	<b>TIMING</b>	<ul style="list-style-type: none"> <li>• <b>Spring:</b> Simultaneously with your anhydrous application</li> <li>• <b>Fall:</b> Simultaneously with your anhydrous, up to two weeks earlier than you would typically apply</li> </ul>
	<b>APPLICATION METHOD</b>	Designed for use with anhydrous ammonia

**eNtrench NXTGEN™**

**Optinyte™ technology**

**NITROGEN STABILIZER**

**APPLICATION GUIDELINES**

<b>CROPS</b> Canola Corn Wheat	<b>PACKAGING</b>	<ul style="list-style-type: none"> <li>• 2 x 994 L case</li> <li>• 454.4 L Tote</li> </ul>
	<b>RATES</b>	0.71 L/ac
	<b>ACRES TREATED</b>	<ul style="list-style-type: none"> <li>• 2 x 994L case treats 28 acres</li> <li>• 454.4L tote treats 640 acres</li> </ul>
	<b>TIMING</b>	<ul style="list-style-type: none"> <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>
	<b>APPLICATION METHOD</b>	<ul style="list-style-type: none"> <li>• Designed for use with liquid fertilizers, including UAN and liquid manure</li> <li>• Impregnated on urea</li> </ul>



# 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.
- 1 x 4.8 L jug of Bindem treats 80 acres, regardless of water volume used.
- Bindem was launched as a component of the Tridem 40 acre case and the Tridem™ herbicide 240 acre bulk pallet in 2019.
- Bindem is also offered as a stand alone product (4 x 4.8 L case).
- 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

<b>PRODUCTS</b> Simplicity™ GoDRI™ Tridem™ (Bindem included in co-pack)	<b>PACKAGING</b> <ul style="list-style-type: none"> <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>
	<b>RATES</b> <p>60 ml/ac</p>
	<b>ACRES TREATED</b> <ul style="list-style-type: none"> <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>

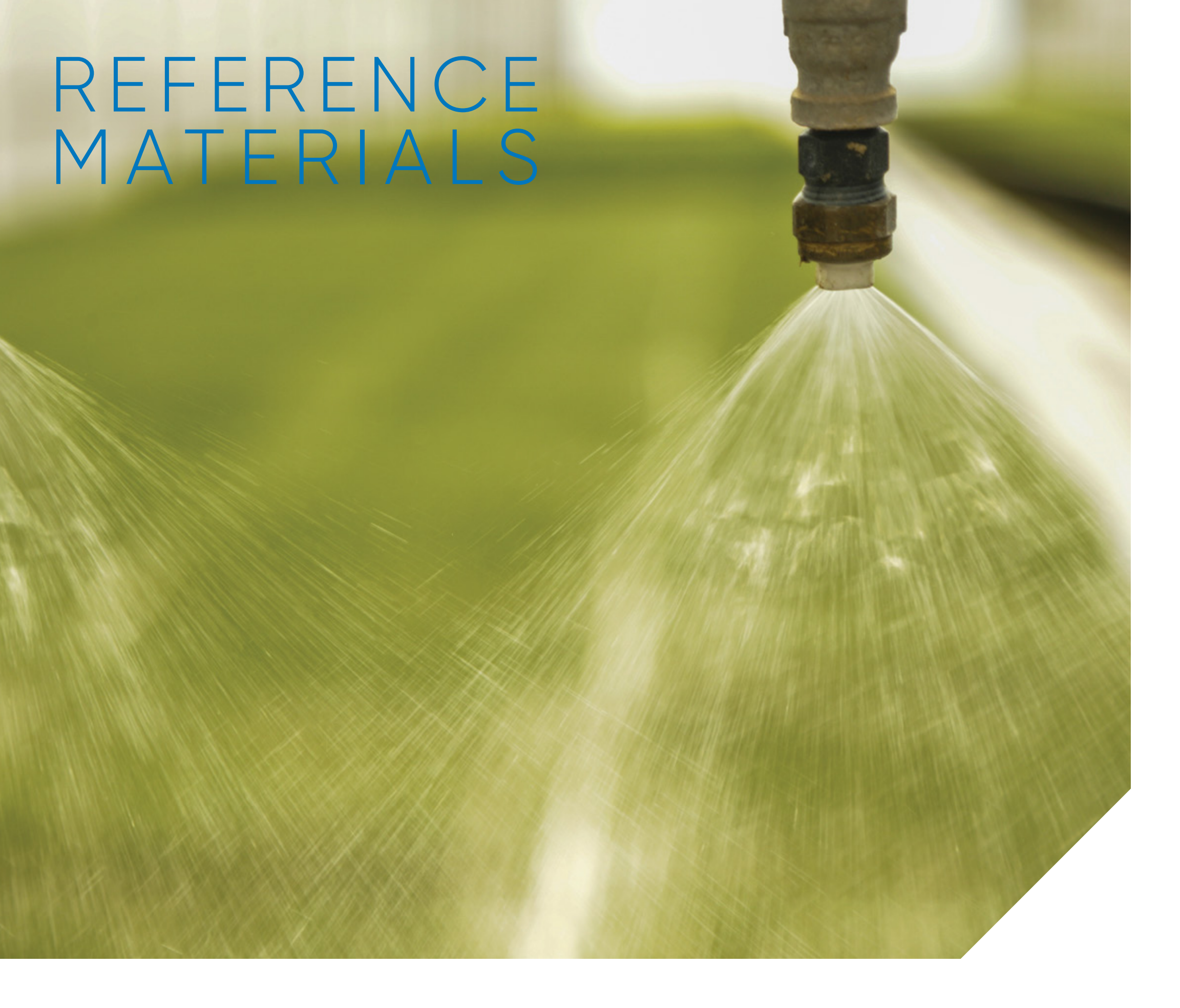
### SIMPLICITY GODRI + BINDEM MIXING INSTRUCTIONS

1. Fill the spray tank with ½ to ¾ 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 ½ to ¾ 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



GROUP 1 MODE OF ACTION – ACCASE INHIBITORS

CHEMICAL FAMILY	ACTIVE INGREDIENTS	FOUND IN*
Aryloxyphenoxy propionate (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 herbicide
	sethoxydim	Poast Ultra, Odyssey brands
	tepraloxydim	Equinox
	clethodim	Centurion
Phenylpyrazolin (DEN)	pinoxaden	Avenza™ herbicide, Axial, Axial iPak, Axial Xtreme, Epic, Rezuvant, Rezuvant™ XL herbicide, Traxos, TraxosTwo

GROUP 2 MODE OF ACTION – ALS/AHAS INHIBITORS

CHEMICAL FAMILY	ACTIVE INGREDIENTS	FOUND IN*	HALF LIFE	PRIMARY FACTORS AFFECTING DEGRADATION
Imidazolinones – IMIs	imazamethabenz	Assert 300	25–36 days	<ul style="list-style-type: none"> <li>• Soil pH (lower pH = ↑residual)</li> <li>• Organic matter</li> <li>• Soil moisture</li> </ul>
	imazamox	Solo, Viper, Amity™ WDG and Ares™ SN herbicides	20–30 days	
	imazethapyr	Pursuit, Ares SN	60–90 days	
	imazamox + imazethapyr	Odyssey DLX	30–60 days	
	imazamox + imazapyr	Ares SN	30 days	
Sulfonylureas – SUs	metsulfuron-methyl	Ally, Express Pro	14–180 days	<ul style="list-style-type: none"> <li>• Soil pH (higher pH = ↑residual)</li> <li>• Organic matter</li> <li>• Soil moisture</li> </ul>
	thifensulfuron-methyl	Express SG, Barricade II, Predicade, Travallas	10 days	
	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™ herbicides	3–5 days @ soil temp of 20°C	<ul style="list-style-type: none"> <li>• Soil temperature (low soil temps = ↑residual)</li> </ul>
	pyroxsulam	Simplicity™, Simplicity™ GoDRI™, Rexade™, Tandem™, Tridem™ herbicides	3 days	
Sulfonylamino-carbonyl triazolones	flucarbazone sodium	Everest 3.0, Sierra 3.0	50–67 days	<ul style="list-style-type: none"> <li>• Soil Moisture (low soil H2O = ↑residual)</li> <li>• Organic Matter</li> </ul>
Triazolones	thiencarbazone-methyl	Velocity m3, Varro	17 days	<ul style="list-style-type: none"> <li>• Soil pH</li> <li>• Organic Matter</li> </ul>

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 and 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

\* 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>

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>\*</sup>

ACTIVE INGREDIENT	FORMULATION (ml/ac)			COVERAGE (ACRES/10 L JUG)		
	oz/ac	500	600	700	500	600
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

<sup>\*</sup>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.

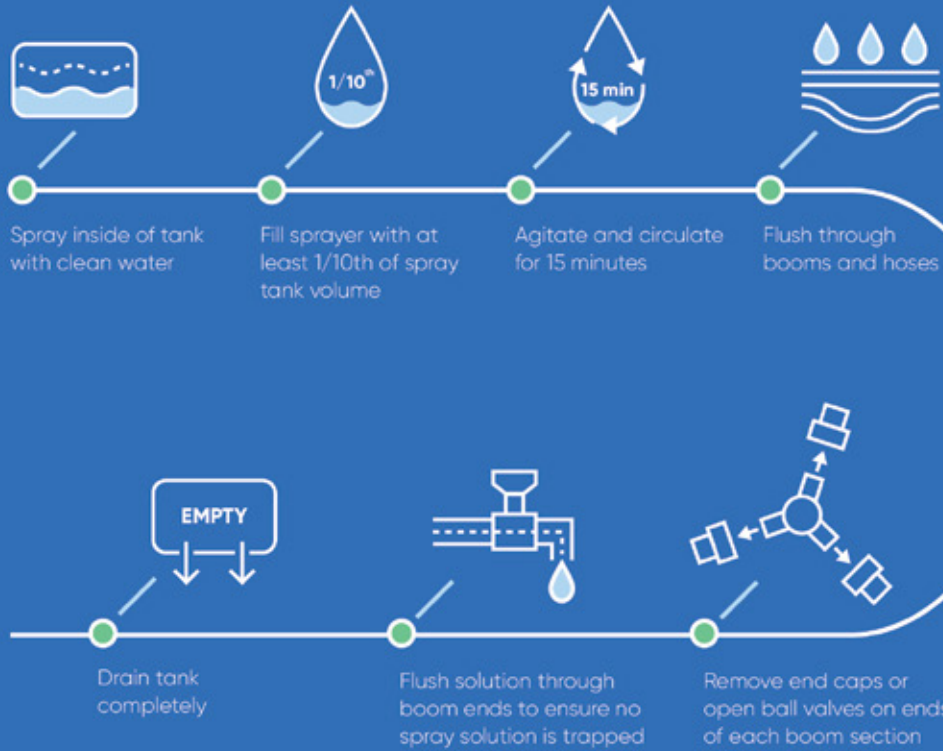
## If you cannot clean the sprayer immediately



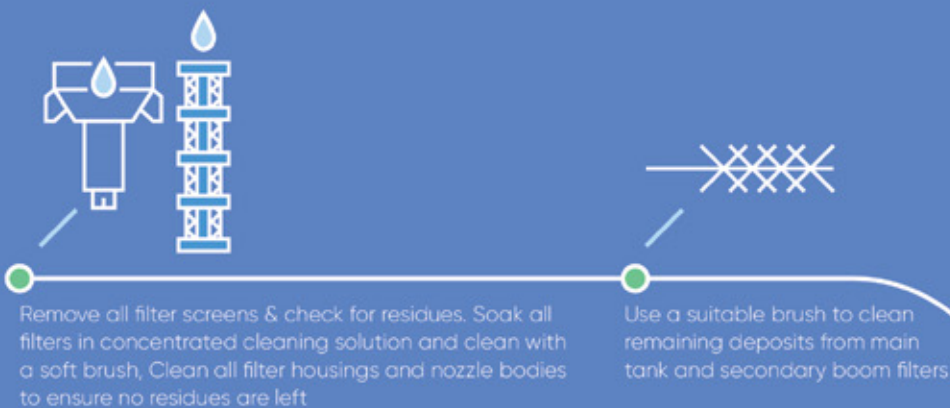
Do a freshwater rinse. Do not let herbicide solutions dry onto tank walls or inside plumbing.

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

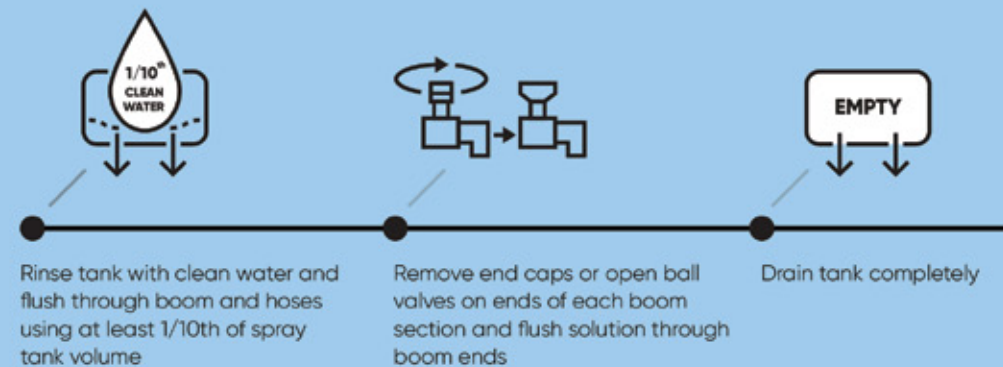
## First Rinse



## Second Rinse



## Final Rinse





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.

**Competitive ability:** A serious competitor in cultivated field crops. 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.<sup>2</sup>  
**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.<sup>2</sup>  
**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.



**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>  
**Resistance issues:** Resistance reported to herbicide Groups 1 and 2 in the U.S. 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.  
**Additional information:** Can be toxic to livestock. Similar to corn spurry when mature, it has an extensive tuber-bearing creeping root system.



**FLIXWEED**

**Growth habit:** Annual, winter annual.  
**Competitive ability:** Overwintered rosettes are strong competitors that grow rapidly in spring and use valuable moisture. Spring-emerged seedlings are not good competitors.<sup>2,3</sup>  
**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.  
**Typical crop losses:** 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.<sup>1</sup>  
**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.





**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% yield 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.  
**Additional information:** 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.<sup>2</sup>



**PRICKLY LETTUCE**

**Growth habit:** Annual, winter annual, biennial.  
**Competitive ability:** Reproduces by seed which is dispersed by wind.  
**Typical crop losses:** This is a serious weed in cropland that can reduce crop yields drastically.  
**Resistance issues:** Resistance to Group 2 (ALS inhibitors) has been reported in three U.S. states.<sup>2</sup>  
**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%.<sup>1</sup>  
**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.<sup>3</sup>  
**Typical crop losses:** In spring wheat, moderate densities can reduce yield 35% in cool, wet years.<sup>3</sup>  
**Resistance issues:** None reported.  
**Additional information:** 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%.<sup>1</sup>  
**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%.<sup>2</sup>  
**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.<sup>3</sup>  
**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%.<sup>1</sup>  
**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%.<sup>1</sup>  
**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.







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