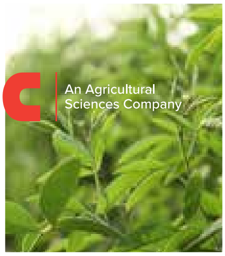
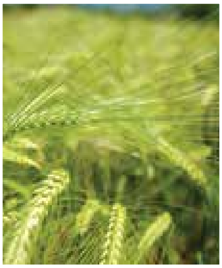




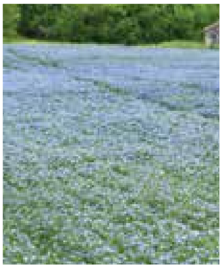


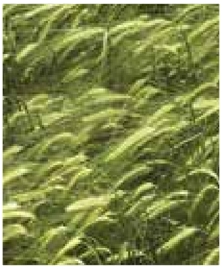
FMC An Agricultural Sciences Company




2025 PRODUCT GUIDE WESTERN CANADA



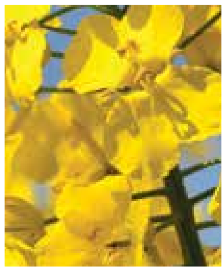
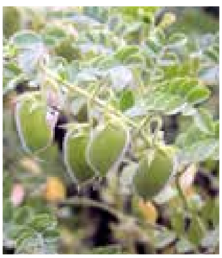



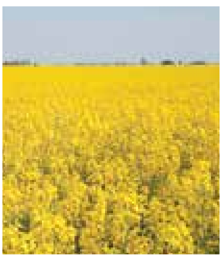










FMC An Agricultural Sciences Company

Agriculture continues to be an industry with opportunities and endless challenges. Weather continued to be unpredictable with spring rains and an unprecedented heat wave in July that brought storms and hail to parts of Western Canada.

We can't predict which weather events will become the storyline in 2025. But we know that no matter what happens, a healthy plant that doesn't have to compete with weeds for resources or fight off insect pressure at critical times will do better than a plant left to fend for itself.

FMC continues to be dedicated to researching products, application options and technologies. Bringing new solutions that will enable our end users to achieve higher yields more economically, more efficiently and more sustainably. Whether it is a small problem today or an industry wide concern for our future, we want to be part of those solutions.

Our product guide brings you a snap shot of each solution that FMC can offer.

Thank-you for making us a part of your success this year. We wish you a safe, productive and profitable 2025.

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AIM® EC HERBICIDE

A flexible tank-mix partner for enhanced burnoff

- Effective, quick burnoff of hard-to-control weeds, including glyphosate-resistant biotypes
- Provides protection for a broad range of crops with flexible tank-mix options

Crops:

Pre-seed/ pre-emerge burnoff:	Barley, buckwheat, canola, chickpea, corn (field, sweet and popcorn), dry bean, faba bean, field pea, flax, lentil, millet (pearl and proso), mustard, oats, potato*, rye, safflower, soybean, sunflower, triticale, wheat (spring, durum, winter)
Harvest aid:	Barley, chickpea, dry beans, faba beans, oats, field peas, potatoes, soybeans, wheat, millet, sorghum, triticale
Post-harvest:	Barley, buckwheat, canola, chickpea, corn (field, sweet and popcorn), dry bean, faba bean, field pea, flax, lentil, millet (pearl and proso), mustard, oats, potato, rye, safflower, soybean, sunflower, triticale, wheat (spring, durum, winter)
Re-cropping:	All other crops can be planted after 12 months.

*pre-seed only

Chemical Group: Group 14

Active Ingredient(s): Carfentrazone-ethyl

Registered and Supported Tank-mixes: Recommended to be tank-mixed with all glyphosate products. 2,4-D ester, Express® SG herbicide, Express® PRO herbicide, Express® FX herbicide, MCPA Ester, Authority® 480 herbicide, Authority Strike™ herbicide, Authority® Supreme herbicide, Command® 360 ME herbicide, PrecisionPac® NC-0050, Nufarm Koril® 235, IPCO Brotex® 240, 480 and 4AT, Bromotril® 240 EC and Bromotril® II 240 EC, PrecisionPac® DB-878, PrecisionPac® NC-00439, PrecisionPac® SZ-75, Reglone® Ion. Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Pre-seed, pre-emerge (up to 3 days after seeding), harvest aid and post-harvest application. Do not apply more than two applications in total per year, including post-harvest application.

Application Information: For pre-seed, pre-emergence or post-harvest burndown applications, applying Aim® EC herbicide will provide control of the listed weeds when used as directed.

Weeds controlled *(apply to small, actively growing weeds for best results)*	**Rate**	**1.2 L Jug (ac/jug)**	**4.8 L Jug (ac/jug)**
Black nightshade (up to 5 cm tall) Eastern black nightshade (up to 5 cm tall) Lamb's-quarters (up to 7.5 cm tall) Morning glory (up to 3 leaf) Redroot pigweed Tall waterhemp (up to 5 cm tall) Velvetleaf	15 mL/ac	80	320
All the above weeds, plus Flixweed Hairy nightshade Lamb's-quarters Morning glory Pennsylvania smartweed (seedling) Pigweed (prostrate, smooth, tumble) Purslane Round-leaved mallow Stinkweed Tansy mustard Waterhemp (tall, common)	24 mL/ac	50	200

Weeds controlled *(apply to small, actively growing weeds for best results)*	Rate	1.2 L Jug (ac/jug)	4.8 L Jug (ac/jug)
All the above weeds, plus Black nightshade Carpetweed Cleavers Cocklebur Eastern black nightshade Jimsonweed Kochia Russian thistle (up to 5 cm tall) Shepherd's-purse Volunteer canola*	30 mL/ac	40	160
Tough to control weeds *All the above weeds, plus* Burclover Corn spurry Prickly lettuce Venice mallow (up to 5 cm tall)	47 mL/ac	26	102

* All herbicide-tolerant canola

Harvest Aid	Rate	PHI** (Days Before Harvest)
Wheat, barley and oats: Apply when grain moisture is less than 30% (hard dough stage; thumbnail impression remains on seed). **Field peas:** Apply when grain moisture is less than 30%. Apply to dry field pea when majority (75% to 80%) of the pods are brown, the bottom pods are ripe and the pea seeds have detached from the pods. **Chickpeas:** Apply when grain moisture is less than 30%. Apply to chickpeas when 80% to 90% of leaves have fallen and pods are mature (yellow to brown in color) and 80% to 90% leaf drop (original leaves) has occurred. **Faba beans:** Apply when grain moisture is less than 30%. At this stage, the majority of the faba bean plants will be ripe and dry. Pods will be fully filled and the bottom pods will be tan or black in color. **Dry beans:** Apply when grain moisture is less than 30%. Apply to dry beans when 80% to 90% of bean leaves have fallen and pods are mature (yellow to brown in color). **Soybeans:** Apply when grain moisture is less than 30%. Apply to soybeans when crop has lost 80% to 90% of leaves and 80% of pods are brown.	Apply at 47 mL per acre 1.2 L jug = 26 ac/jug 4.8 L jug = 102 ac/jug	3 days
Potatoes: When Aim® EC herbicide is tank-mixed with diquat (Reglone® Desiccant) for potato desiccation, the following benefits are obtained. **1. STOLON DETACHMENT** increased from the tuber **2. SKIN SET** increased Skin Set **3. WEED CONTROL** control of tough broadleaf weeds like kochia, lamb's-quarters, nightshades and more	**1st Desiccation application** Aim® EC herbicide @ 94 - 142 mL/acre alone or with Reglone® @ 506 - 931 mL/acre **2nd Desiccation application** (7-14 days after 1st application) Aim® EC herbicide @ 94 – 142 mL/acre alone or with Reglone® @ 506 mL/acre	7 days
Post-Harvest Refer to the Aim® EC herbicide label for complete instructions.		

** When using Aim® EC herbicide alone, without glyphosate, the PHI listed in the table applies.

Surfactant: None required when tank-mixing with glyphosate. When using Aim® EC herbicide alone for pre-plant/pre-emergence, fallow and post-harvest application, use a non-ionic surfactant at 0.25% v/v or use Destination™ MSO (1% v/v), Journey™, Destinaire™ High Surfactant Oil Concentrates (0.5% v/v) or Merge® at 1% v/v. Higher rates are recommended when applying Aim® EC herbicide alone at burn-off timing. For harvest aid uses, use Agral® 90 or Ag-Surf® at 0.25% v/v (0.25 litres per 100 litres of spray solution) or use Merge® at 1% v/v (1 litre per 100 litres of spray solution). The use of Agral® 90 is not recommended in the spray mixture of Aim® EC herbicide + Reglone® Desiccant for use on potatoes except in the Prairie Provinces.

Water Volume: Minimum of 10 US gal/ac (100 L/ha).

Rainfastness: Aim® EC herbicide is rapidly absorbed through the foliage of plants. Rainfall soon after application may reduce efficacy.

Mixing Instructions: Fill spray tank one-half to two-thirds full of water. With agitator operating, add the recommended amount of ingredients using the WAMLEGS order. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Effective, quick burnoff

Untreated | Aim® EC herbicide (30 mL/ac) + glyphosate*

Source: FMC Internal Trial. Olds, AB 2020
*Rate 0.5 L/ac REL

Refer to the Aim® EC herbicide label for complete use instructions.

ALLY®
HERBICIDE

Broadleaf control all season long

- Systemic activity with soil residual that lasts up to eight (8) weeks
- Controls late weed flushes

Crops: Spring wheat, durum wheat, barley, established creeping red fescue, established orchard grass, established crested and intermediate wheat grass (seed or forage) and established timothy (seed or forage).

Chemical Group: Group 2

Active Ingredient(s): Metsulfuron-methyl

Registered and Supported Tank-mixes:
2,4-D (Amine / Ester): Barley, wheat, Assure® II: Creeping red fescue, Avenge 200-C, Cirray™, Horizon 240EC / Horizon® NG, MCPA (Amine / Ester): Barley, wheat, Puma® Advance: Spring wheat, durum wheat, barley. Please refer to FMC Tank-Mix Policy on Page 81.

Timing: 2-leaf to flag-leaf stage; Creeping red fescue, orchard grass, crested and intermediate wheat grass and timothy must have been established for one year.

Crop Rotation: For black and grey wooded soils of pH 7.9 or lower, please refer to the re-cropping recommendations on the next page.

Application Information:

Packaging: 244 g

Rates: 3 g/ac (80 ac/bottle) used alone; 2 g/ac (122 ac/bottle) when tank-mixed with MCPA or 2,4-D

Surfactant: Add a registered non-ionic surfactant (NIS) such as Ag-Surf®, Agral® 90, Companion®, Citowett® Plus, and Super Spreader Sticker® at 2 L per 1000 L of spray solution (0.2% v/v).

Water Volume: 10 US gal/ac (100 L/ha)

Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Broadleaf Control (3 g/ac Rate)		
Ball mustard	Hemp-nettle	Stinkweed
Bluebur	Lady's-thumb	Stork's-bill
Canada thistle[1]	Lamb's-quarters[1]	Tartary buckwheat
Chickweed	Prostrate pigweed	Toadflax[1]
Common groundsel	Redroot pigweed	Volunteer canola (excluding Group 2 herbicide tolerant varieties)
Corn spurry	Russian thistle[1]	Wild buckwheat[1] (1–3 leaf)
Cow cockle	Scentless chamomile	Wild mustard
Flixweed	Shepherd's-purse	
Green smartweed	Sow-thistle[1] (annual, perennial)	

[1] Suppression

Crop Rotation: Black and Grey Wooded Soils									
	Interval prior to planting (months after application)								
Soil pH	Barley	Canary Seed	Canola	Durum wheat	Flax	Lentils	Oats	Spring wheat	Yellow mustard
6.9 or lower	10	48	10	10	10	34	10	10	48
7.0 to 7.9	10	48	22	10	34	48	10	10	48

DO NOT USE ON SOILS WITH pH GREATER THAN 7.9.
On black and grey wooded soils of pH 7.5 or lower, fescue may be planted in 10 months. Alfalfa, red clover, peas and flax may be planted 22 months following application of Ally® herbicide.

Notes: _____

Refer to the Ally® herbicide label for complete use instructions.

AUTHORITY® 480 HERBICIDE

Extended control of tough broadleaf weeds
Registered for fall application

- Now registered in spring and durum wheat
- Pre-plant and pre-emergent extended control of tough broadleaf weeds in a wide range of crops
- Group 14 for herbicide resistance management
- Concentrated formulation for ease of use and mixing

Crops: Chickpeas, field peas, flax, sunflower, soybeans, spring and durum wheat (low rate only), tame mustard (low rate only), asparagus, faba bean, mint, strawberry, horseradish, brassica, head and stem vegetables (transplants only), tomato (transplants only), tree nuts, grapes, berries, apples and alfalfa (seed production only in dormant, established stands)

Chemical Group: Group 14

Active Ingredient(s): Sulfentrazone

Registered and Supported Tank-Mix Options:
2,4-D 700, Aim® EC herbicide + glyphosate, CF herbicide (on registered crops), Express® SG herbicide, Glyphosate, Intruvix™ II herbicide + glyphosate, IPCO Convex, Nu-Image® herbicide (field peas only)
(Consult the tank-mix partner label for specific application use directions and restrictions. Always follow the most restrictive label). Please refer to FMC Tank-Mix Policy on Page 81.

Timing:
Authority® 480 herbicide alone, or in recommended tank-mixes, may be applied to the soil surface as a broadcast spray prior to or after planting of the crop (no later than 3 days after seeding), but prior to weed or crop emergence.

Authority® 480 herbicide requires 1/2" of moisture, at once, for activation, whether the total amount of moisture is received by rainfall or irrigation. See label for specific directions in dormant, established alfalfa grown for seed production.

Fall Application: Authority® 480 herbicide can be applied in the fall to control labelled weeds. Authority® 480 herbicide can be tank-mixed with Express® SG herbicide + glyphosate or Aim® EC herbicide, with or without glyphosate. Approximately 4-8 weeks of extended control, once activated in spring post snowmelt or spring rains. Apply as soil temperatures cool below 10° C. Apply only ONCE per 24 month period.

Weed Control List:

Use rate (ac/jug)	Weeds controlled	
43 acres / jug 89 mL/ac (0.219 L/ha)	Kochia (Group 2, 4, 9 resistant bio-types) Lamb's-quarters Powell pigweed	Redroot pigweed Russian thistle[1]
32 acres / jug 118 mL/ac (0.292 L/ha)	*The above weeds, plus:* Cleavers[1] Common groundsel Common purslane Common waterhemp	 Large crabgrass Smooth crabgrass Wild buckwheat Yellow woodsorrel

[1] Suppression

Crop Rotation:

Replant Interval (Months)	Rotational Crop
0	Broccoli, cabbage, cauliflower, chickpea, faba bean, field pea, flax, horseradish, soybeans, sunflowers, tomato (transplants)
0 (low rate only)	Spring and durum wheat, tame mustard
4	Winter wheat
12	Alfalfa, barley, canary grass, canola, corn (field), oats, potatoes, spring and durum wheat (high rate), tame mustard (high rate)
24	Corn (sweet and pop), lentils, sorghum

If there is a lack of adequate or normal soil moisture due to drought conditions following an application of Authority® 480 herbicide, the minimum rotational crop interval listed in the table must be extended for one additional year and a representative bioassay of the field must be conducted with the potential rotational crop and adequate soil moisture to determine the crop sensitivity to Authority® 480 herbicide.

Application Information:

Apply pre-plant or post-seed (up to 3 days after seeding).
Early application (pre-plant) increases activation potential via spring showers. Post-seed application should be considered in higher disturbance situations.
Clean out tank after using Authority® 480 herbicide. When spraying Authority® 480 herbicide for multiple days, at the end of each day, rinse tank with water and leave 1/3 full of water overnight. Use 50 mesh screens.

Restrictions:

Do not apply Authority® 480 herbicide to fields treated with products containing sulfentrazone in the previous year.
Do not apply Authority® 480 herbicide (or any other product containing sulfentrazone) to spring wheat if an application of Focus® herbicide (or any other product containing pyroxasulfone) was applied in the previous fall.
Do not apply to soils classified as coarse-textured soils.
Do not apply in any type of soil with organic matter lower than 1.5% or greater than 6%.
Do not use on soils with a pH of 7.8 or greater.

Rates and Packaging: 4 x 3.79 L jugs per case.Each 3.79 L jug treats 32 or 43 acres.

Water Volume: 10 US gal/ac (100 L/ha) provides best uniform soil coverage with medium to coarse droplet sizes.

Mixing Instructions: Fill spray tank one-half to two-thirds full of water. With agitator operating, add the recommended amount of ingredients using the **WAMLEGS** order. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Authority® 480 herbicide weed control

Glyphosate 0.5 L/ac | Authority 480 (43 ac/jug) + Glyphosate

Portage la Prairie, MB 30 DAA, 2020

Dead Kochia From Application Of Authority® 480 Herbicide (43 ac/jug)

Source: Kincaid, SK (May 15, 2019).
Application: April 26, 2019

Cleavers*

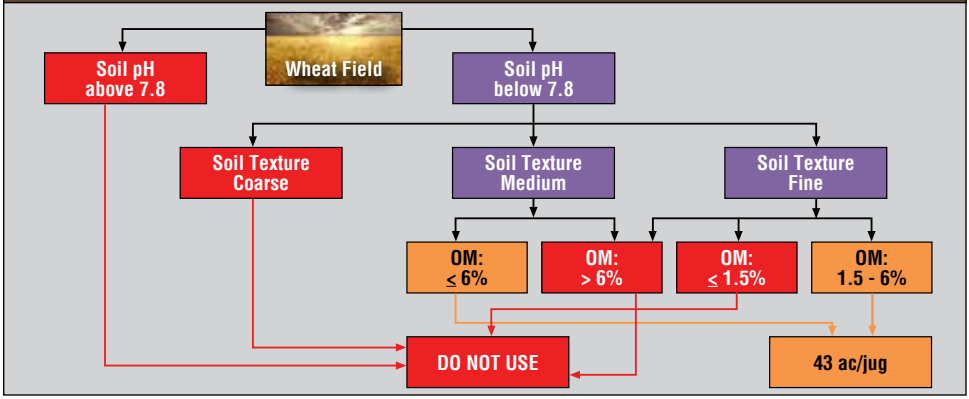
Authority® 480 herbicide | Untreated

* Suppression high rate

Authority® 480 herbicide kochia control

Lethbridge, Alberta; 41 DAA; FMC Farming Smarter Demonstration Trial 2022

When to use Authority® 480 herbicide on Spring and Durum Wheat



Refer to the Authority® 480 herbicide label for complete use instructions.

AUTHORITY STRIKE™ HERBICIDE

The complete solution for one-pass, pre-seed weed control

- Authority Strike™ herbicide provides consistent, high-performance one-pass weed control for pulse and cereal crops.
- Fast burnoff AND extended control of kochia and other key broadleaf weeds.
- Two Group 14 modes of action: carfentrazone (foliar burnoff) and sulfentrazone (extended soil-applied).

Crops: wheat (spring and durum), flax, chickpea, mustard, field pea, faba bean, soybean and sunflower

Chemical Group: Group 14

Active Ingredient(s): Sulfentrazone + carfentrazone-ethyl

Registered and Supported Tank-Mix Options: 2,4-D 700, Aim® EC herbicide + glyphosate, Express® SG herbicide, Glyphosate, IPCO Convex
(Consult the tank-mix partner label for specific application use directions and restrictions. Always follow the most restrictive label). Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Authority Strike™ herbicide alone, or in recommended tank-mixes, may be applied as a broadcast spray prior to or after planting of the crop (no later than 3 days after seeding), but prior to crop emergence. Authority Strike™ herbicide requires 1/2" of moisture, at once, for activation of the extended control component, whether the total amount of moisture is supplied by rainfall or irrigation.
Authority Strike™ herbicide will provide burnoff control of certain weeds that are emerged at the time of treatment and will provide extended control of certain weeds that have not yet emerged.

Registered Crops and Rates	
Rate: 40 acres / jug (113 mL/ac) Crops:	**Rate: 28 acres / jug (161 mL/ac) Crops:**
Spring wheat and durum (low rate only) Tame mustard (low rate only) Chickpea Faba bean Field pea Flax Soybean Sunflower	Chickpea Faba bean Field pea Flax Soybean Sunflower

Crop Rotation:

Replant Interval (Months)	Rotational Crop
0	Chickpea, faba bean, field pea, flax, soybean, sunflower
0 (Low Rate Only)	Mustard, wheat (spring & durum)
4	Winter wheat
12	Alfalfa, barley, canola, field corn, mustard (high rate), wheat (spring & durum – high rate)
24	Sweet & popcorn, lentils, sorghum

Weed control list:

Rate: 40 ac/jug	Rate: 28 ac/jug	
Extended Broadleaf Weeds		
Kochia (including Group 2 & 9 resistant biotypes)	Eastern black nightshade Cleavers* Groundsel (common) **Kochia** (including Group 2 & 9 resistant biotypes) Lamb's-quarters Large crabgrass	Powell pigweed Purslane (common) Redroot pigweed Smooth crabgrass Waterhemp (common) Wild buckwheat Yellow woodsorrel
Burnoff Broadleaf Weeds		
Lamb's-quarters Morning glory Nightshade (Eastern black, black, hairy) Redroot pigweed Tall waterhemp Velvetleaf	Carpetweed Cleavers Cocklebur Flixweed Jimsonweed **Kochia** (including Group 2 & 9 resistant biotypes) Lamb's-quarters Morning glory Nightshade (Eastern black, black, hairy) Pennsylvania smartweed (seedling)	Pigweed (prostrate, smooth, tumble) Purslane (common) Redroot pigweed Russian thistle* Shepherd's purse Stinkweed Tansy mustard Velvetleaf **Volunteer canola** (including glyphosate tolerant) Waterhemp (common) Waterhemp (tall)

* Suppression.

Application Information:

Apply pre-plant or post-seed (up to 3 days after seeding).

Early application (pre-plant) increases activation potential of the extended control component via spring showers. Post-seed application should be considered in higher disturbance situations.

Clean out tank after using Authority Strike™ herbicide. When spraying Authority Strike™ herbicide for multiple days, at the end of each day, rinse tank with water and leave 1/3 full of water overnight.

Do not apply Authority Strike™ herbicide to fields treated with products containing sulfentrazone in the previous year.

Do not apply Authority Strike™ herbicide (or any other product containing sulfentrazone) to spring wheat if an application of Focus® herbicide (or any other product containing pyroxasulfone) was applied in the previous fall.

Do not apply to soils classified as coarse-textured soils.

Do not apply in any type of soil with organic matter lower than 1.5% or greater than 6%.

Do not use on soils with a pH of 7.8 or greater.

Surfactant: When using Authority Strike™ herbicide alone, an adjuvant is required. Use a non-ionic surfactant at 0.25% v/v (0.25 L per 100 L of spray solution) or Merge at 1% v/v (1 L per 100 L of spray solution). An adjuvant is not required when Authority Strike™ herbicide is applied with glyphosate.

Rates and Packaging: 4 x 4.52 L jugs per case. Each 4.52 L jug treats 28-40 acres.

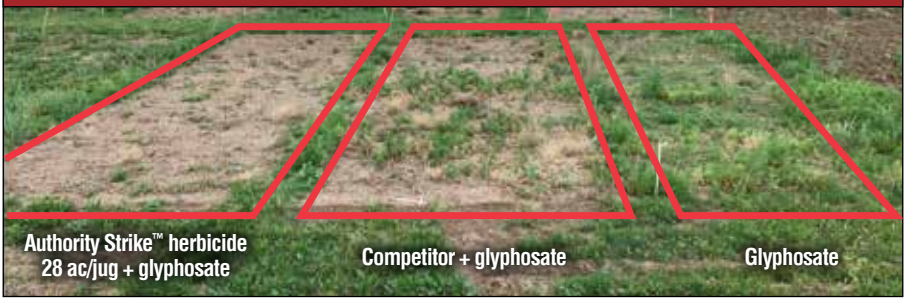
Restrictions: If there is a lack of adequate or normal soil moisture due to drought conditions

following an application of Authority Strike™ herbicide, the minimum rotational crop interval listed in the table must be extended for one additional year and a representative bioassay of the field must be conducted with the potential rotational crop and adequate soil moisture to determine the crop sensitivity to Authority Strike™ herbicide.

Water Volume: 10 US gal/ac (100 L/ha) provides best uniform soil coverage with medium to coarse droplet sizes.

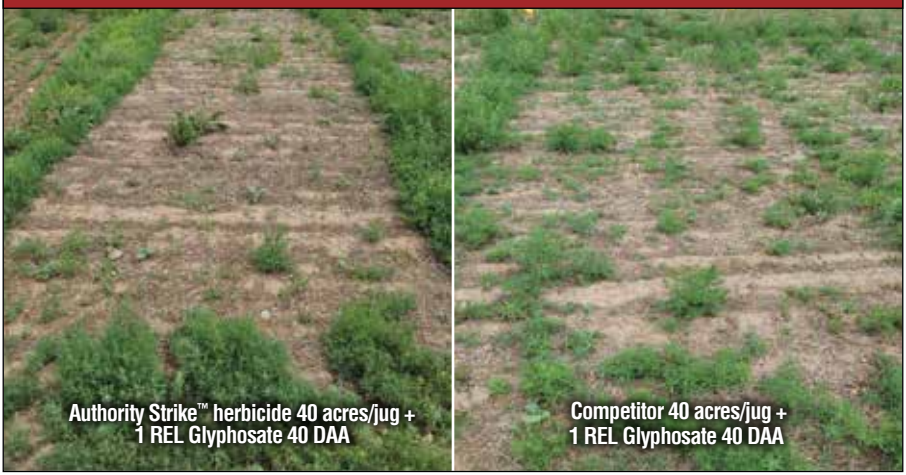
Mixing Instructions: Fill spray tank one-half to two-thirds full of water. With agitator operating, add the recommended amount of ingredients using the WAMLEGS order. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

The power of burnoff plus extended control



Hanley, Saskatchewan, June 23, 2021
Application date - Spring 2021 Application

Complete solution technology



Hanley, SK Spring 2021

AUTHORITY® SUPREME HERBICIDE

Get 2-in-1 pre-emergent protection against grassy and broadleaf weeds

Registered for fall application

- All-in-one, broad-spectrum, extended control against tough-to-kill grass and broadleaf weeds in soybeans, chickpeas, sunflowers and field peas
- Multiple modes of action for herbicide resistance management

Crops: Field peas, chickpeas, soybeans and sunflowers

Chemical Groups: Groups 14 & 15

Active Ingredient(s): Sulfentrazone, pyroxasulfone

Registered and Supported Tank-mix Options:
Glyphosate, Aim® EC herbicide + glyphosate, CF herbicide (on registered crops), Express® SG herbicide + glyphosate (soybeans and field peas only)
(Consult the tank-mix partner label for specific application use directions and restrictions. Always follow the most restrictive label). Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Authority® Supreme herbicide can be applied pre-plant or pre-emergence up to three (3) days after planting. Crop seeds must be planted a minimum of 2.5 cm deep. **DO NOT** apply Authority® Supreme herbicide if crop has emerged. A minimum of 1/2" of rainfall and/or overhead sprinkler irrigation, at once, is necessary to move Authority® Supreme herbicide into the upper soil surface where weed seeds germinate.
Fall Application: Authority® Supreme herbicide can be applied in the fall to control all labelled weeds. It can be tank-mixed with Express® SG herbicide + glyphosate or Aim® EC herbicide, with or without glyphosate. Approximately 4-8 weeks of extended control, once activated in spring post snowmelt or spring rains. Apply as soil temperatures cool below 10°C. Apply only ONCE per 24 month period.

Application Timing	Rate (mL/ac) of Authority® Supreme herbicide
Extended Treatment (pre-plant or pre-emergence)	162 mL/ac (50 ac/jug) (Setup treatment - early season control only) 202 mL/ac (40 ac/jug) (medium texture, O.M. 1.5% - 3%) 243 mL/ac (33 ac/jug) (medium-fine/fine texture, O.M. 3% - 6%)
Fall Application - Apply as soil temperatures cool below 10°C.	Associated rates
Do not apply to soils classified as coarse-textured soils. Do not use on peat or muck soils. Do not apply on any type of soils with an organic matter content less than 1.5% or greater than 6%. Do not use on soils with a pH of 7.8 or greater.	

Crop Rotation:

Replant Interval (Months)	Rotational Crop
0	Chickpeas, field peas, soybeans, sunflowers
4	Winter wheat
12	Field corn, spring and durum wheat, barley, canola, mustard, oats
24	Lentils
36	Sugar beets

If there is a lack of adequate or normal soil moisture due to drought conditions following an application of Authority® Supreme herbicide, the minimum rotational crop interval listed in the table must be extended for one additional year and a representative bioassay of the field must be conducted with the potential rotational crop and adequate soil moisture to determine the crop sensitivity to Authority® Supreme herbicide.

AUTHORITY® SUPREME HERBICIDE

Application Information:

Early application (pre-plant) increases activation potential by spring showers. Post-seed application should be considered in higher disturbance situations.

For fall application, apply as soil temperatures cool below 10°C.

Apply at 10 US gal/ac (100 L/ha) for maximum soil coverage, using medium to coarse droplets.

For extended control, apply at 33 or 40 acres per jug based on timing and soil characteristics.

Apply with or without glyphosate. Apply with glyphosate if weeds are emerged and actively growing.

Authority® Supreme herbicide controls weeds germinating within the soil barrier.

Restrictions:
Do not apply Authority® Supreme herbicide to fields treated with products containing sulfentrazone in the previous year.

Do not apply Authority® Supreme herbicide (or any other product containing pyroxasulfone) if an application of Focus® herbicide (or any other product containing pyroxasulfone) was applied in the previous fall.

Rates and Packaging: 2 x 8 L jugs per case. Each 8 L jug treats 33 to 50 acres per jug when applied for extended control.

Surfactant: Not required.

Water Volume: 10 US gal/ac provides best uniform soil coverage with medium to coarse droplet sizes.

Mixing Instructions: Fill spray tank one-half to two-thirds full of water. With agitator operating, add the recommended amount of ingredients using the **WAMLEGS** order. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Grass Weed Control		
Barnyard grass	Crabgrass (large, smooth)	Witchgrass
Brome (downy, Japanese)	Foxtail (green, yellow, giant)	Wild oats[1]
Broadleaf Weed Control		
Cleavers	Cowcockle	Russian thistle[1]
Common groundsel	Eastern black nightshade	Stinkweed
Common purslane	Kochia	Wild buckwheat
Common ragweed[1]	Lamb's-quarters	Wild mustard[1]
Common waterhemp	Palmer amaranth	Yellow woodsorrel
	Pigweed (green, redroot, Powell)	

[1] Suppression

Authority® Supreme herbicide - Consistent High Performing Control

Source: Hanley, SK. November 2, 2020. 246 DAA.
Refer to the Authority® Supreme herbicide label for complete use instructions.

BARRICADE® II HERBICIDE

POWERED BY SOLUMAX® SOLUBLE GRANULES

Tough on weeds, gentle on crops

- Consistent performance on the toughest broadleaf weeds, yet gentle on crops
- Leverages the strengths of three (3) active ingredients to provide consistent control of a broad range of broadleaf weeds
- Excellent control of narrow-leaved hawk's-beard, cleavers and kochia
- Contains actives from two groups (Groups 2 & 4) to help with resistance management

Crops: Spring wheat, durum wheat, winter wheat, spring barley, oats (when mixed with MCPA Ester)

Chemical Groups: Groups 2 & 4

Active Ingredient(s): Thifensulfuron-methyl, tribenuron-methyl, fluroxypyr

Registered and Supported Tank-mix Options:
Acapela®, Axial®, Brazen II™, MPower Aurora Clodinafop 6NG, NuFarm Clodinafop herbicide, Slam'R Clodinafop herbicide, or NuFarm Signal herbicide, MCPA Ester, 2,4-D Ester, Puma® Advance, Simplicity™ / Simplicity™ GoDri, Traxos®, Trondus™, Varro®. Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Spring wheat, durum wheat, barley: 2-leaf to flag-leaf stage; oats (when tank-mixed with MCPA Ester): 3-leaf to flag-leaf stage; winter wheat: 3-tiller to just before the flag leaf (spring application)

Crop Rotation:

Replant Interval	Rotational Crop
Following year	Alfalfa, barley, canola, dry beans, faba beans, field corn, flax, forage grasses, lentils, mustard, oats, peas, potatoes, rye, wheat, soybeans, sugar beets, sunflowers or fields can be summer fallowed

Application Information:

Rates and Packaging: One (1) case treats 40 acres. One case is 486 g + 3.4 L.

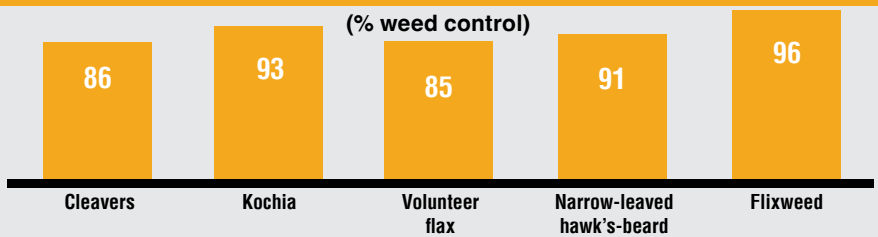
Surfactant: Add a registered non-ionic surfactant (NIS) at 2 L per 1000 L of spray solution (0.2% v/v). When tank-mixing with a grass herbicide, use the surfactant provided with that product. Do not use an additional surfactant unless otherwise indicated on the label.

Water Volume: Ground application - 5 US gal/ac (50 L/ha)
Can be aerial applied.

Rainfastness: One (1) hour

Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Barricade® II herbicide vs. tough broadleaf weeds



Results are from internal FMC research trials, 2009–2010.

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Broadleaf control	
Canada thistle[1]	Russian thistle
Cleavers (1 to 6 whorls), (1 to 9 whorls)[3]	Scentless chamomile[3]
Common chickweed	Shepherd's purse (up to 20 cm)
Cow cockle	Smartweed (Lady's-thumb)
Common ragweed (up to 10 cm)[3]	Sow thistle (perennial)
Dandelion[3] (spring and fall rosettes up to 15 cm)	Stinkweed
Flixweed	Stork's-bill (1-6 leaf)
Hemp-nettle (control <10cm); (1 to 8 leaf)[3]	Tufted vetch (up to 15 cm)[3]
Kochia (up to 10 cm; including Group 2 resistant biotypes)	Volunteer canola (2 to 4 leaf)[2]
Lamb's-quarters	Volunteer flax (12 cm in height)
Narrow-leaved hawk's-beard (<10cm)	White cockle[3]
Night-flowering catchfly (<10cm)	Wild carrot (up to 15 cm)[1,3]
Redroot pigweed	Wild buckwheat
Round-leaved mallow (1-5 leaf)	Wild mustard

[1] Suppression.
[2] Excluding Group 2 herbicide tolerant varieties, unless Barricade® II herbicide is tank-mixed with MCPA Ester
[3] When tank-mixed with MCPA Ester

Unless otherwise noted, apply to young and actively growing weeds that are less than 10 cm in height or width.

Barricade® II herbicide efficacy on narrow-leaved hawk's-beard

Source: Dammann Farms, Creelman, SK

Notes: _____

Refer to the Barricade® II herbicide labels for complete use instructions.

COMMAND® 360 ME HERBICIDE

Your first line of defense against cleavers and chickweed in canola

- Early, extended control of cleavers and suppression of common chickweed in front of canola, mustard, camelina and dry beans
- Unique Group 13 mode of action for resistance management
- Does not require incorporation and is taken up by the roots of germinating cleavers, and chickweed upon activation

Crops: Canola, mustard, camelina, dry beans

Chemical Group: Group 13

Active Ingredient(s): Clomazone

Registered and Supported Tank-mix Options:
Glyphosate, Aim® EC herbicide, Aim® EC herbicide + glyphosate, Bromotril® 240 EC herbicide, CF herbicide (on registered crops), IPCO Brotex® 4AT, IPCO Brotex® 240 Liquid herbicide, IPCO Octagon herbicide. Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Pre-seed in front of canola, mustard and camelina. For dry beans, apply broadcast after seeding but prior to crop or weed emergence.

Crop Rotation:

Replant Interval (Months)	Rotational Crop
0	Camelina, canola, dry beans, mustard
4	Winter wheat
12	Beans (white, kidney, snap), corn (field, sweet), peas, potatoes, spring & durum wheat, spring barley, oats, lentils
16	All other crops

If there is a lack of adequate or normal soil moisture due to drought conditions following an application of Command® 360 ME herbicide, the minimum rotational crop interval listed in the table must be extended for one additional year and a representative bioassay of the field must be conducted with the potential rotational crop and adequate soil moisture to determine the crop sensitivity to Command® 360 ME herbicide.

Application Information: Early-season control only. An in-crop herbicide application will be required. Can be used in front of any variety of herbicide-tolerant canola. Requires a minimum 1/4" of rain, at once, for activation.
Rates and Packaging: Canola, dry beans: 134 mL/ac (330 mL/ha or 40 acres per jug). Mustard and camelina: 101 mL/ac (250 mL/ha or 53 acres per jug). 2 x 5.4 L jugs/case
Surfactant: None required
Water Volume: 10 US gal/ac (100 L/ha)
Mixing Instructions: Fill spray tank one-half to two-thirds full of water. With agitator operating, add the recommended amount of ingredients using the **WAMLEGS** order. Please refer to the FMC Herbicide Mixing Instructions on Page 78.
Weeds Controlled: Extended control of cleavers (cleavers not emerged at application), suppression of chickweed.

Command® 360 ME herbicide control of cleavers

Rowatt, SK. Photo taken July 14, 2019

Notes:

Refer to the Command® 360 ME herbicide label for complete use instructions.

COMMAND® CHARGE HERBICIDE

The most complete broadleaf burnoff label available to canola growers with added extended activity on cleavers and chickweed

- Multiple modes of action to battle weed resistance

Crops: All herbicide tolerant canola and mustard

Chemical Group: Groups 13 & 14

Active Ingredient(s): Clomazone, Carfentrazone-ethyl

Registered and Supported Tank-mix Options:
Glyphosate, Bromotril® 240 EC herbicide, IPCO Brotex® 240 Liquid herbicide, IPCO Brotex® 4AT. Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Pre-seed in front of canola, mustard.

Crop Rotation:

Replant Interval	Rotational Crop
0	Canola, mustard (low rate of Command® Charge A herbicide only)
4 months	Winter wheat
12 months	Beans (white, kidney, snap), corn (field, sweet), peas, potatoes, spring & durum wheat, spring barley, oats, lentils
16 months	All other crops

If there is a lack of adequate or normal soil moisture due to drought conditions following an application of Command® Charge herbicide, the minimum rotational crop interval listed in the table must be extended for one additional year and a representative bioassay of the field must be conducted with the potential rotational crop and adequate soil moisture to determine the crop sensitivity to Command® Charge herbicide.

Application information:

Rates and Packaging: 2 x 5.4 L jugs of Command® Charge A Herbicide – 101-135 mL/ac *
2 x 1.2 L jugs of Command® Charge B Herbicide – 30 mL/ac
80 or 106 acres per case
*For mustard, use 101 mL/ac. For canola, use 135 mL/ac

Surfactant: None required if tank-mixed with glyphosate. If sprayed without glyphosate, add a non-ionic surfactant at 0.25% v/v or Merge® at 1% v/v.

Water Volume: 10 US gal/ac (100 L/ha)

Rainfastness and Moisture Activation Requirement:
Command® Charge A herbicide – Requires 1/4" of rain, at once, for activation in the soil
Command® Charge B herbicide – is rapidly absorbed through the foliage of plants. Rainfall soon after application may reduce efficacy.

Mixing Instructions: Fill spray tank one-half to two-thirds full of water. With agitator operating add the recommended amount of ingredients using the **WAMLEGS** order. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

WEEDS AND CROP USES

When used as directed, Command® Charge A herbicide will provide extended control of cleavers and suppression of chickweed for up to 4 weeks. Command® Charge B herbicide will provide burnoff control of the listed, emerged weeds up to ten (10) cm in height, or as specified.

Weeds Controlled at 80 acres/case rate	
Extended Weed Control (emerging weeds)	
Chickweed (suppression)	Cleavers (suppression only at 101 mL/ac rate)
Burnoff (emerged weeds)	
Canola, volunteer, including glyphosate-tolerant	Nightshade, hairy
Carpetweed	Pennycress, field (stinkweed)
Cleavers	Pigweed, prostrate
Cocklebur	Pigweed, redroot
Flixweed	Pigweed, smooth
Jimsonweed	Pigweed, tumble
Kochia	Purslane, common
Lamb's-quarters, common	Shepherd's purse
Mallow, round-leaved	Smartweed, Pennsylvania (seedling)
Morning glory	Thistle, Russian (up to 5 cm tall)
Mustard, tansy	Velvetleaf
Nightshade, black	Waterhemp, common
Nightshade, Eastern black	Waterhemp, tall

Command® Charge herbicide versus untreated

Untreated | Command® Charge herbicide (80 ac/case)

Source - FMC Internal Trials, Portage la Prairie, MB, 2020

Command® Charge herbicide provides a MMOA complete solution control on cleavers

- Whitening is evidence of the Group 13 soil applied extended active ingredient
- The brown necrotic tissue is evidence of the burnoff Group 14 component
- The yellowing observed is evidence of the Group 9 control

Viking, AB, Date of Application May 18, 2022
Date of Photographs June 7, 2022

Refer to the Command® Charge herbicide labels for complete use instructions.

EXPRESS® BRAND HERBICIDES

POWERED BY SOLUMAX®

Helps eliminate your toughest weeds from shoots to roots

Express® Brand herbicides - One trusted brand, multiple options

	Express® SG herbicide	Express® PRO herbicide	Express® FX herbicide
Chemical Groups (tank-mixed with glyphosate)	Groups 2 & 9	Groups 2 & 9	Groups 2, 4 & 9
Active Ingredient(s):	Tribenuron-methyl	Tribenuron-methyl, metsulfuron-methyl	Tribenuron-methyl, dicamba
Pre-Seed Crop Flexibility	Wheat (spring, durum, winter), barley, oats, canary seed, pulses (dry bean, faba bean, lupin, field pea, soybean)†, alfalfa†, minor use forages†	Wheat (spring, durum, winter), barley, oats	Wheat (spring, durum, winter), barley, oats
Key Weeds (tank-mixed with glyphosate)	Dandelion, flixweed, narrow-leaved hawk's-beard, stinkweed, volunteer canola*	Up to 15 days of extended control of cleavers, dandelion, narrow-leaved hawk's-beard, volunteer canola*	**Kochia** (Group 2 & 9 resistant biotypes) dandelion, flixweed, narrow- leaved hawk's-beard, stinkweed, volunteer canola*, wild buckwheat (8-leaf)
Timing	- Pre-seed burnoff - Chemfallow - Post-harvest	- Pre-seed burnoff - Chemfallow - Post-harvest prior to seeding cereals	- Pre-seed burnoff - Chemfallow - Post-harvest
Fit	Maximum cropping flexibility & application timing	Extended control in cereals	- Proactive resistance management - Control of Group 2 & 9 resistant kochia

† Injury to pulse crops, soybeans, grasses and alfalfa may occur on coarse textured soils, low in organic matter (less than 3%), or in fields with variable soils, gravelly areas, sandy areas or eroded knolls.
* Will not provide extended control of volunteer Group 2 herbicide tolerant canola.

Refer to the Express® Brand herbicide labels for complete use instructions.

Proactive resistance management with uncompromising burnoff performance

- Three modes of action when tank-mixed with glyphosate
- Enhanced control of key weeds like kochia, dandelion, narrow-leaved hawk's-beard, volunteer canola
- Systemic activity all the way down to the root, so weeds won't grow back

Crops: Wheat (spring, durum, winter), barley, oats

Chemical Groups: Groups 2, 4 & 9 when tank-mixed with glyphosate

Active Ingredient(s): Tribenuron-methyl, dicamba

Registered and Supported Tank-mixes:
Must be tank-mixed with glyphosate. Aim® EC herbicide, CF herbicide (on registered crops), SZ-75 herbicide. Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Add Express® FX herbicide to your glyphosate for pre-seed, chemfallow or post-harvest. Registered crops may be seeded a minimum of 24 hours after a pre-seed application of Express® FX herbicide.

Crop Rotation:

Replant Interval	Rotational Crop
24 hours after application:	Wheat (spring, durum, winter), barley, oats
12 months:	Any crop can be seeded after a spring or chemfallow application
Post-harvest application:	For applications made prior to October 1, canola, field corn, lentils soybeans, white beans, wheat (spring, durum, winter), barley or oats may be seeded. For applications made after October 1, seed only wheat (spring, durum, winter), barley or oats.

Application Information
Rates and Packaging: One (1) case treats 80 acres. One case is 2 x 1.86 kg.
Surfactant: No additional surfactant is required when tank-mixed with 0.5 REL glyphosate/acre
Water Volume: 5 US gal/ac (50 L/ha)
Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Weeds Controlled (Express® FX herbicide plus 0.5 L/ac glyphosate equivalent)†:			Stage
Canada fleabane (including Gr. 9 resistant biotypes) Common ragweed **Kochia (including Gr. 2 & 9 resistant biotypes)**		**Narrow-leaved hawk's-beard** Scentless chamomile[1]	Up to 8 cm
Cleavers Dandelion Downy brome Flixweed Giant foxtail Green foxtail Hemp-nettle Lady's-thumb	Lamb's-quarters Persian darnel Redroot pigweed **Russian thistle** Stinkweed Tufted vetch[1] (up to 15 cm) Volunteer barley	Volunteer canola (including glyphosate-tolerant varieties) Volunteer flax Volunteer wheat Wild carrot[1] (up to 10 cm) Wild mustard Wild oats	Up to 15 cm
Cow cockle			Up to 3 leaf
Wild buckwheat			Up to 8 leaf
Canada thistle[1], Common chickweed		White cockle[1]	Rosette

[1] Suppression.
† Original 360 g/L formulation.

Refer to the Express® FX herbicide label for complete use instructions.

EXPRESS® PRO HERBICIDE

Professional strength burnoff with extended control

- Provides up to 15 days of extended control† on key broadleaf weeds, including cleavers, dandelion, narrow-leaved hawk's-beard and volunteer canola[1]

Crops: Pre-seed burnoff application prior to seeding wheat (spring, winter, durum), oats and spring barley. Also used in chemfallow and post-harvest applications prior to seeding wheat, oats or barley the following spring.

Chemical Group: Groups 2 & 9 when tank-mixed with glyphosate

Active Ingredient(s): Tribenuron-methyl, metsulfuron-methyl

Registered and Supported Tank-mixes:
Express® PRO herbicide must be tank-mixed with glyphosate, Aim® EC herbicide, CF herbicide (on registered crops). Please refer to FMC Tank-Mix Policy on Page 81.

Timing: **Pre-seed:** Wait a minimum of 24 hours after applying Express® PRO herbicide and glyphosate before planting wheat (spring, durum, winter), barley or oats.

Note: Do not use on highly variable soils that have gravelly or sandy areas, eroded knolls or calcium deposits. Heavy rainfall soon after application may result in visual crop injury or possible yield reduction. Conditions such as thin crop stand, sandy soil or low soil organic matter may increase the severity of injury.

Chemfallow: Allow at least 10 days after treatment before tillage.

Post-harvest: Apply to fields where wheat, barley or oats will be seeded next spring.
Note: Limit of one (1) application of metsulfuron products per growing season.

Crop Rotation:

Replant Interval	Rotational Crop
24 hours or post-harvest application:	Wheat (spring, durum and winter) and spring barley, oats
10 months:	Canola, faba beans, field corn, field peas, soybeans, lentils, dry beans and flax. Oats, wheat (spring or durum), barley or winter wheat may be seeded any time in the following season.

Application Information:

Rates and Packaging: One (1) jug treats 80 acres. One case is 8 x 567g.

Water Volume: 5 US gal/ac (50 L/ha)

Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

[1] Excluding Group 2 herbicide tolerant canola.
† Degree and duration of extended control is dependent on weed infestation levels, and on environmental conditions at and following treatment.

Weeds Controlled (Express® PRO herbicide plus 0.5 L/ac glyphosate equivalent)†:		Stage
Canada fleabane **Cleavers**[E] Common ragweed	**Narrow-leaved hawk's-beard**[E] **Scentless chamomile** Night flowering catchfly[1]	Up to 8 cm
Chickweed		1 - 6 leaf
Dandelion[E] Downy brome Flixweed Giant foxtail Green foxtail Hemp-nettle Kochia (except Group 2 & 9 resistant biotypes) Lady's-thumb Lamb's-quarters Persian darnel Redroot pigweed	Russian thistle Stinkweed Tufted vetch[1] Volunteer barley **Volunteer canola**[E*] (including glyphosate tolerant) Volunteer flax Volunteer wheat Wild carrot[1] Wild mustard Wild oats	Up to 15 cm
Cow cockle	Wild buckwheat	Up to 3 leaf
White cockle	Canada thistle[1]	Rosette

[1] Suppression.
† Original 360 g/L formulation.
[E]= Extended control.
[E*]= Will not provide extended control of Group 2 herbicide tolerant canola.

Express® PRO herbicide plus glyphosate

Untreated	1 REL glyphosate/acre	Express® PRO herbicide plus 0.5 REL glyphosate/acre

Location: Kelburn Farm, MB

Refer to the Express® PRO herbicide label for complete use instructions.

EXPRESS® SG HERBICIDE

POWERED BY SOLUMAX®

Excellent burnoff weed control helps maximize cropping flexibility

- When added to glyphosate, it provides enhanced control of hard-to-kill broadleaf weeds while helping maximize cropping flexibility.
- Gets right to the root of your weed problems with systemic activity.

Crops:

Pre-seed burnoff application 24 hours prior to seeding	Spring wheat (including durum), winter wheat, spring barley, oats, canary seed, pulse crops (including dry bean, faba bean, field pea, lupin and soybean), alfalfa, red clover, alsike clover, smooth bromegrass, meadow bromegrass, timothy and creeping red fescue.
In-crop	In-crop application for pasture and rangeland and tribenuron-methyl tolerant sunflowers (e.g. ExpressSun® Sunflowers SU7)
New minor use registration:	Express® SG herbicide pre-seed application for the following minor use crops (for forage and seed production): Yellow sweet clover, sainfoin, hybrid bromegrass, meadow fescue, tall fescue, slender wheatgrass, crested wheatgrass

Timing: Pre-seed burnoff, chemfallow and post-harvest applications.

Pre-seed: Wait a minimum of 24 hours after applying Express® SG herbicide and glyphosate before planting registered crops.

Pasture and Rangeland: Apply in the early bud to pre-bloom stage of registered broadleaf weeds.

Tribenuron-methyl tolerant sunflower: Apply at the 2 - 8 leaf sunflower stage for the control of lamb's quarters (up to 9 leaf) and suppression of wild buckwheat (up to 6 leaf).

Chemical Group: Groups 2 & 9 when tank-mixed with glyphosate

Active Ingredient(s): Tribenuron-methyl

Registered and Supported Tank-mixes:

Express® SG herbicide must be tank-mixed with glyphosate with or without labelled tank-mix partners, when applied before seeding, 2,4-D Ester, Aim® EC herbicide, Authority® Supreme herbicide (field pea, soybeans, Authority® 480 herbicide (faba bean, soybean, field pea, spring and durum wheat), Focus® herbicide (spring and winter wheat, soybeans, field peas), CF herbicide (on registered crops), SZ-75 herbicide

Registered and Supported Tank-mixes for ExpressSun® sunflowers

Assure® II herbicide at labelled rates + Merge® at 0.5-1% v/v or Sure-Mix™ at 0.5% v/v, Poast® Ultra Liquid Emulsifiable herbicide at 190 mL/ac, Select®, Centurion®, OR Shadow® RTM herbicide at 80 mL/ac + Amigo® adjuvant at 1% v/v. Please refer to FMC Tank-Mix Policy on Page 81.

Crop Rotation:

Replant Interval	Rotational Crop
Pre-seed burnoff	Any crop may be seeded the year following a pre-seed burnoff.
Chemfallow	Allow at least 10 days after treatment before tillage. Any of the above crops can be seeded 24 hours after application. Canola and flax can be seeded two (2) months after application
Fall Application	Seed winter wheat a minimum of 24 hours after application. For applications made prior to October 1, seed spring wheat (including durum), spring barley, oats, field corn, canary seed or pulse crops (including chickpea, dry bean, faba bean, field pea, lentil, lupin and soybean), canola, flax, alfalfa, red clover or alsike clover, smooth bromegrass, meadow bromegrass, timothy, creeping red fescue, crested wheatgrass, slender wheatgrass, meadow fescue, tall fescue, hybrid bromegrass, yellow sweet clover and sainfoin. After October 1, seed any of the above crops except canola, field corn or flax.

Application Information:

Rates and Packaging: One jug treats 80 acres (6 g/ac). One case is 8 x 486g.

Pasture and Rangeland: 6 or 12 g/ac with a non-ionic surfactant at 0.2% v/v (2 L per 1000 L of water) to broadleaf weeds in the early bud to pre-bloom stage using a minimum spray volume of 5 gal/ac.

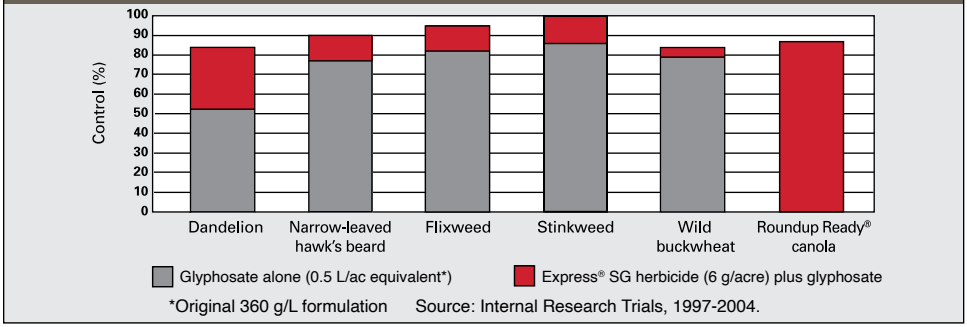
Tribenuron-methyl tolerant sunflowers (E.g. ExpressSun®): Apply at 6 g/ac with a non-ionic surfactant, such as Agral® 90 or Ag-Surf®, at 0.2% v/v or Hasten® NT Ultra at 0.5% v/v using a minimum spray volume of 5 gal/ac.
Water Volume: 5 US gal/ac (50 L/ha)
Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

**Note: For pre-seed applications in the spring, injury to pulse and forage crops may occur on coarse-textured soils, low in organic matter (less than 3%) or in fields with variable soils, gravelly areas, sandy areas or eroded knolls. Avoid planting crops in soils containing more than 50% sand.*

Weeds Controlled (Express® SG herbicide plus 0.5 L/ac glyphosate equivalent)†:		Stage
Canada fleabane Common ragweed	**Narrow-leaved hawk's-beard** Scentless chamomile[1]	Up to 8 cm
Dandelion Downy brome Flixweed Giant foxtail Green foxtail Hemp-nettle Kochia (except Group 2 & 9 resistant biotypes) Lady's-thumb Lamb's-quarters Persian darnel Redroot pigweed	Russian thistle Stinkweed Tufted vetch[1] Volunteer barley **Volunteer canola** (including glyphosate tolerant) Volunteer flax Volunteer wheat Wild carrot (up to 10 cm)[1] Wild mustard Wild oats	Up to 15 cm
Cow cockle	Wild buckwheat	Up to 3-leaf
White cockle[1]	Canada thistle[1]	Rosette
Common chickweed		Up to 8-leaf

[1] Suppression.
† Original 360 g/L formulation

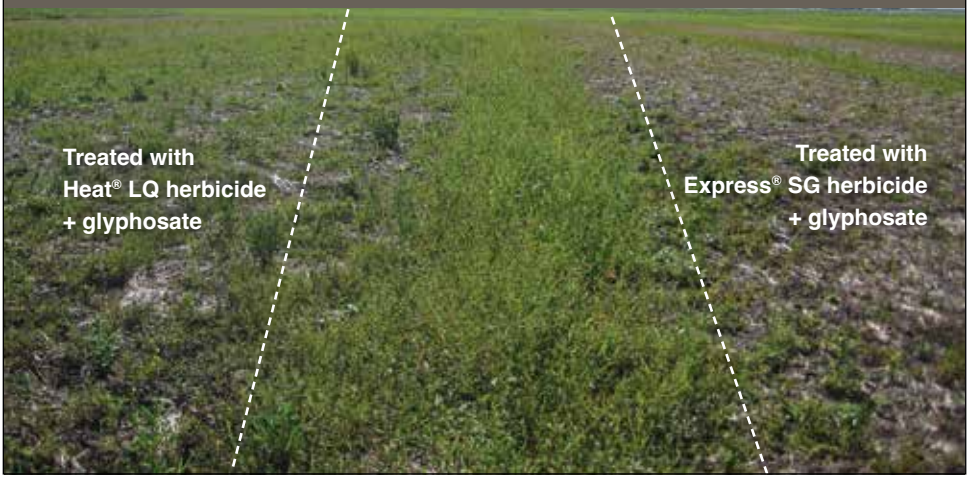
Express® SG herbicide plus glyphosate



*Original 360 g/L formulation Source: Internal Research Trials, 1997-2004.

Express® SG herbicide plus glyphosate on dandelion (pre-seed burnoff)

Treatment (21 days after application)



Refer to the Express® SG herbicide label for complete use instructions.

FOCUS®
HERBICIDE

A unique combination of Group 14 and 15 actives in one product providing complete spectrum broadleaf and grassy extended weed control along with enhanced pre-seed burndown

• Multiple modes of action for resistance management

Crops: Spring wheat (except durum), winter wheat, lentils, field corn, field peas, soybeans, sunflowers.

Chemical Groups: Groups 14 & 15

Active Ingredient(s): Carfentrazone-ethyl + pyroxasulfone

Registered and Supported Tank-Mix Options:
Aatrex® Liquid 480 herbicide (field corn), Glyphosate, Express® SG herbicide (soybean, spring (except durum) and winter wheat, field peas). Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Focus® herbicide can be applied pre-plant or pre-emergence. Requires a minimum 1/2" of moisture, at once, for activation. Wheat, corn and lentils should be planted a minimum of 2.5 cm deep, soybean should be planted a minimum of 4 cm deep.

FALL APPLICATION - Focus® herbicide may be applied with glyphosate in the fall to control labeled emerged weeds. A fall application of Focus® herbicide will also provide early-season control or suppression of labelled weeds the following spring. Focus® herbicide should be applied to the stubble or soil surface and allow moisture from rainfall or snow to move the product into the soil. Do not mechanically incorporate in the fall or spring as this can destroy the herbicide barrier and allow weeds to escape. Do not apply to frozen soils or existing snow cover to prevent Focus® herbicide runoff.

Crop Rotation:

Replant Interval (Months)	Rotational Crop
0	Field corn, field peas, lentils, soybeans, sunflowers, wheat (winter and spring, except durum)
12	Barley, canola, chickpeas, durum wheat, flax, mustard, oats, safflower
24	Sugar beets

If there is a lack of adequate or normal soil moisture due to drought conditions following an application of Focus® herbicide, the minimum rotational crop interval described above must be extended for one additional year and a representative bioassay of the field must be conducted with the potential rotational crop and adequate soil moisture to determine the crop sensitivity to Focus® herbicide.

Application Information: Apply pre-plant or post-seed (up to three (3) days after seeding). Application early (pre-plant) increases activation potential by spring showers. Post-seed application should be considered in higher disturbance seeding operations.

FOCUS®
HERBICIDE

Apply at 33 or 40 ac/jug, based on soil characteristics:

Acres/jug	Soil Texture	O.M.
33	medium-fine/fine	3-7%
40	coarse/medium	1-3%

- Apply with or without glyphosate. Apply with glyphosate if weeds are emerged and actively growing.
- Apply only once per 12-month period.
- Do not apply Authority® Supreme herbicide (or any other product containing pyroxasulfone) in the spring to fields that were treated with applications of Focus® herbicide (or any other product containing pyroxasulfone) during the previous fall. DO NOT follow a fall application of Focus® herbicide (or any other product containing pyroxasulfone) with a spring application of Authority® 480 herbicide (or any other product containing sulfentrazone) to fields where spring wheat will be planted.
- Focus® herbicide controls weeds germinating within the soil herbicide barrier, located in the upper part of the soil profile.

Rates and Packaging: 4 x 4.5 L jugs per case. Each 4.5 L jug treats 33 acres / jug at 136 mL/ac (336 mL/ha) or 40 acres / jug at 113 mL/ac (280 mL/ha).

Water Volume: 10 US gal/ac (100 L/ha)

Mixing Instructions: Fill spray tank one-half to two-thirds full of water. With agitator operating, add the recommended amount of ingredients using the **WAMLEGS** order. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Weeds registered for extended control (emerging weeds) Rate: 113 - 136 mL/ac
Annual grasses Wild oats[1]; annual bluegrass; barley foxtail[1]; foxtail (green, yellow, giant[1]); barnyard grass; downy brome; Italian ryegrass; Japanese brome; large crabgrass
Annual broadleaf weeds Redroot pigweed; green pigweed; cleavers; common waterhemp; Eastern black nightshade; kochia[1]; lamb's quarters[1]; stinkweed[1]; velvetleaf; wild buckwheat[1]; wild mustard[1]; wormseed mustard
Burnoff Weeds Controlled (emerged weeds)
Rate: 113 mL/ac or 40 acres/jug Common mallow, round-leaved; flixweed; lamb's-quarters; morning glory; mustard, tansy; nightshade, black (up to 5 cm tall), Eastern black (up to 5 cm tall) and hairy; pennycress, field (stinkweed); smartweed, Pennsylvania (seedling); pigweed, prostrate, smooth and tumble; Pigweed, redroot; purslane, common; velvetleaf; waterhemp, tall and common
Rate: 136 mL/ac or 33 acres/jug All the weeds controlled at 113 mL/ac plus the following: carpetweed; cleavers; cocklebur; jimsonweed; kochia; nightshade, black and Eastern black; thistle, Russian (up to 5 cm tall); shepherd's purse; canola, volunteer, including glyphosate-tolerant

[1] Suppression

Focus® herbicide – on bare ground

Glyphosate*	Focus® herbicide (40 ac/ jug rate) + Glyphosate (0.5 REL/ac)

FMC Internal Trial. Hanley, SK 2020

Notes: _____

Refer to the Focus® herbicide label for complete use instructions.

INTRUVIX™ II HERBICIDE

Intruvix™ II herbicide consistently provides quick and lasting burnoff control of tough weeds like kochia, narrow-leaved hawk's-beard and volunteer canola in front of cereals

- Fast burning activity with the power of systemic action on broadleaf weeds
- Extensive burnoff of over 50 broadleaf weeds in front of cereal crops
- Cleaner fields without the worry of herbicide resistant weed escapes
- Multiple modes of action to battle herbicide resistance

Crops: Wheat (spring, durum, winter), spring barley, oats

Chemical Group: Groups 2, 4, 14 & 9 when tank-mixed with glyphosate

Active Ingredient(s): Tribenuron-methyl + dicamba + carfentrazone-ethyl

Registered and Supported Tank-mixes:
Glyphosate, 2,4-D Ester, Authority® 480 herbicide (spring and durum wheat), SZ-75 herbicide (spring and durum wheat). Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Pre-seed burnoff and chem-fallow

Crop Rotation:

Replant Interval	Rotational Crop
After 24 hours	Wheat (spring, durum, winter), barley, oats,
Following year Pre-seed / Chemfallow	Any crop

Application information:

Rates and Packaging: One (1) case treats 160 acres - 40 acres per jug. 4 x 2.58 kg jugs per case.
Surfactant: Intruvix™ II herbicide needs to be tank mixed with a minimum 0.5 REL glyphosate/acre
Water Volume: 10 US gal/ac (100 L/ha)
Mixing Instructions: Fill spray tank one-half to two-thirds full of water. With agitator operating, add the recommended amount of ingredients using the **WAMLEGS** order. Please refer to the FMC Tank-Mix Policy on Page 81.
Mixing Order: Recommended mixing order is as follows:
1. Intruvix™ II herbicide
2. Glyphosate

Rainfastness: Rainfall soon after application may reduce efficacy.

Weeds Controlled

(Intruvix™ II herbicide plus 0.5 L/ac glyphosate equivalent)†:

- Canada fleabane (up to 8 cm)
- Canada thistle (rosette)[1]
- Carpetweed (up to 10 cm)
- Cleavers (up to 15 cm)
- Cocklebur (up to 10 cm)
- Common ragweed (up to 8 cm)
- Common waterhemp (up to 10 cm)
- Cow cockle (up to 3 leaf)
- Dandelion (up to 15 cm)
- Downy brome
- Flixweed
- Foxtail (giant, green) (up to 15 cm)
- Hairy nightshade (up to 15 cm)
- Hemp-nettle (up to 15 cm)
- Jimsonweed (up to 10 cm)
- **Kochia (up to 10 cm)(Incl. Group 2 & 9 biotypes)**
- Lady's thumb (up to 15 cm)
- Lamb's-quarters (up to 15 cm)
- Morning glory
- Narrow-leaved hawk's-beard (up to 8 cm)
- Nightshade (Eastern black, black) (up to 10 cm)
- Pennsylvania smartweed (seedling) (up to 10 cm)
- Persian darnel (up to 15 cm)
- Prostrate pigweed (up to 10 cm)
- Purslane (common) (up to 10 cm)
- Redroot pigweed (up to 15 cm)
- Round-leaved mallow (up to 10 cm)
- **Russian thistle (up to 15 cm)**
- Scentless chamomile (up to 8 cm)[1]
- Shepherd's purse (up to 10 cm)
- Smooth pigweed (up to 10 cm)
- Stinkweed (up to 10 cm to tall)
- Tansy mustard (up to 10 cm)
- Tumble pigweed (up to 10 cm)
- Velvetleaf (up to 10 cm)
- Volunteer barley (up to 15 cm)
- Volunteer canola (Including glyphosate tolerant) (up to 15 cm)
- Volunteer flax (up to 15 cm)
- Volunteer wheat (up to 15 cm)
- Waterhemp (tall) (up to 10 cm)
- White cockle (rosette)[1]
- **Wild buckwheat (up to 8 leaf)**
- Wild mustard (up to 15 cm)
- Wild oats (up to 15 cm)

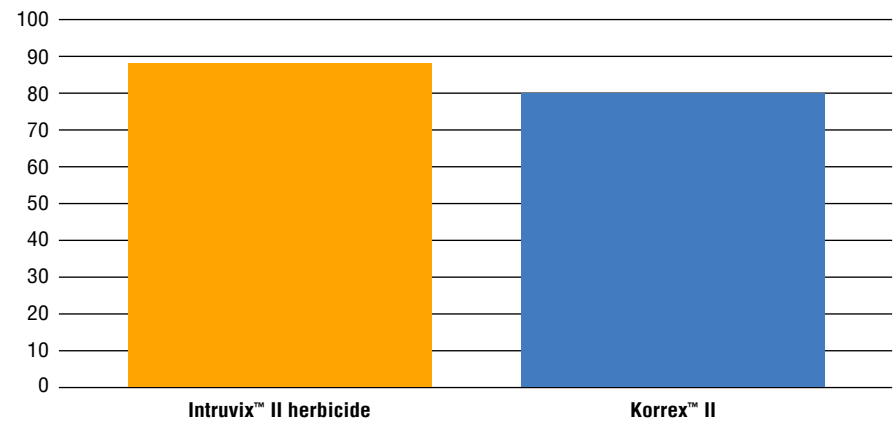
(Intruvix™ II herbicide plus 0.9 L/ac glyphosate equivalent)†:

All weeds listed above plus:

- Annual blue grass
- Annual sow thistle
- Crab grass (large and smooth)
- Narrow-leaved vetch
- Prickly lettuce
- Shepherd's purse

[1] Suppression.
† Original 360 g/L formulation

Mean % Control of Kochia



Source: 2020 Summary across 3 trials 7-14 DAA

Intruvix™ II herbicide + Glyphosate vs Glyphosate 8 DAA

Glyphosate | Intruvix™ II herbicide + Glyphosate*

Source: 2023 FMC Internal Trials. Lethbridge, AB *Rate 0.5 L/ac REL

Intruvix™ II herbicide + Glyphosate vs untreated 8 DAA

Untreated check | Intruvix™ II herbicide + Glyphosate

Source: 2023 FMC Internal Trials. Lethbridge, AB *Rate 0.5 L/ac REL

Refer to the Intruvix™ II herbicide label for complete use instructions.

MUSTER®

HERBICIDE

- Proven broadleaf control for brown and oriental mustard, canola and sunflowers
- Control of wild mustard
- Registered for minor use on *Brassica carinata*

Crops: Canola, *Brassica carinata*, brown mustard, oriental mustard, sunflowers

Chemical Group: Group 2

Active Ingredient(s): Ethametsulfuron-ethyl

Packaging: 8 x 320 g jugs per case

Tank-mix Options:

For grass and broadleaf control in canola only, tank-mix Poast® Ultra or Lontrel®. For brown and oriental mustard, or canola: Assure® II herbicide. Please refer to the FMC Tank-Mix Policy on Page 81.

Timing:

Canola: 2-leaf stage up to the initiation of bolting and before crop canopy closure.
Brown and Oriental mustard, *Brassica carinata*: 4-leaf to late rosette stage.
Sunflower: 2-leaf to 8-leaf stage.
Weeds: Apply early when weeds are actively growing.

Crop Rotation:

Replant Interval (Months)	Rotational Crop
10	Spring wheat, durum, barley, oats, flax
22	Alfalfa, canary grass, canola, dry beans, faba beans, fescue, lentils, peas, red clover, tame mustard

Crop	Staging	Rates
Canola, including rapeseed	2 leaf to beginning of bolting	8 g/ac or 12 g/ac
Brown condiment mustard oriental mustard	4 leaf to late rosette stage	8 g/ac
Sunflower	2 - 8 leaf stage (14 - 45 cm in height)	8 g/ac or 12 g/ac

Must use a surfactant with Muster® herbicide. Use Agral® 90, or Ag-Surf®, or Super Spreader.
Caution: Application prior to the 2-leaf stage of canola or 4-leaf stage of brown condiment mustard and oriental mustard (condiment and oilseed types), or to sandy soil or low soil organic matter may increase the severity of injury.

Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Broadleaf control	
Flixweed (spring seedlings)	Redroot pigweed[2]
Green smartweed	Stinkweed[1] (1–4 leaf)
Hemp-nettle	Wild mustard

[1] Controlled at high rate of Muster® herbicide – 12 g/ac or 8 g/ac when tank-mixed with Assure® II.
[2] Suppressed at high rate of Muster® herbicide – 12 g/ac.

Refer to the Muster® herbicide label for complete use instructions.

PINNACLE® SG HERBICIDE

POWERED BY SOLUMAX®

- Pinnacle® SG herbicide with Solumax® soluble granules is a sulfonylurea herbicide for soybeans, thifensulfuron-methyl tolerant camelina (SES1154HR) and field tomatoes
- Powered by Solumax® soluble granules for effective and consistent weed control, and easier, more consistent sprayer cleanout that reduces risk to subsequently sprayed crops

Crops: Camelina (SES1154HR thifensulfuron-methyl tolerant), soybeans, field tomatoes

Herbicide Group: Group 2

Active Ingredient(s): Thifensulfuron-methyl

Packaging: 8 x 240 g jugs per case

Crop Rotation: Any crop the following year

Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Weeds Controlled and Application Information

Crop	Weeds	Rate	Application Timing	Application Information
Soybeans, field tomatoes	Lady's-thumb Redroot pigweed Wild mustard	3.3 g/ac + NIS	**Soybeans:** Apply post-emergent from the first fully expanded trifoliate leaf to before the initiation of flowering. Target weeds when they are small. **Tomatoes:** Apply post-emergent 3 weeks after transplanting in the field. Weeds should be less than 10 cm (4 in.) tall or across. Weeds that emerge after treatment will not be controlled. Because varieties differ in their tolerance to herbicides, limit the first use of Pinnacle® SG herbicide to a small area of each variety prior to adoption as a field practice.	**Soybeans:** Add a registered non-ionic surfactant (NIS) such as Agral® 90 or Ag-Surf® at 1 L per 1000 L of spray solution (0.1% v/v). For more consistent control of velvetleaf, add 28% UAN at 4 L per 100 L of spray solution (4% v/v). **Tomatoes:** Add a registered non-ionic surfactant (Agral® 90 only) at 2.0 L per 1,000 L of spray solution (0.2% v/v). For a wider spectrum of weeds, apply a tank-mix of Prism® herbicide and Pinnacle® SG herbicide 3 weeks after processing tomatoes are transplanted.
	Lady's-thumb Lamb's-quarters Redroot pigweed Velvetleaf Wild mustard	4.8 g/ac + NIS		
Thifensulfuron-methyl tolerant camelina (SES1154HR) only	Lady's-thumb Lamb's-quarters Redroot pigweed Velvetleaf Wild mustard	4.8 g/ac + NIS	Apply post-emergent up to 60 days before harvest, to young actively growing weeds less than 10 cm tall or across. Weeds that emerge after treatment will not be controlled. Do not make more than 1 application per year in thifensulfuron-methyl tolerant camelina.	Add a registered non-ionic surfactant (Ag-Surf®, Agral® 90 or Citowett® Plus) at 1L per 1000L of spray solution (0.1% v/v) OR a crop oil concentrate (such as Sure-Mix® at 0.5 L per 100L of spray solution (0.5% v/v) OR Assist® at 1-2L per hectare. Use a minimum spray volume of 100 L/Ha. Do not apply by air.

Refer to the Pinnacle® herbicide label for complete use instructions.

PRECISIONPAC®
APPLICATION INNOVATION

Custom herbicides as unique as your fields

Every farm is unique. Every field is different. Now, you can choose from 24 different PrecisionPac® herbicides to customize your weed control program for each individual field, based on your agronomic needs. Thanks to a revolutionary new dispensing system, your crop protection retailer can create high-performing PrecisionPac® herbicides that match your agronomic needs, in exactly the right amount for your field size or sprayer tank. No more left-over herbicide, no more measuring or guesswork. PrecisionPac® herbicides can save time and money while enhancing your weed control.

How it works: After scouting the field, identifying key weeds and evaluating other important agronomic factors, your retailer will help you choose the appropriate PrecisionPac® herbicide solution. Each system can hold up to 6 different active ingredients that can be combined in various ratios to create the PrecisionPac® herbicide blend that best meets the agronomic needs of a specific field. The exact amount of herbicide is dispensed into a grower bag and labeled for easy identification.

PrecisionPac® herbicides are:

- High Performing Weed Control
- Completely Customized Weed Control
- Easy to Use
- Right Product, Right Rate, Right Acre
- Multiple Modes of Action
- Pick Length Of Herbicide Activity
- Reduced Waste
- Constantly Evolving

PRECISIONPAC®
APPLICATION INNOVATION

Thanks to the revolutionary dispensing technology of PrecisionPac® herbicides, you'll experience:

- Less time mixing and more time spraying
- Less risk of errors; each bag is custom built for your field or sprayer tank size
- Less herbicide and packaging, with single bags able to treat up to 320 acres
- **24** high-performing herbicides to match with your weed spectrum, including blends with both grassy and broadleaf weed control all in one bag

Cross-Spectrum Grassy and Broadleaf Weed Control

- CS-100-2525
- CS-75-2525
- CS-100-23235
- CS-75-23235

Non-Crop Weed Control

- NC-00439
- NC-0050
- DB-878
- CF herbicide
- DB-878 PRO
- CF-18-50
- CF-18-439
- CF-09-878
- CF-18-878

Extended Weed Control

- SZ-75
- SZ-100
- SZ-0050
- SZ-75-18

Post-Emergent Broadleaf Weed Control

- PP-2525
- PP-23235
- PP-3317
- DB-8454
- Ally®
- DB-6654

Other Products / Tank-mix Options

- Perimeter® II
- MCPA Ester
- 2,4-D Ester

Notes:

Refer to the PrecisionPac® herbicide labels for complete use instructions.

PREDICADE®
HERBICIDE

POWERED BY SOLUMAX®

All-in-one grass and broadleaf weed control for wheat

- Predicade® herbicide is an all-in-one solution that excels at controlling the most challenging grass and broadleaf weeds, including Group 1 resistant wild oats
- Multiple modes of action for proactive resistance management
- Offers excellent control while still providing flexible re-crop options

Crops: Spring, durum and winter wheat

Chemical Groups: Groups 2 & 4

Active Ingredient(s): Tribenuron-methyl + thifensulfuron-methyl + thiencarbazone-methyl + fluroxypyr + MCPA

Timing: **Spring wheat and durum:** 3-leaf to 6-leaf with 3 tillers, but prior to jointing (presence of first node)

Winter Wheat: Spring application from the 3 tiller stage and before the first node can be felt in the stem. DO NOT apply after the presence of the first node as crop injury may occur.

Under drought conditions, do NOT apply Predicade® herbicide if time between seeding and spraying exceeds 35 days.

Crop Rotation:

Replant Interval	Rotational Crop
Following Year	alfalfa, barley, canola, field corn, field peas, flax, dry beans, lentils, mustard, oats, soybeans, spring and durum wheat or sunflowers

Broadleaf Weed Control		
Annual smartweed (green smartweed, lady's-thumb)	**Kochia** (including Groups 2 & 9 resistant biotypes; up to 10 cm)	Shepherd's-purse (1-6 leaf)
Canada thistle[1] (top growth control)	Lamb's-quarters	Sow thistle, perennial
Cleavers (1-6 whorls)	**Narrow-leaved hawk's-beard**	Stinkweed
Common chickweed (1-6 leaf)	Night flowering catchfly	Stork's-bill (1-6 leaf)
Cow cockle	Pale smartweed (1-6 leaf)	**Volunteer canola** (2-4 leaf) including Group 2 herbicide tolerant varieties
Dandelion (< 15 cm in diameter)	Redroot pigweed	Volunteer flax (< 12 cm)
Flixweed	Round-leaved mallow (1-5 leaf)	**White cockle** (< 10 cm)
Hemp-nettle	Russian thistle	Wild buckwheat
	Scentless chamomile (< 10 cm)	Wild mustard
Grassy Weed Control		
Barnyard grass	Persian darnel[1]	Wild oats
Green foxtail	Volunteer canary seed	Yellow foxtail[1]
Japanese brome[2] (1-6 leaf)		

[1] Suppression.
[2] Control of spring-germinated Japanese brome. Suppression of overwintered Japanese brome. Best results are obtained after a pre-seed or burnoff application with a glyphosate herbicide.

Application Information:

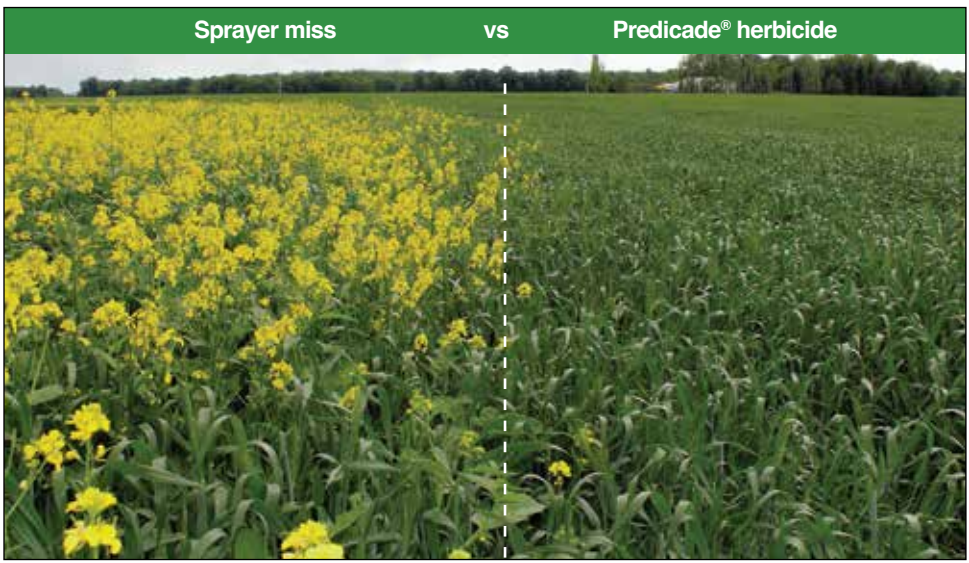
Rates and Packaging: One (1) case treats 40 acres.
One case is a co-pack of 486 g + 3.4 L + 8 L + 7.6 L

Water Volume: Minimum 5 US gal/ac (50 L/ha)

Rainfastness: Two (2) hours
Can be applied by ground or air

Mixing Order: Recommended mixing order is as follows:
1. Predicade® Broadleaf herbicide
2. Predicade® Grass herbicide
3. Perimeter® II herbicide
4. MCPA Ester 600 Liquid herbicide

Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.



Predicade® herbicide sprayed June 5th, 2015, Oakville, MB
Photo taken 21 DAA

Notes: _____

Refer to the Predicade® herbicide label for complete use instructions.

REFINE® M HERBICIDE

POWERED BY SOLUMAX® SOLUBLE GRANULES

Proven control of annual and perennial broadleaf weeds

- Controls dandelion, wild buckwheat and all types of volunteer canola, including Roundup Ready® and Group 2 herbicide tolerant varieties
- Contains both Group 2 and Group 4 herbicides to help manage weed resistance

Crops: Barley, oats, wheat (durum, spring, winter)

Chemical Groups: Groups 2 & 4

Active Ingredient(s): Tribenuron methyl + thifensulfuron methyl + MCPA Ester

Registered and Supported Tank-mix Options:
Axial®, Axial® Xtreme, Brazen™ II, Cirray™ (wild oats only), Horizon® NG, IPCO Avant, Lontrel™ XC, Puma® Advance (wild oats only), Simplicity™ / Simplicity™ GoDri, Trondus™, Varro®.
Please refer to FMC Tank-Mix Policy on Page 81.

Timing: 3-leaf stage to just prior to flag-leaf stage

Crop Rotation:

Replant Interval	Rotational Crop
Following Year	No re-cropping restrictions

Application Information:

Rates and Packaging: One (1) case treats 40 acres. One case is a co-pack of 486 g + 7.6 L.

Surfactant: Not required when used alone. When tank-mixing with grass herbicides, use the surfactant provided with that product (follow label instructions if surfactant is not provided).

Water Volume: 5-10 US gal/ac (50-100 L/ha)

Rainfastness: Two (2) hours

Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Broadleaf control	
Ball mustard	Round-leaved mallow*[1] (2–6 leaf)
Canada thistle* (≤15 cm, before budding)	Russian thistle
Chickweed (1–6 leaf)	Scentless chamomile*
Cleavers*[1] (1–3 whorls)	Shepherd's purse
Common groundsel	Sow-thistle*[1] (≤15 cm, before budding)
Corn spurry	Stinkweed
Cow cockle	Stork's-bill*[1] (2–6 leaf)
Dandelion[2]	Tartary buckwheat
Flixweed	Toadflax* (≤15 cm in height)
Green smartweed	**Volunteer canola**
Hemp-nettle	**Volunteer Group 2 herbicide tolerant canola**
Kochia[3]	**Volunteer Roundup Ready® canola**
Lady's-thumb	Volunteer sunflower
Lamb's-quarters	**Wild buckwheat** (up to 5-leaf)
Narrow-leaved hawk's-beard	Wild mustard
Redroot pigweed	

*Suppression.
[1] Use Barricade® II herbicide, Predicade® herbicide or Travallas® herbicide for control.
[2] Spring or fall rosettes, less than 15 cm in diameter.
[3] Most effective control with early application. Use Barricade® II herbicide or Predicade® herbicide for enhanced results and control of Group 2-resistant kochia.

Notes:

Refer to the Refine® M herbicide label for complete use instructions.

REFINE® SG HERBICIDE

POWERED BY SOLUMAX®

Count on Refine® SG herbicide for broad spectrum broadleaf weed control

- Controls broadleaf weeds, including hemp-nettle, chickweed, narrow-leaved hawk's-beard and flixweed
- One of the most broad spectrum broadleaf herbicides on the market
- Wide window of application and excellent crop safety

Crops: Wheat (spring, durum, winter), barley, oats

Seedling or established grasses for forages or seed production:
Meadow bromegrass, smooth bromegrass, creeping red fescue, tall fescue (seedling only), Kentucky bluegrass (established stand only), orchard grass, crested wheatgrass, intermediate wheatgrass, northern wheatgrass, pubescent wheatgrass, slender wheatgrass, streambank wheatgrass, tall wheatgrass, western wheatgrass

Chemical Group: Group 2

Active Ingredient(s): Tribenuron methyl + thifensulfuron methyl

Registered & Supported Tank-mix Options:
2,4-D, Attain®, Axial®, Axial® Xtreme, Banvel® II, Brazen™ II, Cirray™, Curtail® M herbicide, Horizon® NG, IPCO Avant, Lontrel™ XC herbicide, MCPA, Puma® Advance, Simplicity™ / Simplicity™ GoDri, Trondus™, Varro®. Please refer to the FMC Tank-Mix Policy on Page 81.

Timing: 2-leaf to the full flag-leaf stage

Crop Rotation:

Replant Interval (Months)	Rotational Crop
2	Alfalfa, canola, flax, lentil
Following Year	No re-cropping restrictions

Application Information:

Rates and Packaging: 12 g/ac. One (1) jug treats 40 acres. One case is 8 x 486 g.

Surfactant: Add a registered non-ionic surfactant (NIS) at 2 L per 1000 L of spray solution (0.2% v/v). When tank-mixing with grass herbicides use the surfactant provided with that product. Do not use an additional surfactant unless otherwise indicated on the label.

Water Volume: 5-10 US gal/ac (50-100 L/ha)

Rainfastness: One (1) hour
Can be applied by ground or air

Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Broadleaf control	
Ball mustard	Redroot pigweed
Canada thistle* (≤15 cm, before budding)	Round-leaved mallow[1] (2–6 leaf)*
Chickweed (1–6 leaf)	**Russian thistle**
Cleavers[1] (1–3 whorls)*	Scentless chamomile*
Common groundsel	**Shepherd's purse**
Corn spurry	Sow-thistle[1] (≤15 cm, before budding)*
Cow cockle	**Stinkweed**
Flixweed	Stork's-bill[1] (2–6 leaf)*
Green smartweed	Tartary buckwheat
Hemp-nettle	Toadflax* (≤15 cm in height)
Kochia[2]	**Volunteer canola**[3] (excluding Group 2 herbicide tolerant canola)
Lady's-thumb	Volunteer sunflower (excluding ExpressSun® herbicide tolerant sunflowers)
Lamb's-quarters	**Wild buckwheat** (up to the 5-leaf stage)
Narrow-leaved hawk's-beard	Wild mustard

*Suppression.
[1] Use Barricade® II herbicide, Predicade® herbicide or Travallas® herbicide for control.
[2] Use Barricade® II herbicide or Predicade® herbicide for enhanced results and control of Group 2-resistant kochia.
[3] For control of Group 2 herbicide tolerant canola, tank-mix with MCPA or use Refine® M herbicide.

Notes:

Refer to the Refine® SG herbicide label for complete use instructions.

TRAVALLAS®
HERBICIDE

Lightweight package, heavyweight liquid weed control

- Commanding performance on key weeds like Canada thistle[1], cleavers, narrow-leaved hawk's-beard, wild buckwheat, dandelion, scentless chamomile, hemp-nettle and kochia
- Simple to use and easy to handle
- High performance on large weeds (i.e. up to 9 whorl cleavers)
- Excellent crop safety over a wide application window
- Multiple modes of action built in (2 different groups, 3 active ingredients)

Crops: Spring wheat, durum wheat, winter wheat, barley

Chemical Groups: Groups 2 & 4

Active Ingredient(s): Metsulfuron-methyl + thifensulfuron-methyl + fluroxypyr

Timing: 2-leaf to flag-leaf

Crop Rotation:

Replant Interval (Months)	Rotational Crop
10 months after application:	Canola, flax, dry beans, faba beans, field corn, lentils, oats, peas, soybeans, spring barley, wheat (spring, durum, winter)

Registered & Supported Tank-mix Options:
Acapela®, Axial®, Brazen™ II, Everest® 2.0, Horizon® NG, MCPA Ester, Puma® Advance, Simplicity™ / Simplicity™ GoDri, Traxos®, Trondus™, Varro®. Please refer to the FMC Tank-Mix Policy on Page 81.

Application Information:
Rates and Packaging: One 8 L jug treats 40 acres (202 mL/ac). One case is 2 x 8 L.
Rainfastness: Two (2) hours
Water Volume: 5 US gal/ac (50 L/ha)
Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Control of key weeds like dandelion:

Travallas® herbicide

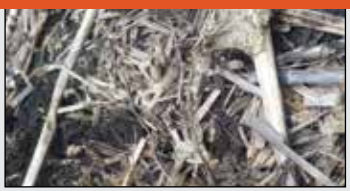
Day of application – 15" dandelion
Legal, AB

28 days after application
Legal, AB

40 days after application
Legal, AB

[1]Suppression

Wild buckwheat comparison:

Untreated	Travallas® herbicide	Premium competitive product
		
Wild buckwheat Three Hills, AB	**30 days after application** Three Hills, AB	**30 days after application** Three Hills, AB

Weeds Controlled	
Annual smartweed (green smartweed, lady's thumb)	Night-flowering catchfly (up to 10 cm)
Annual sow thistle[2]	Redroot pigweed
Canada thistle[1] (top growth control)	Round-leaved mallow[2]
Chickweed (1-6 leaf)	Russian thistle
Cleavers (1-9 whorl)	**Scentless chamomile (up to 10 cm)**
Corn spurry	Shepherd's purse (up to 20 cm)
Cow cockle	Stinkweed
Dandelion (spring or fall rosettes up to 25 cm in diameter)	Stork's-bill
Flixweed	**Volunteer canola**[3]
Hemp-nettle (up to 8 leaf)	Volunteer flax
Kochia (including Group 2-resistant)	**White cockle (less than 10 cm)**
Lamb's-quarters	Wild buckwheat (1-8 leaf)
Narrow-leaved hawk's-beard	Wild mustard

[1] Suppression
[2] When tank-mixed with MCPA Ester
[3] Including Group 2 herbicide-tolerant varieties when tank-mixed with MCPA Ester

Notes:

Refer to the Travallas® herbicide label for complete use instructions.

UPBEET®
HERBICIDE

Broadleaf weed control for sugar beets

Crop: Sugar beets

Chemical Group: Group 2

Active Ingredient(s): Triflusulfuron-methyl

Registered and Supported Tank-mixes:
UpBeet® herbicide may be applied alone with a NIS. If tank-mixing, may be mixed with Betamix® B EC herbicide. Do not add a surfactant when tank-mixing. Please refer to FMC Tank-Mix Policy on Page 81.

Crop Rotation:

Replant Interval (Months)	Rotational Crop
1	Sugar beets
Following year	Spring wheat, durum, winter wheat, barley, sugar beets

Application Information:

Rates and Packaging: Broadcast at 14 g/ac to 28 g/ac. Do not exceed 40 g/ac per growing season.

Surfactant: If applied alone, add a registered non-ionic surfactant (Agral® 90, Ag Surf®, Citowett® Plus or Sure-Mix™ at 0.25% v/v or 2.5 L per 1000 L of spray solution).

Water Volume: 10 US gal/ac (100 L/ha)

Rainfastness: Six (6) hours

Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

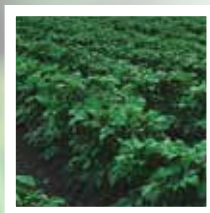
Weeds Controlled	
Velvetleaf[1]	
When tank-mixed with Betamix® B EC herbicide, UpBeet® herbicide will control the following additional weeds:	
Green foxtail[2]	Lamb's-quarters
Kochia (rosette stage)	Redroot pigweed

[1] Two (2) applications necessary.
[2] Suppression.

Notes: _____

Refer to the UpBeet® herbicide label for complete use instructions.

NOTES



Insecticide

Carbine® 55
Coragen® MaX 58
Cygon® 480-AG 64
Cygon® 400EC 67
Pounce® 384EC 70



Insecticide

Carbine® 55
Coragen® MaX 58
Cygon® 480-AG 64
Cygon® 400EC 67
Pounce® 384EC 70

CARBINE®

INSECTICIDE

Targeted aphid and lygus bug control in pulses and alfalfa

- Fast acting, selective aphid control. Reduces numbers of lygus and tarnished plant bugs.
- Residual with translaminar activity
- Ideal partner in integrated pest management (IPM) - minimal impact on many important beneficial insects and pollinators[1], with a favourable environmental and toxicological profile.
- Short 7 day PHI for flexibility

Crops: Lentil, field pea, chickpea, dry bean, faba bean, lupin, alfalfa (seed and forage), clover

Chemical Group: Group 29

Active Ingredient(s): Flonicamid

Application Information:

Carbine® insecticide applications can be made any time before the pre-harvest interval in the registered crop. Apply once the pest threshold has been met. Controls both immature and adult insect stages with unique anti-feeding action. Minimum 7 days between applications with a maximum of 242 g/acre per year.

Packaging: 4 x 1.587 KG jugs/case

Surfactant: Not required

Water volume (Ground): Minimum 10 US gal/ac (100 L/ha). Thorough spray coverage of plant foliage is essential for optimum control. Do not apply by air.

Temperature: Can be applied in a wide range of temperatures. High temperatures do not reduce efficacy. If temperatures are high at time of application, consider increasing water volume to ensure adequate coverage.

Rainfast: When dry on leaf surface. Avoid application when heavy rain is forecast.

Mixing Instructions: Ensure the spray system is clean and free of residues from previous applications. Fill the spray tank half full with clean water. Ensure the agitation system is operating and sufficient to provide uniform spray mixing during application and until the spray tank has been emptied. Complete filling the spray tank to the desired level. Avoid overnight storage of Carbine® insecticide spray mixtures. Do not use liquid fertilizer as a carrier for Carbine® insecticide. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Re-Entry Period: 12 hours

[1]When applied at label rates. In line with Integrated Pest Management and Good Agricultural Practices, insecticide applications should be made when pollinators are not foraging to avoid unnecessary exposure.

Crop	Pest	Rate	PHI (days)	Application Information
Pulses (not including soybean): Lentil, field pea, chickpea, dry edible beans, faba bean, lupins	Aphids	49-65 g/ac (25 ac/jug)	7	Apply before aphid populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary. Use higher rates for greater pest populations and/or dense foliage. Do not apply more than 65 g/ac per application (up to 3 applications per season).
	Lygus & tarnished plant bug	81 g/ac (20 ac/jug)		Apply when lygus bugs first appear in the field and before populations reach high levels. Carbine® Insecticide will stop lygus bug feeding rapidly but it may take several days to see a reduction in lygus bug numbers. Reapply when new insects aredetected.
Non Grass Animal Feeds Alfalfa (seed*, forage), clover, lespedeza, lupin, sainfoin, trefoil, vetch; crown vetch, milk vetch	Aphids	49-65 g/ac (25 ac/jug)		Apply before aphid populations reach economic thresholds or as populations begin to increase but before damaging populations become established. Scout fields and reapply if necessary. Use higher rates for greater pest populations and/or dense foliage. Within the range, use higher rate for greater pest populations and/or dense foliage.
	Tarnished plant bug	81 g/ac (20 ac/jug) max 3 applications OR 121 g/ac (13.2 ac/jug) max 2 applications		

* Do not use seed or treated forage for human or animal consumption from treated alfalfa that was grown for seed production specifically.

Carbine® insecticide quickly stops aphids from feeding

Untreated

Treated with 100 µg/mL flonicamid (active ingredient in Carbine® insecticide)

Two (2) days after application, pea aphids were 50% smaller than the untreated pea aphids.

Three (3) days after application all treated pea aphids were dead.

Source: Sadeghi, A. et al. (2009) Evaluation of the susceptibility of the pea aphid, Acyrthosiphon pisum, to a selection of novel biorational insecticides using an artificial diet. Journal of Insect Science. Vol. 9 (Article 65)

CARBINE®
INSECTICIDE

How Carbine® insecticide works

- Active by contact and ingestion
- Provides up to 14 days extended control[1]
- Both immature and adult staged are controlled
- Higher temperatures do not reduce efficacy
- Translaminar activity – controls the aphid whether they fed on the top or bottom of the leaf
- Minimal impact on many important beneficial insects and pollinators[2]

What to expect with Carbine® insecticide

- Rapid and irreversible feeding cessation within 30 minutes[3]
  - Stylet mouthpart is impaired, and pest is unable to penetrate tissue to feed.
  - Evidence of activity: leg flicks, swivels, uncoordinated movements
- Mortality due to dehydration / starvation. May take up to:
  - 2-4 days for aphids
  - 7-10 days for lygus bug (including tarnished plant bug)
  - Note: target insects not causing damage during this time
- What to look for:
  - No recolonization
  - No new nymphs

Carbine® insecticide provides selective and extended control[1] of aphids in peas with minimal impact on many important beneficials[2]

Untreated

Carbine® insecticide (10 DAA)

Source: Internal FMC field trial, MB, 2022

[1] Dependent on application rate and environmental conditions.
[2] When applied at label rates. In line with Integrated Pest Management and Good Agricultural Practices, insecticide applications should be made when pollinators are not foraging to avoid unnecessary exposure.
[3] Morita et al. 2007. Pest Man. Sci.

CORAGEN® MAX INSECTICIDE

POWERED BY RYNAXYPYR® ACTIVE

Highly concentrated for easier handling and increased sustainability

- Powered by the Rynaxypyr® active, Coragen® MaX insecticide is an **innovative insecticide** providing broad spectrum, extended control
- Active ingredient from a **novel group of chemistry** with no cross-resistance to other chemistries
- Controls hatching insects all the way through to adult stages of development
- **Fast acting!** Insect feeding stops in as little as 7 minutes
- **Extended Control!** Delivers reliable, long-lasting protection against key insect pests.
- **Coragen® MaX insecticide** has minimal impact on many important beneficial insects and pollinators[1], and its unique environmental and toxicological profile make it a sound choice for growers and applicators.

Crops:

Brassica vegetables	Fodder and hay	Okra
Canola	Fruiting vegetables	Peas
Cereals (wheat, barley, rye, oats, triticale)	Grass forage	Potatoes
Chickpeas	Leafy vegetables	Soybeans
Cucurbit vegetables	Legume vegetables	Sunflowers
Corn (field, sweet, seed, pop)	Lentils	Tame mustard
Flax	Mint	Tuberous and corm vegetables
	Non-grass animal feeds	

How Coragen® MaX works: Coragen® MaX insecticide is unique in the way that it controls target insect pests. After application and consumption of treated plant material, target insects will undergo rapid and irreversible cessation of feeding, lethargy, regurgitation and muscle paralysis. They may remain alive for up to a few days after application (depending on rate applied, target insect and stage), but will not be causing further feeding damage leading up to their death.

Chemical Group: **Group 28**

Active Ingredient(s): Chlorantraniliprole

Resistance Management - DO NOT make a foliar application of Coragen® MaX insecticide for a minimum of 60 days following an in-furrow or soil application or planting of seed or seed pieces treated with any Group 28 insecticide.

Application Information:

Packaging: 4 x 2 L jugs/case

Rainfast: 1 hour

Water Volume (Ground): 10 US gal/ac (100 L/ha)

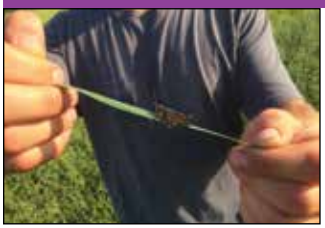
Aerial Application: 5 US gal/ac (50 L/ha) for cereals, corn, legume vegetables (dry edible beans, soybeans, lupine, faba bean, chickpeas, lentils, peas, sugar beets), oilseeds (canola, mustard, flax, sunflower, safflower, etc.), potatoes, grass forage, fodder, and hay group (crop Group 17) and non-grass animal feeds (crop Group 18)

Re-entry Period: 12 hours

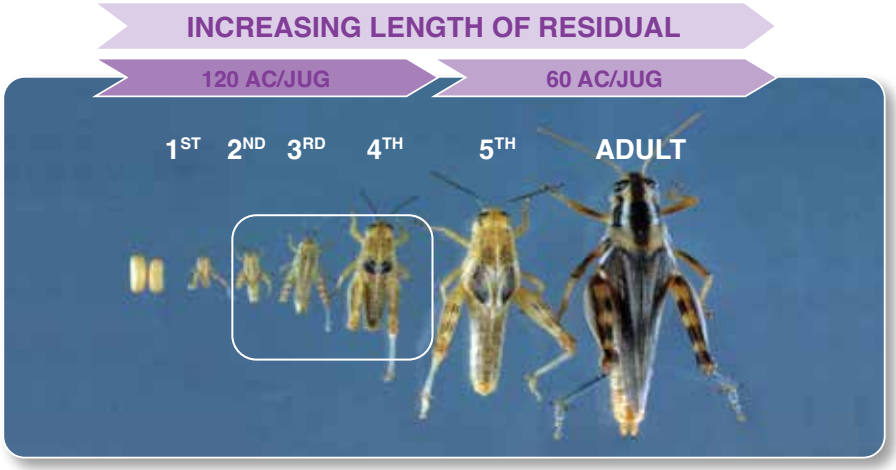
Mixing Instructions: Please refer to the FMC Herbicide Mixing Instructions on Page 78.

[1] In line with Integrated Pest Management and good agricultural practices, insecticide applications should be made when pollinators are not foraging to avoid unnecessary exposure.

What to Expect After Application



Provides Extended Control:	7 to 21 days (depending on pest, rate, crop stage and when weather and temperature are optimal).
Staging:	Controls hatching insects all the way through to adult stages.
Tank-Mixing:	Very stable in the tank and very tank-mixable.
Temperature:	Can be applied in a wide range of temperatures (between 4°C and 40°C).



PRAIRIE PEST MONITORING BLOG – PACKARD GRASSHOPPER **(EGG, NYMPH, ADULT) AAFC**

Rate	Situation
(120 ac / 2L jug) 17 mL/ac	✔ Lower grasshopper populations only ✔ Grasshopper nymphs to 2nd instar stage ✔ Expected residual of approximately 7 days
(80 ac / 2L jug) 25 mL/ac	✔ Plant close to final size (i.e. flowering or mid-to later season) ✔ 3rd to 4th instar stage ✔ Flushing, continued pressure entering field ✔ Move to higher rate range, even in early crop stage, if pest pressure is excessively high
(60 ac / 2L jug) 33.5 mL/ac	✔ Higher insect populations ✔ Fewer bites required to achieve lethal dose ✔ At early pod set (prior to dry down) ✔ 4th instar to adult stage ✔ Longer expected residual (7-14 days)

Pests Controlled and Application Timing				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
OILSEEDS GROUP (Crop Group 20) **Canola,** rape seed, **mustard seed, flax,** linseed, **sunflower seed,** safflower, borage, calendula, castor oil plant, Chinese tallowtree, cottonseed, crambe, cuphea, echium, euphorbia, evening primrose, gold of pleasure, hare's ear mustard, jojoba, lesquerella, lunaria, meadowfoam, milkweed, niger seed, oil radish, poppy seed, rose hip, stokes aster, sweet rocket, tea oil plant	**Diamondback moth**	17 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. For cutworm control, apply to smaller plants or when lower portions of plant can receive adequate coverage. Do not make more than 3 applications per season. Do not apply more than once every 5 days. Do not exceed a total of 151 mL of Coragen® MaX Insecticide per ha per year.
	Cabbage looper **Cutworms** Imported cabbage worm Swede midge	33.5 mL/ac		
	Bertha armyworm **17 mL/ac** recommended when the bertha armyworms are less than 1 inch in length, and populations are low. **33.5 mL/ac** recommended when the bertha armyworms are approximately 1 inch in length and populations are increasing. **50.5 mL/ac** recommended when the bertha armyworms are greater than 1 inch in length and populations are high. **Rates on the higher end of the range will result in longer length of extended control.**	17 to 50.5 mL/ac		
	Grasshoppers	17 to 33.5 mL/ac		
	Reduces damage caused by banded sunflower moth. Sunflower head moth	33.5 to 50.5 mL/ac		
CEREAL GRAINS **Crop Groups 15 and 16 (except corn and wild rice)** **Barley,** buckwheat, millet - pearl, millet - proso, **oats,** rye, sorghum, teosinte, triticale, **wheat**	**Grasshoppers**	17 to 33.5 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Cutworms	33.5 mL/ac		
	Armyworm Fall armyworm Beet armyworm Corn earworm European corn borer	33.5 to 50.5 mL/ac		

Pests Controlled and Application Timing				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
LEGUME VEGETABLES (Crop Group 6) Bean (lupinus) (includes grain lupin, sweet lupin, white lupin and white sweet lupin), **bean (phaseolus)** (includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean), bean (vigna) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean), **broad bean (fava), chickpea** (garbanzo), guar, jackbean, lablab bean, **lentil,** pea (Pisum) (includes dwarf pea, edible-podded pea, English pea, **field pea,** garden pea, green pea, snowpea, sugar snap pea), pigeon pea, sword bean, **soybean**	**Grasshoppers**	17 to 33.5 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. For cutworm control, apply to smaller plants or when lower portions of plant can receive adequate coverage.
	Cabbage looper **Cutworms**	33.5 mL/ac		
	Armyworm Fall armyworm Beet armyworm Corn earworm European corn borer Western bean cutworm	33.5 to 50.5 mL/ac		
CORN Field corn, popcorn, seed corn, sweet corn	Black cutworm	33.5 mL/ac	1 day (sweet and seed corn) 14 days (field corn and popcorn)	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control. For black cutworm control, apply to smaller plants or when lower portions of plant can receive adequate coverage. For corn earworm, European corn borer and Western bean cutworm control, time the applications to coincide with peak egg hatch. Scout by monitoring egg laying and egg hatch to determine application timing. Thorough coverage is essential for optimum control. Reapply if monitoring indicates it is necessary.
	Armyworm Fall armyworm Beet armyworm Variegated cutworm Corn earworm/Tomato fruitworm European corn borer Western bean cutworm	33.5 to 50.5 mL/ac		
	Grasshoppers	17 to 33.5 mL/ac		

Pests Controlled and Application Timing				
Crop	**Pest**	**Rate**	**PHI**	**Application Information**
POTATOES (Crop Group 1)	Colorado potato beetle	33.5 to 67.5 mL/ac	1 day	Begin applications when treatment thresholds have been reached. Thorough coverage is essential for optimum control. For Colorado potato beetle, application made at larval stages provides optimal control. For all pests, use the high rate under heavy pest pressure. For control of European corn borer, time the application to coincide with peak egg hatch. Scout for European corn borer by monitoring egg laying and egg hatch to determine application timing. Registered for aerial application.
	Grasshoppers	17 to 33.5 mL/ac		
	Diamondback moth Cabbage looper Black cutworm Imported cabbage worm Swede midge	33.5 mL/ac		
	European corn borer Variegated cutworm Tobacco hornworm Tomato hornworm Leaf miners; *Liriomyza sativae, Liriomyza trifolii*	33.5 to 50.5 mL/ac		
GRASS FORAGE, FODDER AND HAY (Crop Group 17) Any grass, Gramineae family (either green or cured) except sugarcane and those included in the cereal grains group, that will be fed to or grazed by livestock, all pasture and range grasses and grasses grown for hay or silage.	**Grasshoppers**	17 to 33.5 mL/ac	0 days	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Cutworms	33.5 mL/ac		
	Armyworm Fall armyworm Beet armyworm Corn earworm	33.5 to 50.5 mL/ac		
NON-GRASS ANIMAL FEEDS (Crop Group 18) **Alfalfa,** bean (velvet), clover (trifolium, melilotus), kudzu, lespedeza, lupin, sainfoin, trefoil, vetch; vetch (crown), vetch (milk)	Beet armyworm	33.5 to 50.5 mL/ac	0 days	Begin applications when treatment thresholds have been reached. Thorough coverage is important to obtain optimum control.
	Alfalfa weevil (Suppression)	50.5 to 67.5 mL/ac		
	Cutworms	33.5 mL/ac		
	Grasshoppers	17 to 33.5 mL/ac		

Refer to the Coragen® MaX insecticide label for complete use instructions.

CORAGEN® MAX INSECTICIDE

POWERED BY RYNAXYPYR® ACTIVE

Registered Rates, Crops & Insects Controlled

Insect	Coragen® MaX insecticide Rates Acres / 2L Jug	Coragen® MaX insecticide (600 SC formulation) 2L Jug Rates / Acre
Alfalfa weevils	30 - 40	50.5 – 67.5 mL/ac
Armyworm in cereals	40 - 60	33.5 – 50.5 mL/ac
Banded sunflower moths	40 - 60	33.5 – 50.5 mL/ac
Beet armyworms	40 - 60	33.5 – 50.5 mL/ac
Bertha armyworms	**40 - 120**	**17 – 50.5 mL/ac**
Cabbage loopers	60	33.5 mL/ac
Colorado potato beetles	30 - 60	33.5 – 67.5 mL/ac
Corn earworms	40 - 60	33.5 – 50.5 mL/ac
Cutworms	**60**	**33.5 mL/ac**
Diamondback moths	**120**	**17 mL/ac**
European corn borers	40 - 60	33.5 – 50.5 mL/ac
Fall armyworms	40 - 60	33.5 – 50.5 mL/ac
Grasshoppers	**60 - 120**	**17 – 33.5 mL/ac**
Imported cabbage worms	60	33.5 mL/ac
Sunflower head moths	40 - 60	33.5 – 50.5 mL/ac
Swede midge	60	33.5 mL/ac

Crops	Pre-Harvest Interval	Insects
Alfalfa	0 days	Grasshoppers, alfalfa weevil (suppression)
Oilseeds: Canola, flax, mustard, sunflower, safflower	1 day	Bertha armyworm, diamondback moth, cutworms, grasshoppers, swede midge, imported cabbage worm, sunflower head moth
Pulses: Chickpeas, lentils, peas, beans, soybeans	1 day	Armyworm, fall armyworm, beet armyworm, cutworms, grasshoppers, cabbage looper, corn earworm, European corn borer, Western bean cutworm
Cereals	1 day	Grasshoppers, beet armyworm, fall armyworm, cutworms, armyworm, corn earworm, European corn borer
Corn (sweet and seed)	1 day	Armyworm, fall armyworm, variegated cutworm, beet armyworm, corn earworm, Western bean cutworm, European corn borer, black cutworm, grasshoppers
Corn (field and popcorn)	14 days	
Grass forage, hay	0 days	Grasshoppers, armyworm, beet armyworm, fall armyworm, corn earworm, cutworms
Potatoes	1 day	Colorado potato beetle, European corn borer, cutworms, grasshoppers

CYGON® 480-AG
SYSTEMIC INSECTICIDE

Reliable wheat midge, aphid, lygus and spider mite control

- Broad spectrum insecticide for the control of insects on listed field crops
- Provides contact and stomach activity in target insects
- Local systemic activity - penetrates the leaf and gets to the underside to kill aphids, with a few days of extended control
- Active under a wide range of application temperatures, it works well during warm periods when aphids and mites thrive

Crops: Wheat, barley, oats, soybeans, beans, potatoes, alfalfa, canola, asparagus, pastures, forage crops, strawberry, peas, clover, canary seed, flax

Insecticide Group: Group 1B

Active Ingredient(s): Dimethoate

Tank-mixes: None registered or supported

Packaging: 2 x 10 L jugs per case

Re-entry Period: 12 hours (unless otherwise indicated on label)

Rainfastness: 6 hours

Water Volume: Minimum 10 gal/ acre (Ground) or 5 gal/ acre (Aerial - crop specific, see below for more information)

Mixing Instructions: Please check with the label for complete mixing instructions based on crop and application. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Two-spotted spider mite

Adult nymph soybean aphid

Lygus bug

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Wheat	Orange blossom wheat midges Say's stink bug (For Say's stink bug must use a water volume of at least 10 gal/ac (100 L/Ha) for ground or 5 gal/ac (50 L/Ha) for air).	405 mL/ac (25 ac/ jug)	35 days	If adult midges are present (1 midge / 4-5 wheat heads), sprays should be applied when 25% of the wheat head has fully emerged from the boot but before flowering has begun. At this stage, wheat first becomes susceptible to attack by the egg-laying females. Applications should be made in the late afternoon or evening when temperatures exceed 15°C and the wind speed is less than 10 km/h. High volume sprays will improve penetration of the crop. Proper timing of application is essential for control. Ground or aerial application.
Wheat, oats, barley	Thrips	405 mL/ac (25 ac/ jug)	35 days	Ground or aerial application.
	Aphids Russian wheat aphid[1]	172 mL/ac (58 ac/ jug)		

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Soybean	Spider mites	405 mL/ac (25 ac/ jug)	30 days	Do not feed or allow livestock to graze treated forage. Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. Ground only.
Peas	Aphids	111-154 mL/ac (65 - 90 ac/ jug)	3 days	May be applied by air or ground equipment. Do not feed or allow livestock to graze treated vines within 21 days after application. Do not apply when bees are foraging. Ground or aerial application.
Beans	Aphids Bean beetles Leafhoppers Leaf miners Lygus bugs Mites Tarnished plant bugs	283-405 mL/ac (25 - 35 ac/ jug)	7 days	Do not feed or allow livestock to graze treated forage. Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. Ground only.
Potatoes	Aphids Leafhoppers	223-405 mL/ac (25 - 35 ac/ jug)	7 days	Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. Ground only.
Alfalfa	Aphids, Leafhoppers, Lygus bugs, reduction of alfalfa weevil larvae	172 mL/ac (58 ac/ jug)	2 days	
	Blotch leaf miners	223 mL/ac (45 ac/ jug)	2 days	
	Grasshoppers - nymphs	223 mL/ac (45 ac/ jug)	28 days	
	Grasshoppers - adults	344-364 mL/ac (27 - 29 ac/ jug)	28 days	
Alfalfa (seed)	Lygus bugs Plant bugs	445 mL/ac (23 ac/ jug)	10 days	
Forage crops (grain)	Lygus bugs Plant bugs	172 mL/ac (58 ac/ jug)	2 days	
	Grasshoppers – Low infestations	172-223 mL/ac (45 - 58 ac/ jug)	2 days	
	Grasshoppers- nymphs	223 mL/ac (45 ac/ jug)	2 days	
	Grasshoppers- adults	344-405 mL/ac (23 - 25 ac/ jug)	28 days	

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Sweet clover, red clover, alsike clover	Sweet clover weevils	344-445 mL/ac (23 - 29 ac/ jug)	28 days	Ground or aerial application.
Pastures	Grasshoppers- nymphs	223 mL/ac (45 ac/ jug)	2 days	
	Grasshoppers- adults	344-405 mL/ac (23 - 25 ac/ jug)	28 days	
Canola	Aphids Leafhoppers Grasshoppers	344-364 mL/ac (27 - 29 ac/ jug)	21 days	Repeat application only when necessary. Toxic to bees. Do not apply during the crop blooming period or during the 5-day period before the crop blooms. Ground or aerial application.
	Lygus bugs	182-364 mL/ac (27 - 55 ac/ jug)		
Asparagus	Asparagus aphid	931 mL/ac (10 ac/ jug)	Apply post harvest only	For mature asparagus, sprays begin July 1, after crop has been harvested, and continue at 3 to 4 week intervals until defoliation in October. For immature asparagus, begin application mid-May. If applied on immature asparagus do not harvest for feed or food. Ground only.
Canary seed	Aphids	202 mL/ac (50 ac/ jug)	21 days	Apply when >50 aphids per seed head between heading and soft dough stage. Do not apply when bees are foraging. Ground or aerial application.
Flax	Potato aphids	177 mL/ac (57 ac/ jug)	21 days	One application per season; apply from late flowering to early green bole stage in sufficient water to provide good coverage. Do not apply when bees are foraging. Ground or aerial application.
Strawberries (bearing)	Tarnished plant bugs	1.1 L/ac (9 ac/ jug)	7 days	Apply first spray when first blooms appear and the second application 10 to 12 days after if needed. Ground only.
Strawberries (bearing and non-bearing)	Aphids Mites	911 mL/ac (10 ac/ jug)	7 days	Spray when insects first appear and repeat as necessary using sufficient water for good coverage. Ground only.

[1]Suppression

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging the treatment area.

CYGON® 400EC INSECTICIDE

Reliable wheat midge, aphid, lygus and spider mite control

- **New** formulation for added ease of use
- Broad spectrum insecticide for the control of insects on listed field crops
- Provides contact and stomach activity in target insects
- Local systemic activity - penetrates the leaf and gets to the underside to kill aphids, with a few days of extended control
- Active under a wide range of application temperatures, it works well during warm periods when aphids and mites thrive

Crops: Wheat, barley, oats, soybeans, beans, potatoes, alfalfa, canola, asparagus, pastures, forage crops, strawberry, peas, clover, canary seed, flax

Insecticide Group: Group 1B

Active Ingredient(s): Dimethoate

Tank-mixes: None registered or supported

Packaging: 2 x 9.7 L jugs per case

Re-entry Period: 12 hours (unless otherwise indicated on label)

Rainfastness: 6 hours

Water Volume: Minimum 10 gal/ acre (Ground) or 5 gal/ acre (Aerial - crop specific, see below for more information)

Mixing Instructions: Please check with the label for complete mixing instructions based on crop and application. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Two-spotted spider mite

Adult nymph soybean aphid

Lygus bug

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Wheat	Orange blossom wheat midges Say's stink bug (For Say's stink bug must use a water volume of at least 10 gal/ac (100 L/Ha) for ground or 5 gal/ac (50 L/Ha) for air).	486 mL/ac (20 ac/jug)	35 days	If adult midges are present (1 midge / 4-5 wheat heads), sprays should be applied when 25% of the wheat head has fully emerged from the boot but before flowering has begun. At this stage, wheat first becomes susceptible to attack by the egg-laying females. Applications should be made in the late afternoon or evening when temperatures exceed 15°C and the wind speed is less than 10 km/h. High volume sprays will improve penetration of the crop. Proper timing of application is essential for control. Ground or aerial application.
Wheat, oats, barley	Thrips	486 mL/ac (20 ac/jug)	35 days	Ground or aerial application.
	Aphids Russian wheat aphid[1]	206 mL/ac (47 ac/jug)		

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Soybean	Spider mites	486 mL/ac (20 ac/jug)	30 days	Do not feed or allow livestock to graze treated forage. Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. Ground only.
Peas	Aphids	134-185 mL/ac (52-72 ac/jug)	3 days	May be applied by air or ground equipment. Do not feed or allow livestock to graze treated vines within 21 days after application. Do not apply when bees are foraging. Ground or aerial application.
Beans	Aphids Bean beetles Leafhoppers Leaf miners Lygus bugs Mites Tarnished plant bugs	340-486 mL/ac (20-29 ac/jug)	7 days	Do not feed or allow livestock to graze treated forage. Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. Ground only.
Potatoes	Aphids Leafhoppers	267-486 mL/ac (20-36 ac/jug)	7 days	Toxic to bees. Avoid application during the crop blooming period. If applications must be made during the crop blooming period, restrict applications to evening when most bees are not foraging. Ground only.
Alfalfa	Aphids, Leafhoppers, Lygus bugs, reduction of alfalfa weevil larvae	206 mL/ac (47 ac/jug)	10 days	
	Blotch leaf miners	267 mL/ac (36 ac/jug)	10 days	
	Grasshoppers - nymphs	267 mL/ac (36 ac/jug)	10 days	
	Grasshoppers - adults	413-437 mL/ac (22 ac/jug)	28 days	
Alfalfa (seed)	Lygus bugs Plant bugs	534 mL/ac (18 ac/jug)	10 days	
Forage crops (grain)	Lygus bugs Plant bugs	206 mL/ac (47 ac/jug)	2 days	
	Grasshoppers – Low infestations	206-267 mL/ac (36 - 47 ac/jug)	2 days	
	Grasshoppers- nymphs	267 mL/ac (36 ac/jug)	2 days	
	Grasshoppers- adults	413-486 mL/ac (20 ac/jug)	28 days	

Insects Controlled and Application Information				
Crop	**Pest**	**Rate**	**PHI (days)**	**Application Information**
Sweet clover, red clover, alsike clover	Sweet clover weevils	413 - 534 mL/ac (18 - 23 ac/jug)	28 days	Ground or aerial application.
Pastures	Grasshoppers- nymphs	267 mL/ac (36 ac/jug)	2 days	
	Grasshoppers- adults	413 - 486 mL/ac (20 ac/jug)	28 days	
Canola	Aphids Leafhoppers Grasshoppers	413 - 437 mL/ac (22 ac/jug)	21 days	Repeat application only when necessary. Toxic to bees. Do not apply during the crop blooming period or during the 5-day period before the crop blooms. Ground or aerial application.
	Lygus bugs	219 - 437 mL/ac (22 - 44 ac/jug)		
Asparagus	Asparagus aphid	1117 mL/ac (9 ac/jug)	Apply post harvest only	For mature asparagus, sprays begin July 1, after crop has been harvested, and continue at 3 to 4 week intervals until defoliation in October. For immature asparagus, begin application mid-May. If applied on immature asparagus do not harvest for feed or food. Ground only.
Canary seed	Aphids	243 mL/ac (40 ac/jug)	21 days	Apply when >50 aphids per seed head between heading and soft dough stage. Do not apply when bees are foraging. Ground or aerial application.
Flax	Potato aphids	207 mL/ac (47 ac/jug)	21 days	One application per season; apply from late flowering to early green bole stage in sufficient water to provide good coverage. Do not apply when bees are foraging. Ground or aerial application.
Strawberries (bearing)	Tarnished plant bugs	1336 mL/ac (7 ac/jug)	7 days	Apply first spray when first blooms appear and the second application 10 to 12 days after if needed. Ground only.
Strawberries (bearing and non-bearing)	Aphids Mites	1093 mL/ac (9 ac/jug)	7 days	Spray when insects first appear and repeat as necessary using sufficient water for good coverage. Ground only.

[1]Suppression

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds.

Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging the treatment area.

POUNCE® 384EC INSECTICIDE

High performing insecticide for control of striped and crucifer flea beetles as well as cutworms

- **Excellent control of both striped and crucifer flea beetles in canola**
- **Cutworm control in a wide variety of crops**
- Synthetic pyrethroid
- Stable in sunlight resulting in longer control versus other pyrethroids

Crops: Canola, cereals (barley, wheat, oats), cole crops (cabbage, cauliflower, broccoli, brussels sprouts), corn, flax, lentils, peas, potato, sunflower, sweet corn

Chemical Group: Group 3

Active Ingredient(s): Permethrin

Registered and Supported Tank-Mix Options:
For tank-mixing with other products, please perform a jar test for compatibility. FMC supports the use application of the following tank mixes: Ares® SN (up to 5 leaf stage canola), Coragen® MaX insecticide (up to 5 leaf stage canola). Please refer to FMC Tank-Mix Policy on Page 81.

Timing: Depends on the crop. Please refer to the application chart.

Crop Rotation: No re-cropping restrictions

Application Information: Please refer to the application chart.

Rates and Packaging: 2 x 10 L jugs/case and 12 x 1 L jugs/case

Surfactant: Specific to pest and crop

Water Volume: Ground - 10 US gal/ac (100 L/ha) Air - 3 US gal/ac (30 L/ha)

Rainfastness: Once dry on the leaf surface. Do not apply if rain is imminent in forecast.

Mixing Instructions: Please check with the label for complete mixing instructions based on crop and application. Please refer to the FMC Herbicide Mixing Instructions on Page 78.

Striped flea beetle (left) and crucifer flea beetle (right)

Cutworms

POUNCE® 384EC INSECTICIDE

Pests Controlled and Application Timing				
Crop	**Pest**	**Recommended Rate***	**PHI**	**Application Information**
Canola	Crucifer flea beetle **Striped flea beetle**	62 mL/ac (160 ac/10 L jug)	Apply only up to 5 leaf stage	**Crop Staging:** Up to 5 leaf **Ground application:** Apply in sufficient water for good coverage when insects are present. Application should be made when the beetles are actively feeding. For severe infestations, use 73 mL/ac. **Aerial application:** Apply in 1- 4 gal/ac (11-35 L/Ha) spray water. Can only be applied by air once per season.
Canola, cereals, corn, flax, lentils, peas, potatoes, sugar beets, sunflowers	**Cutworms:** army, black, dark-sided, pale western, red-backed, white	125 mL/ac (80 ac/10 L jug)	Apply only up to 5 leaf stage	**Crop Staging:** Up to 5 leaf **Ground application** should be made under warm, moist conditions in the evening or at night when cutworm activity is highest. Do not disturb soil surface for 5 days after treatment.
Cole Crops (cabbage, cauliflower, broccoli, brussels sprouts)	Cabbage looper, diamondback moth, imported cabbage worm, diamondback moth larvae, crucifer flea beetle	71 mL/ac (140 ac/10 L jug)	Broccoli – 7 days PHI Remaining crops – 3 days PHI	**Ground application:** Apply in 40-70 gal/ac (400-650 L/ Ha) spray water on a 7-10 day schedule when insects or insect damage first appears. Add Agral® 90 wetting agent at 300 mL per 1000 L of water to improve wetting and coverage. Do not apply by air.
Corn (sweet only)	European corn borer Corn earworm	143 mL/ac (70 ac/10 L jug)	1 day PHI	**Ground application:** Apply specified dosage in 35-50 gal of water/ac. Spray when first feeding is observed. For second brood borers in plantings, apply before tassels show. For control of corn earworm, direct the spray to ensure coverage of ears and silks. **Aerial application:** Application by air is permitted. Apply specified rate in 1- 4 gal/ac (11-35 L/Ha) spray water. Do not apply more than twice per year by air.
	Fall armyworm	71 mL/ac (140 ac/10L jug)		

Pests Controlled and Application Timing				
Crop	**Pest**	**Recommended Rate***	**PHI**	**Application Information**
Potato	Colorado potato beetle, potato flea beetle, potato leafhopper, tarnished plant bug (lygus bug)	100 mL/ac (100 ac/10 L jug)	1 day PHI	**Ground application:** Apply in sufficient water for thorough coverage. Repeat as necessary. **Aerial application:** Application by air is permitted, provided there is no hazard of drift to other crops or to areas occupied by people or livestock. Apply specified rate in 1- 4 gal/ac (11-35 L/Ha) spray water. Can be applied by air once per season.
	Cutworms, European corn borer	73 mL/ac (137 ac/10 L jug)		Variegated cutworm **Ground application:** Apply when insects or damage appears - usually late July or during August, depending on location. Good control is dependent on spray penetration of dense foliage. European corn borer **Ground application:** Apply in sufficient water for good coverage. Apply when egg masses begin to hatch. **Aerial application:** Application by air is permitted. Apply specified rate in 1-4 gal/ac (11-35 L/Ha) spray water. Can be applied by air once per season.

* For complete crop and insect listing, with application rate ranges, refer to label.

Pounce® 384EC insecticide control of striped flea beetles in canola

Source: St. Francois Xavier, MB
Pounce® 384EC insecticide 160 ac/jug

Notes:

Refer to the Pounce® 384EC insecticide label for complete use instructions.

NOTES



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The Benefits of Solumax® Soluble Granules

The convenience and benefits of a dry herbicide, that works like a liquid

Many sulfonylurea herbicides from FMC are formulated, using Solumax® soluble granules, which deliver active ingredients that completely dissolve in water, creating a clear solution. This unique technology gives you all the convenience and benefits of a dry herbicide that works just like a liquid.

Dry flowable (DF) **Soluble granules (SG)**

Remember, not all dry herbicides are alike! If your dry herbicide isn't powered by Solumax, you may not be maximizing your weed control and may be putting your operation at risk.

Here are the three (3) key benefits:

1. Solumax will help save you time, money and water with easier sprayer cleanout

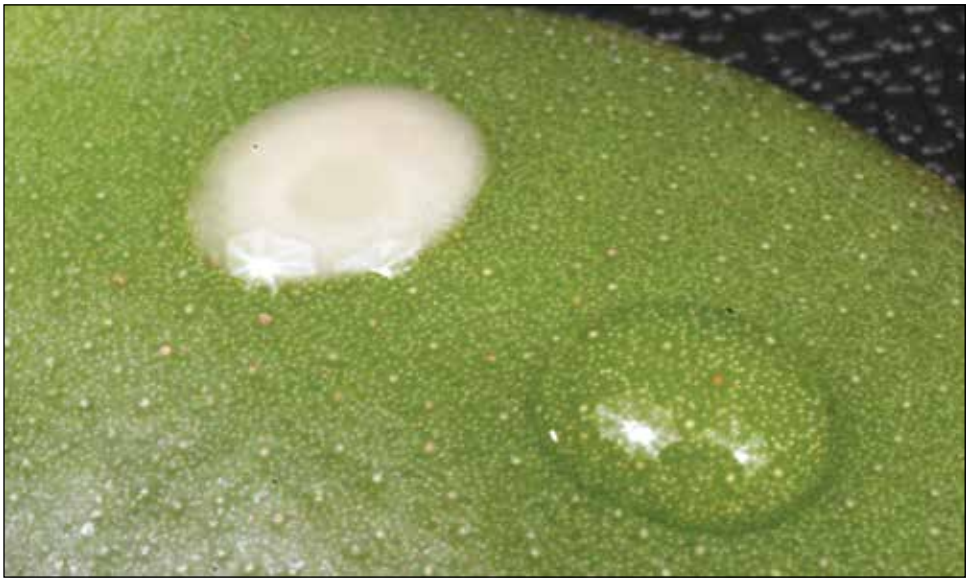
Products powered by Solumax fully dissolve into solution so less active ingredient adheres to the sides of the tank, and particles won't clog nozzles or become trapped in filters or other pinch points. In tests, cleanout times were reduced by up to 70% when compared to a dry flowable herbicide.

2. Lower risk to sensitive crops.

Removing product residue from spray tanks is easier, which helps minimize the potential impact to subsequently sprayed crops, like peas or canola.

3. Consistent weed control.

Solumax increases the bioavailability of the active ingredient to the weed. The active is rapidly absorbed into the weed, which provides fast, effective and consistent weed control.



The clear liquid on the leaf surface is a herbicide powered by Solumax. It is completely dissolved into a clear solution. The DF herbicide is cloudy because its particles are merely in suspension.

Herbicide Mixing Instructions

1. Start with a clean empty sprayer. Ensure sprayer is equipped with 50 mesh screens or filters when using FMC products.
2. Fill sprayer tank 1/2 full with clean water in order to ensure enough water for added product to dilute properly.
3. With agitator running, add the FMC products according to their formulation as shown below in the **WAMLEGS** chart. Add the products slowly.
4. If loading FMC granular products, agitate well to ensure granules are completely dissolved prior to moving to the next step. This can take longer in spring with cold water sources.

   Do not aggressively agitate SE, SC or EC formulations. Moderate agitation is sufficient. If the spray mixture looks like its boiling, then there is too much agitation.
5. If using a mix & fill tank, add the FMC product to as large a volume of water as possible in a chemical handler.
6. If combining multiple products, ensure application water volume is sufficient to dilute the mixture.
7. Proceed with adding additional products as per the **WAMLEGS** chart and water while maintaining agitation. Slowly add each tank mix partner, before proceeding to the next tank mix partner.
8. For repeat tank loads, start off with an empty tank or ensure spray solution is reduced to 10%, or less, of the original volume.
9. (Recommended) For the last load of the day, add 10L of household ammonia (containing at least 3% ammonia) to the tank heel PRIOR to the addition of the FMC product, water and glyphosate. Follow steps 2 through 6.
10. (Recommended) When spraying an FMC extended weed control liquid formulated product multiple days in a row, it is important, at the end of each day to fill the sprayer with water overnight, to prevent any film from developing on the tank walls.

Wettable powders, dispersible granules, soluble granules (WG, DF, SG, WP, SP)
Agitate tank mix thoroughly
Micro-encapsulated suspensions (ME)
Liquid flowables and suspensions (SC, SL, SN, Li, SU, SE)
Emulsifiable concentrate formulations (EC)
- Fill spray tank nearly full with water

Glyphosate formulations
Surfactants
- Complete filling the spray tank to the desired level

Special mixing instructions for soluble granule (SG) herbicides when using a CHEM HANDLER:

1. Ensure the chem handler is clean (rinsed with ammonia).
2. For best results, add the product to the top of the sprayer tank.
3. If you do use a chem handler, make sure that all of the product is completely dissolved and injected into the main tank with agitation, before adding other chemicals.
4. Low water volumes in some chem handlers can cause the water to become saturated with granular product, leaving undissolved granules. In that case, rinse the chem handler with clean water before adding any other chemicals.
5. Always dissolve the granular product with agitation in the main tank before adding a tank-mix partner.

   Note: Follow the clean-out procedure recommended for sprayer tanks for the chem handler.

Sprayer Cleanout Procedure

1. **Rinse 1:** Empty tank completely and flush entire spraying system with clean water. Ensure the boom is flushed well by removing boom end caps or opening boom end valves.
2. Visually inspect all sprayer parts, including in-line filters, to ensure removal of all visible herbicide residues.
3. **Rinse 2:** Prepare a sprayer cleaning solution by adding 3 (three) litres of ammonia per 100 litres of clean water.

   Prepare sufficient cleaning solution to allow the spray system to operate for a minimum of 15 minutes.

   Household ammonia (containing at least 3% active), agricultural ammonia such as Finish or Flush are recommended. When tank mixing a Group 2 herbicide with a petroleum based formulation or adjuvant, add a detergent at 0.25L/100 L to the ammonia rinse. The detergent breaks down the petroleum coating to allow the ammonia access to the Group 2 product. CAUTION: Do not use ammonia with chlorine bleach. Using ammonia with chlorine bleach will release a gas with a musty chlorine odour, which may cause eye, nose, throat, and lung irritation. Do not clean equipment in an enclosed area.
4. Flush the cleaning solution through the entire sprayer system and then add more water to completely fill the tank. The use of top-mounted tank rinse nozzles allow for a reduction in use of rinse volume by utilizing 3 rinses totaling 10% of the tank volume. Sit with agitation for at least 15 minutes or allow to sit overnight.
5. Drain the tank.
6. Remove nozzles, screens and filters and clean separately in a bucket of water and cleaning agent.
7. **Rinse 3:** Thoroughly rinse the tank with clean water for 5 minutes minimum, flushing water throughout the entire sprayer system.

   Frequent sprayer cleaning throughout the spraying season with ALL pesticides make any single cleaning operation more efficient and effective.

Assessing the Performance of FMC Herbicides

Establishing a check strip and answering these key questions will help with the performance evaluation of a burnoff, pre-emergent extended weed control or post-emergent in-crop herbicide.

For Pre-Emergent Extended Control Herbicide Performance Assessment

- How much rainfall was received after application and when did it occur?
- What is the soil texture, soil organic matter and pH level?
- What amount of soil disturbance occurred during seeding?
- What was the product application rate?

For Burnoff Herbicide Assessment

- What was the weed stage at time of application?
- What was the temperature 1-2 days prior to application and day of application?
- What was the weed condition at the time of application?
- What is the soil texture, soil organic matter and pH level?

For Post-Emergent In-Crop Control Herbicide Assessment

- What was the crop stage at time of application?
- What was the weed stage at time of application?
- What was the temperature 1-2 days prior to application and day of application?
- What was the crop/weed condition at the time of application?

There is Value in a Check Strip

Untreated check strips are required to determine and easily show the value of the application.

They can help with:

- Conveying the value of an early pre-seed application
- Showing the degree of control against a baseline
- Developing a clearer discussion to evaluate what has or has not occurred

Guidelines for Establishing a Check Strip

Here are some key points to keep in mind when establishing a check strip:

- Is it an area representative of the field for weeds and crops?
- Is there easy access for follow-up?
- How should the check strip be established?
  - By shutting the boom off for 1 - 2 seconds
  - By placing a tarp on the ground prior to spraying
  - Mark the area with flags to find the check strip

Product Storage

Storage requirements		
Heated storage required	Aim® EC Ally® Authority® 480 Authority Strike™ Authority® Supreme Barricade® II Command® Charge	Command® 360 ME Coragen® MaX Cygon® 480-AG Cygon® 400EC Focus® Pounce® 384 EC Predicade®
Heated storage NOT required	Carbine® Express® FX Express® PRO Express® SG Intruvix™ II Muster®	Pinnacle® SG Refine® M Refine® SG Travallas® UpBeet®

FMC Tank-Mix Policy

FMC products may be tank-mixed with registered pest control products, whose labels also allow tank-mixing, provided the entirety of both labels, including Directions for Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank-mix partner labels, the most restrictive label must be followed. Do not tank-mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank-mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact FMC of Canada Limited at 1-833-362-7722 for information before applying any tank-mix that is not specifically recommended on this label.

FMC

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Always read and follow label instructions. Member of CropLife Canada.