

2016-7705  
2017-03-03

[Container label]

GROUP	2	HERBICIDE
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# MPOWER® PRO

**COMMERCIAL (AGRICULTURAL)**

60% Water Dispersible Granules

FOR SALE FOR POSTEMERGENCE USE ON WHEAT (SPRING AND DURUM), BARLEY AND ESTABLISHED CREEPING RED FESCUE, ORCHARD GRASS, CRESTED AND INTERMEDIATE WHEAT GRASS (SEED OR FORAGE) (SOIL PH 7.9 OR LOWER), FOR CONTROL OF WESTERN SNOWBERRY AND WILD ROSE IN PASTURE AND RANGELAND, AND AS A SUMMER FALLOW AND A PRESEEDING HERBICIDE ON FIELDS TO BE PLANTED TO WHEAT (SPRING AND DURUM) AND BARLEY (tank mix only) IN THE PRAIRIE PROVINCES AND THE PEACE RIVER REGION OF BRITISH COLUMBIA ONLY

**ACTIVE INGREDIENT:** Metsulfuron Methyl 60%

**REGISTRATION NO:** 31118 PEST CONTROL PRODUCTS ACT

**Warning:** contains the allergens milk and sulfites

**READ THE LABEL AND ATTACHED BOOKLET BEFORE USING**

**NET CONTENTS:** 30g to bulk

**NewAgco, Inc.**  
320 22<sup>nd</sup> Street East  
Saskatoon (Sask.) S7K 0H1 Canada  
1-844-269-3276

Distributed by:  
**AgraCity Crop & Nutrition Ltd.**  
320 – 22<sup>nd</sup> Street East  
Saskatoon (Sask.) S7K 0H1 Canada  
1-844-269-3276

MPOWER® is a trademark of AgraCity Crop & Nutrition Ltd. or its affiliates.

**PRECAUTIONS:**

- **KEEP OUT OF REACH OF CHILDREN**
- Avoid breathing spray mist.
- Avoid contact with skin, eyes and clothing.
- Do not contaminate any body of water.
- Wear long-sleeved shirt, long pants, socks and shoes, chemical-resistant gloves during mixing and loading, clean-up and repair activities. Wear long-sleeved shirt and long pants, socks and shoes when applying.
- Do not re-enter treated fields before 12 hours after application.

NOTE: If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at [www.croplife.ca](http://www.croplife.ca).

**FIRST AID:****IF IN EYES :**

Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:**

Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**IF SWALLOWED:**

Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**IF INHALED:**

Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**ENVIRONMENTAL HAZARDS:**

TOXIC to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

Runoff: To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted or fine textured such as clay).

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

Leaching:

The use of this chemical may result in contamination of groundwater, particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

**STORAGE:**

Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed.

**DISPOSAL:**

1. Make the empty container unsuitable for further use.
2. Dispose of the container in accordance with provincial requirements.
3. For information on the disposal of unused, unwanted product contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill and for cleanup of spills.

**NOTICE TO USER:**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

[Booklet label]

GROUP	<b>2</b>	HERBICIDE
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# MPOWER<sup>®</sup> PRO

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60% Water Dispersible Granules

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**NET CONTENTS:** 30g to bulk

**For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC 1-800-424-9300 / +1 703-527-3887**

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**PRECAUTIONS:**

- **KEEP OUT OF REACH OF CHILDREN**
- Avoid breathing spray mist.
- Avoid contact with skin, eyes and clothing.
- Do not contaminate any body of water.
- Wear long-sleeved shirt, long pants, socks and shoes, chemical-resistant gloves during mixing and loading, clean-up and repair activities. Wear long-sleeved shirt and long pants, socks and shoes when applying.
- Do not re-enter treated fields before 12 hours after application.

NOTE: If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at [www.croplife.ca](http://www.croplife.ca).

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**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**ENVIRONMENTAL HAZARDS:**

TOXIC to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

Runoff: To reduce runoff from treated areas into aquatic habitats, consider the characteristics and conditions of the site before treatment. Site characteristics and conditions that may lead to runoff include, but are not limited to, heavy rainfall, moderate to steep slope, bare soil, poorly draining soil (e.g. soils that are compacted or fine textured such as clay).

Avoid application of this product when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

**Leaching:**

The use of this chemical may result in contamination of groundwater, particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

**USE PRECAUTIONS:**

- Do not use on soils above pH 7.9.
- Do not use on highly variable soils that have large gravelly or sandy areas, eroded knolls, or calcium deposits.
- Do not use more than 7.5 grams per hectare per year.
- Do not apply to irrigated land where tail water will be used to irrigate other crop land.

OVERSPRAY OR DRIFT TO IMPORTANT WILDLIFE HABITATS SUCH AS SHELTERBELTS, WETLANDS, SLOUGHS OR DRY SLOUGH BORDERS AND WOODLOTS SHOULD BE AVOIDED. LEAVE A 15 METER ZONE BETWEEN THE LAST SPRAY SWATH AND THE EDGE OF ANY OF THESE HABITATS.

- Do not contaminate irrigation water.
- Do not apply within 15 meters of a body of water.
- Do not apply to frozen ground where surface runoff may occur.

Because crop varieties differ in their tolerance to herbicides, limit first use of **MPOWER PRO** to a small area of each variety prior to adoption as a field practice.

Do not apply **MPOWER PRO** to a crop that is stressed by severe weather conditions, drought, low fertility, water saturated soil, disease or insect damage as crop injury may result. Drought, disease or insect damage following application also may result in crop injury.

Under certain conditions (such as heavy rainfall, prolonged cool weather, frost conditions, wide fluctuations in day/night temperatures) temporary lightening in crop colour and occasionally a slight reduction in crop height may occur.

Do not apply to a crop undersown with legumes or grasses as injury to the forage may result.

Do not remove soil from treated fields for use on lawns, in gardens or for backfill.

The additive effect of soil residues from the use of **MPOWER PRO** and Assert® Herbicide on the same land has not been determined. Crop rotation guidelines and minimum rotation intervals are not known and injury to rotational crops other than wheat (excluding durum) may occur. Wherever land will be treated with **MPOWER PRO** and has been or will be treated with Assert Herbicide, plant only wheat (excluding durum) after both herbicides have been used, until a bioassay (see "Bioassay" section of the **MPOWER PRO** label) demonstrates that other crops can be successfully grown.

**STORAGE:**

Store product in original container only, away from other pesticides, fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed.

**DISPOSAL:**

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2. Dispose of the container in accordance with provincial requirements.
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## DIRECTIONS FOR USE:

### IMPORTANT

Injury to or loss of desirable trees or vegetation may result from failure to observe the following. Do not apply, drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts or similar areas. Prevent drift of spray to desirable plants. Do not contaminate any body of water, including irrigation water that may be used on other crops.

APPLY **MPOWER PRO** WITH RECOMMENDED SURFACTANT.  
DO NOT APPLY BY AIR.

Carefully observe sprayer clean-up instructions, as spray tank residue may damage crops other than wheat, barley or creeping red fescue.

PRIOR TO USE REFER TO "MINIMUM CROP ROTATION GUIDELINES" SECTION OF LABEL.

### GENERAL INFORMATION

**MPOWER PRO** is recommended for postemergence use on wheat (spring and durum), barley and established creeping red fescue, orchard grass, crested and intermediate wheat grass (seed or forage) in the Prairie Provinces and the Peace River Region of British Columbia (soil pH of 7.9 or lower). In addition, **MPOWER PRO** is recommended for use on pasture and rangeland in the same geographic region (no soil pH restriction).

**MPOWER PRO** is to be mixed in water with a recommended surfactant and applied as a uniform broadcast spray. Use for selective control or suppression of certain broadleaf weeds in spring wheat (including durum), barley and established creeping red fescue (seed or forage) and for control of Western Snowberry and Wild Rose in pasture and rangeland. **MPOWER PRO** is non-corrosive, non-flammable, non-volatile and does not freeze. Wheat, barley or creeping red fescue may be grazed by or fed to livestock anytime after treatment. **MPOWER PRO** is a 60% active ingredient herbicide formulated as water dispersible granules.

Prior to using **MPOWER PRO**, careful consideration should be given to crop rotation plans. Crops other than those listed in the "Minimum Crop Rotation Guidelines" section can be very sensitive to low concentrations of **MPOWER PRO** in the soil. Refer to the "Minimum Crop Rotation Guidelines" section of this label to plan your **MPOWER PRO** use and crop rotations.

Rainfall, soil temperature and soil pH are important factors affecting **MPOWER PRO** breakdown in the soil. **MPOWER PRO** breakdown is more rapid under conditions of moist soil, warm soil temperatures and low soil pH. The breakdown process is slower under conditions of dry soil, cool soil temperatures and high soil pH. **MPOWER PRO** must be applied with a recommended surfactant early postemergence to the main flush of actively growing broadleaf weeds. For pasture and rangeland applications, **MPOWER PRO** should be applied between mid-June and mid-August after the target species have leafed out, but before fall colouration begins. Cattle may graze the treated areas on the day of treatment.

Warm, moist growing conditions promote active weed growth and enhance the activity of **MPOWER PRO** by allowing maximum foliar uptake and contact activity. If cold, dry conditions prevail, delay treatment until active weed growth resumes. Weeds hardened off by cold weather or drought stress may not be adequately controlled or suppressed and re-growth may occur. **MPOWER PRO** may only be applied with ground spray equipment. For best results, ensure good spray coverage of target weeds.

**MPOWER PRO** rapidly inhibits the growth of susceptible weeds, however, typical symptoms (discolouration) of dying weeds may not be noticeable for 1 to 3 weeks after application depending upon growing conditions and weed susceptibility. Degree of control and duration of effect depend on weed sensitivity, weed size, growing conditions, soil pH and spray coverage.

**SURFACTANTS FOR USE WITH MPOWER PRO:**

Ag-surf®, Agral® 90, Citowett® Plus, Companion®, Super Spreader Sticker® and Liberate® are registered for use with **MPOWER PRO**, **MPOWER PRO + 2,4-D**, and **MPOWER PRO + MCPA**. Not all tank mixes require the use of an adjuvant. Use the surfactant at the rate of 2 L per 1000 L spray solution (0.2% v/v). See section on MIXING INSTRUCTIONS.

**CROP LEAF STAGING: WHEAT, BARLEY AND CREEPING RED FESCUE**

Apply **MPOWER PRO** or **MPOWER PRO** tank mixtures to wheat, barley, or creeping red fescue when the crop is between the stages listed in the table below.

Post-Emergent Treatment	Crop Leaf Staging	Crop
<b>MPOWER PRO</b>	2 leaf to flag leaf (shot blade)	Wheat, barley, Creeping red fescue
<b>MPOWER PRO+ 2,4-D</b> (amine or ester)	Full 3 leaf to just before flag leaf	Wheat, barley
<b>MPOWER PRO + MCPA</b> (amine or ester)	Full 3 leaf to just before flag leaf	Wheat, barley
<b>MPOWER PRO + Avenge</b> ®	2 leaf to 6 leaf (shot blade)	Wheat, barley
<b>MPOWER PRO+ Avenge + MCPA</b> (ester)	3 leaf to 6 leaf (shot blade)	Wheat, barley
<b>MPOWER PRO+ COUGAR</b> ® 120 EC Herbicide	1 leaf to 6 leaf + 3 tillers	Spring and durum wheat
<b>MPOWER PRO+ PUMA</b> ® 120 SUPER	1 leaf to 6 leaf + 3 tillers	Spring and durum wheat
<b>MPOWER PRO+ BULLWHIP</b> ® 240EC Herbicide	2 leaf to flag leaf	Spring wheat only

**HOW TO APPLY TO WHEAT (SPRING OR DURUM), BARLEY OR ESTABLISHED CREEPING RED FESCUE (SEED OR FORAGE)**

Apply **MPOWER PRO** or **MPOWER PRO** tank mixtures to the first main flush of actively growing weeds, when the crop is in the leaf stage specified in the section CROP STAGE. Apply before the crop canopy is dense enough to prevent thorough coverage of the weeds. Apply with ground equipment only. Make only one application per growing season. For further information on control of Canada thistle, sow thistle, Russian thistle, lamb's quarters or wild buckwheat, refer to the section SPECIFIC WEED CONTROL RECOMMENDATIONS.

DO NOT APPLY BY AIR.

**RATES TO APPLY:**

**MPOWER PRO** 7.5 g/ha (plus surfactant)

**MPOWER PRO + 2,4-D (use one of the following, plus surfactant):**

<b>MPOWER PRO</b>	5.0 or 7.5 g/ha
<b>Plus</b>	
2,4-D Amine 500	0.84 – 1.1 L/ha
<b>Or</b>	
2,4-D Ester LV 700	0.6 – 0.8 L/ha
<b>Or</b>	
2,4-D Ester LV 600	0.7 – 0.9 L/ha
<b>Or</b>	
2,4-D Acid equivalent	420 – 560 g/ha

Refer to the 2,4-D label for information on crop variety restrictions, precautions, and application information

**MPOWER PRO + MCPA (use one of the following, plus surfactant):**

<b>MPOWER PRO</b>	5.0 or 7.5 g/ha
<b>Plus</b>	
MCPA Amine 500	0.7 – 1.1 L/ha
<b>Or</b>	
MCPA Ester 500	0.7 – 1.1 L/ha

Refer to the MCPA label for information on crop variety restrictions, precautions, and application information



**MPOWER PRO + AVENGE 200-C OR MPOWER PRO + AVENGE 200-C + MCPA Ester (Use one of the following. Do not add surfactant.)**

<b>MPOWER PRO</b>	7.5 g/ha
<b>Plus</b>	
AVENGE 200-C	4.25 L/ha
<b>Or</b>	
<b>MPOWER PRO</b>	7.5 g/ha
<b>Plus</b>	
AVENGE 200-C	4.25 L/ha
<b>Plus</b>	
MCPA Ester 500	0.7 – 1.1 L/ha

Refer to the AVENGE 200-C and MCPA Ester labels for information on crop variety restrictions, precautions, and application information.

**MPOWER PRO + COUGAR 120 EC Herbicide (Do not add surfactant):**

<b>MPOWER PRO</b>	5 or 7.5 g/ha
<b>Plus</b>	
COUGAR 120 EC Herbicide	0.385 or 0.77 L/ha

Refer to the COUGAR 120 EC label for information on crop variety restrictions, precautions, environmental information and application information.

**MPOWER PRO + PUMA<sup>®120</sup> SUPER (Do not add surfactant):**

<b>MPOWER PRO</b>	5 or 7.5 g/ha
<b>Plus</b>	
PUMA <sup>120</sup> SUPER Herbicide	0.385 or 0.77 L/ha

Refer to the PUMA<sup>120</sup> SUPER label label for information on crop variety restrictions, precautions, environmental information and application information.

**MPOWER PRO + BULLWHIP<sup>®</sup> 240EC Herbicide:**

<b>MPOWER PRO</b>	7.5 g/ha
<b>Plus</b>	
BULLWHIP 240EC	230 or 290 ml/ha
<b>Plus</b>	
XA OIL CONCENTRATE™	0.8% or 1.0% v/v (0.8 L or 1.0 L per 100 L of spray solution)

A non-ionic surfactant is NOT required when MPOWER PRO is tank mixed with BULLWHIP 240EC Herbicide plus XA OIL CONCENTRATE.

Refer to the BULLWHIP 240EC Herbicide label for additional information on crop variety restrictions, use precautions and application information.

**WEEDS CONTROLLED OR SUPPRESSED†**

† Weed suppression is a visual reduction in weed competition (reduced population or vigour) as compared to an untreated area. Degree of suppression will vary with size of weed and environmental conditions prior to and following treatment.

**MPOWER PRO 7.5 grams/ha + surfactant:**

Ball mustard	Corn spurry	Kochia	Russian thistle†	Stork's bill
Blue bur	Cow cockle	Lady's thumb	Scentless chamomile	Tartary buckwheat
Canada thistle†	Flixweed	Lamb's-quarters†	Shepherd's purse	Toadflax†
Chickweed	Green smartweed	Prostrate pigweed	Sow thistle (annual; perennial)†	Volunteer canola °
Common groundsel	Hemp-nettle	Redroot pigweed	Stinkweed	Wild buckwheat†
				Wild mustard

- ° Volunteer canola: **MPOWER PRO** alone will not control imazethapyr tolerant canola varieties, e.g. canola varieties with the Pursuit Smart\* trait.

**MPOWER PRO 5 grams/ha + 2,4-D (amine or ester) + Surfactant:**

Annual sunflower	Flixweed	Narrow-leaved hawksbeard (spring seedlings)	Russian thistle	Toadflax†
Ball mustard	Green smartweed	Plantain	Shepherd's purse	Volunteer canola°
Canada thistle†	Hemp-nettle	Prickly lettuce	Sow thistle†	Wild buckwheat†
Chickweed	Kochia	Redroot pigweed	Stinkweed	Wild mustard
Cow cockle	Lamb's-quarters	Russian pigweed	Sweet clover	Wormseed mustard

- ° Including imazethapyr tolerant canola varieties, e.g. Canola varieties with the Pursuit\* Smart trait. Consult the 2,4-D label for appropriate use rates.

**MPOWER PRO 7.5 grams/ha + 2,4-D (amine or ester) + Surfactant:**

All of the weeds controlled or suppressed by **MPOWER PRO 5 grams/ha + 2,4-D** plus:

Bluebur	Corn spurry	Toadflax†	Scentsless chamomile	Tartary buckwheat
Common groundsel	Lady's-thumb	Prostrate pigweed	Stork's bill	

**MPOWER PRO 5.0 grams/ha + MCPA (amine or ester) + Surfactant:**

Annual sunflower	Flixweed	Plantain	Shepherd's purse	Tumble mustard
Ball mustard	Green smartweed	Prickly lettuce	Sow thistle†	Volunteer canola°
Canada thistle†	Hemp-nettle	Redroot pigweed	Stinkweed	Wild buckwheat†
Chickweed	Kochia	Russian pigweed	Sweet clover	Wild mustard
Cow cockle	Lamb's-quarters	Russian thistle	Toadflax†	Wormseed mustard

- ° Including imazethapyr tolerant canola varieties, e.g. canola varieties with the Pursuit\* Smart trait. Use the highest rate of MCPA (1.1 litre/ha) when volunteer imazethapyr tolerant canola is the target weed.

**MPOWER PRO 7.5 grams/ha + MCPA (amine or ester) + Surfactant:**

All of the weeds controlled or suppressed by **MPOWER PRO 5.0 grams/ha + MCPA**, plus:

Bluebur	Corn spurry	Prostrate pigweed	Stork's bill	Toadflax†
Common groundsel	Lady's-thumb	Scentsless chamomile	Tartary buckwheat	

**MPOWER PRO + AVENGE 200-C (No surfactant):**

Broadleaf weeds controlled by **MPOWER PRO**, plus: Wild oats

**MPOWER PRO + AVENGE 200-C + MCPA ester (No surfactant):** Broadleaf weeds controlled by **MPOWER PRO + MCPA**, plus: Wild oats

**MPOWER PRO + COUGAR 120 EC Herbicide (0.385 L/ha) (No surfactant):** Broadleaf weeds controlled by **MPOWER PRO** at 5 or 7.5 grams/ha, plus: Green foxtail

- Refer to COUGAR 120 EC Herbicide label for appropriate weed staging, additional application instructions and environmental use precautions.

**MPOWER PRO + PUMA<sup>120</sup> SUPER Herbicide (0.385 L/ha) (No surfactant):** Broadleaf weeds controlled by **MPOWER PRO** at 5 or 7.5 grams/ha, plus: Green foxtail

- Refer to PUMA<sup>120</sup> SUPER Herbicide label for appropriate weed staging, additional application instructions and environmental use precautions.

**MPOWER PRO + COUGAR 120 EC Herbicide (0.77 L/ha) (No surfactant):** Broadleaf weeds controlled by **MPOWER PRO** at 5 or 7.5 grams/ha, plus: Green foxtail, Barnyard grass, Wild oats

- Refer to COUGAR 120 EC Herbicide label for appropriate weed staging, additional application instructions, and environmental and use precautions.

**MPOWER PRO + PUMA<sup>120</sup> SUPER Herbicide (0.77 L/ha) (No surfactant):** Broadleaf weeds controlled by **MPOWER PRO** at 5 or 7.5 grams/ha, plus: Green foxtail, Barnyard grass, Wild oats

- Refer to PUMA <sup>120</sup> SUPER Herbicide label for appropriate weed staging, additional application instructions, and environmental and use precautions.

**MPOWER PRO + BULLWHIP 240EC Herbicide + Surfactant:**

Broadleaf weeds controlled or suppressed by **MPOWER PRO** alone at 7.5 g/ha, plus control of the following:

Wild oats	230 ml/ha BULLWHIP 240EC + 0.8% v/v XA OIL CONCENTRATE (0.8 L per 100 L of spray solution)
Wild oats, Green foxtail, Yellow foxtail	290 ml/ha BULLWHIP 240EC + 1.0% v/v XA OIL CONCENTRATE (1.0 L per 100 L of spray solution)

- Refer to BULLWHIP 2 40EC Herbicide label for the appropriate weed staging at application to control wild oats, green foxtail and yellow foxtail.

**SPECIFIC WEED RECOMMENDATIONS:**

Weeds must be actively growing at time of application or control may be reduced. Application should be made before the crop canopy prevents thorough coverage of the weeds.

**CANADA THISTLE, SOW THISTLE –**

- Apply when the majority of thistles have emerged.
- **MPOWER PRO** + surfactant should be applied before the thistles are more than 15 cm tall.
- **MPOWER PRO** + 2,4-D or **MPOWER PRO** + MCPA + surfactant may be applied up to the bud stage of the thistles.
- Thistles that emerge after application will not be controlled.
- A single application will prevent emerged thistles from competing with the crop.

**WILD BUCKWHEAT –**

- Apply **MPOWER PRO** + surfactant at the cotyledon to 3-leaf stage.
- **MPOWER PRO** + 2,4-D or **MPOWER PRO** + MCPA + surfactant should be applied at the 1-3 leaf stage.
- Under dry conditions, control may be reduced.
- Large weeds may re-grow after treatment.

**LAMB’S-QUARTERS, RUSSIAN THISTLE –**

- Apply **MPOWER PRO** + surfactant before these weeds are more than 8 cm tall.

**PASTURE AND RANGELAND**

- For control of Western Snowberry apply 25 grams of **MPOWER PRO** per hectare.
- For control of Wild Rose apply 30 grams of **MPOWER PRO** per hectare.
- Add a recommended surfactant at 0.2% v/v (2.0 litres per 1000 litres of spray solution).
- Apply as a ground application only in 100 – 225 litres spray volume per hectare.
- Apply as a full coverage spray to foliage and stems using equipment that will assure uniform coverage.

**CONTROL OF BROADLEAF WEEDS AND GRASSES IN FALLOW AND PRE-SEED TO SPRING WHEAT (INCLUDING DURUM) AND BARLEY.**

- With any summerfallow treatment, allow 10 days to elapse between treatment and tillage.
- Only weeds emerged at time of application will be controlled.
- Fields treated with **MPOWER PRO** can be seeded to spring wheat (including durum) or barley a minimum of 24 hours after application.

Apply MPOWER PRO + Nuance Herbicide (tank mixed at 2.5 g/h and 10 g/ha), and tank mixed with one of the following companion herbicides and adjuvant (where required) in a total spray volume of 55-110 L/ha.

Companion Herbicide	Application Rate	Application Stage	Weeds Controlled	Weeds Suppressed *
GLYFOS®	1.25 L/ha	Up to 8 cm	Canada fleabane, Common ragweed, Narrow-leaved hawk's beard	
CHEMINOVA GLYPHOSATE™	1.25 L/ha	Up to 15 cm	Dandelion, Downy brome, Flixweed Giant foxtail, Green foxtail, Hemp nettle, Kochia, Lady's thumb, Lamb's-quarters, Persian dandelion, Redroot pigweed, Russian thistle, Stinkweed, Volunteer barley, Volunteer canola (including glyphosate-tolerant varieties), Volunteer flax, Volunteer wheat, Wild mustard, Wild oats	
Roundup® Transorb®	1.25 L/ha			
Roundup Weathermax®	0.83 L/ha			
Roundup Dry	450g ae/ha**			
Touchdown®* 600	1.0 L/ha			
Touchdown iQ®	1.25 L/ha			
		Up to 3-leaf Rosette	Wild buckwheat, Cow cockle	
				Canada thistle
GLYFOS, CHEMINOVA GLYPHOSATE, Roundup Original or Roundup Transorb,  plus  Agral 90 or LIBERATE	0.75 L/ha  0.35% v/v	Any stage	Volunteer canola (including glyphosate tolerant varieties)	
		Seedlings and rosettes (nonflowering)		Narrow-leaved hawk's beard
		Up to 10cm	Kochia, Lamb's quarters,	Redroot pigweed, Russian thistle
		Up to 8 cm	Green foxtail, Lady's thumb, Stinkweed, Volunteer barley, Volunteer wheat, Wild mustard, Wild oats (1-3- leaf), Wild buckwheat (1-3 leaf)	
		Rosettes (nonflowering)	Dandelion (top growth)	Canada thistle (top growth)
GLYFOS, CHEMINOVA GLYPHOSATE, Roundup Original or Roundup Transorb,  plus  Agral 90 or LIBERATE	1.0 L/ha  0.35 % v/v			

\* Weed suppression is a visual reduction in weed competition (reduced population or vigour) as compared to an untreated area. Degree of suppression will vary with size of weed and environmental conditions prior to and following treatment.

\*\* Roundup Dry is expressed as rate of active per hectare, rather than rate of product per hectare.

**NOTE TO BUYER/USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR SPECIAL USE APPLICATIONS.**

The Directions for Use for this product for the uses described below were developed by persons other than NewAgco Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion Program. NewAgco Inc. itself makes no representation of warranty with respect to product performance (efficacy) and crop tolerance (phytotoxicity) of this product when used on the crops listed. Accordingly, the Buyer and User assume all liability arising, and agree to hold NewAgco Inc. harmless from any claims based on efficacy or phytotoxicity in connection with this use described below:

**FORAGE GRASSES FOR FEEDS OR SEED PRODUCTION:**

For postemergent application to creeping red fescue, orchard grass, crested and intermediate wheat grass. These forage grasses should be established for a minimum of one year before applying **MPOWER PRO**. Optimum control of narrow-leaved hawk's beard and scentless chamomile is obtained if application is made to small, actively growing weeds.

- Apply **MPOWER PRO** as a broadcast application at 7.5 g/ha post-emergent.
- Application should be made from the 2 leaf, up to the shot blade stage of the crop, and before canopy closure to permit thorough coverage of actively growing weeds.
- Make only one application per growing season.
- Application should be made using ground equipment only.
- Rotation options are determined by soil pH, the crop to be planted and a minimum interval.
- Refer to the recropping recommendation section as well as other application instructions.

**ESTABLISHED CREEPING RED FESCUE FOR SEED:**

For postemergent broadleaf and grassy weed control, apply one of the following tankmixes:

**MPOWER PRO + ASSURE II Herbicide + Adjuvant:**

<b>MPOWER PRO</b>	7.5 grams/hectare
<b>plus</b>	
ASSURE® II Herbicide	0.5 - 0.75 litres/hectare
<b>plus</b>	
SURE-MIX™	5 litres per 1000 litres spray solution
<b>Or</b>	
CANPLUS® 411	5-10 litres per 1000 litres spray solution

- These tank mixes will control all label weeds listed on the respective **MPOWER PRO** and ASSURE II Herbicide labels.
- Apply **MPOWER PRO** + ASSURE II Herbicide tank mixtures postemergent to the first main flush of actively growing weeds, when established creeping red fescue is in the 2 leaf to flag leaf (shot blade) stage.
- Apply before the crop canopy is dense enough to prevent thorough coverage of the weeds.
- Apply with ground equipment only.
- Make only one application per growing season.
- Refer to other sections of this label, and to the ASSURE II Herbicide labels for additional application and/or use precautions instructions.

**SPRAY DRIFT MANAGEMENT:**

Apply only when the potential for drift to areas of human habitation or areas of human activity (houses, cottages, schools and recreational areas) is minimal. Take into consideration winds speed, wind direction, temperature inversions, application equipment and sprayer settings.

Field sprayer application:

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty.

DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification for application to crops.

DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse for application to pasture and rangeland.

**Buffer zones:**

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrub lands) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Application Rate (and use)*	Buffer Zones (in metres) Required for the Protection of :		
	Freshwater Habitat of Depths :		Terrestrial Habitat
	0.8 m	> 1 m	
4.5 g a.i./ha (crops)	1	0	15
12 g a.i./ha (pasture and rangeland)	1	1	10
15 g a.i./ha (pasture and rangeland)	1	1	10
18 g a.i./ha (pasture and rangeland)	1	1	10

\* For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy or ground, the labelled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy or ground, the labelled buffer zone can be reduced by 30%.

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

### **MIXING INSTRUCTIONS:**

1. Fill the spray tank 1/4 to 1/3 full with clean water. Prepare mixture volume to apply a minimum of 100 litres spray volume per hectare.
2. With the agitator running, add the required amount of **MPOWER PRO**.
3. Continue to agitate until **MPOWER PRO** is completely dispersed.
4. If another herbicide is to be added, do this now.
5. Add the rest of the required water.
6. If required in the mixture, add the surfactant now.
7. On repeat tank loads, draw down the tank contents to less than 10% of the original volume, and repeat from step 1. If more than 10% of the spray volume remains, pre-slurry the **MPOWER PRO** in a bucket of water before adding to the spray tank.
8. If an antifoam agent is required, add it last.

NOTE: Continuous agitation is required to keep **MPOWER PRO** in suspension in the spray tank for a uniform application. Use spray preparation of **MPOWER PRO** within 48 hours or product degradation may occur. If spray preparation is left standing without agitation, thoroughly agitate before spraying.

Do not mix **MPOWER PRO** with liquid fertilizers, substances that contain boron or substances that release free chlorine. Mixing **MPOWER PRO** with any of these compounds will result in an insoluble substance in the tank.

### **APPLICATION INSTRUCTIONS:**

Apply the spray mixture with ground equipment only, using a minimum of 100 litres spray volume per hectare. Use a properly calibrated sprayer that will ensure thorough coverage and a uniform spray pattern. Flat fan nozzles are recommended. Use 50-mesh screens or larger.

Continuous agitation is required to keep **MPOWER PRO** in suspension. Avoid overlapping, and shut off spray booms while starting, turning, slowing or stopping to prevent over-application.

#### NOTE:

Extreme care must be taken to prevent drift to desirable plants or non-target agricultural land.

### **SPRAYER CLEANUP:**

Immediately after spraying, thoroughly remove all traces of **MPOWER PRO** from mixing and spray equipment in order to avoid subsequent injury to sensitive crops (other than wheat or barley or creeping red fescue). Follow these instructions:

1. Empty the tank and drain the sump completely. Remove any contamination on the outside of the spraying equipment by washing with clean water.
2. Spray the interior tank walls (including the lid) with clean water using a minimum volume of 10% of the tank volume. Add household ammonia (containing a minimum 3% ammonia) at a solution rate of 1 L/100 L water or ALLCLEAN Cleaner (or other similarly approved cleaner) to the tank. Circulate the water through the lines, including all by-pass lines, for at least two minutes. Flush the boom well and empty the sprayer. Completely drain the sump.
3. Repeat step 2. For this rinse, the addition of household ammonia or other cleaner is not required.
4. Remove the strainers, nozzles, tips and screens and clean separately in a bucket containing water and ammonia solution.

If only ammonia is used as a cleaner, the rinsate solution may be applied to the crop(s) listed on this label. Do not exceed the maximum-labeled use rate. If other cleaners are used consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

#### 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.

**MINIMUM CROP ROTATION GUIDELINES:**

Rotation options are determined by soil pH, the crop to be planted and a minimum interval. Minimum interval is the time from the last application of **MPOWER PRO** to date of planting the rotational crop.

<b>BLACK AND GREY WOODDED SOILS INTERVAL PRIOR TO PLANTING (MONTHS AFTER APPLICATION)</b>									
<b>Soil pH</b>	<b>SW</b>	<b>DW</b>	<b>BR</b>	<b>OT</b>	<b>RS</b>	<b>FL</b>	<b>LN</b>	<b>CS</b>	<b>YM</b>
<b>6.9 or Lower</b>	10	10	10	10	10	10	34	48	48
<b>7.0 to 7.9</b>	10	10	10	10	22	34	48	48	48

SW = spring wheat; DW = durum wheat; BR = barley; OT = oats; RS = canola; FL = flax; LN = lentils; CS = canary seed; YM = yellow mustard

- 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 22 months following application of **MPOWER PRO**.
- Do not use on soils with pH greater than 7.9.
- All other crops FIELD BIOASSAY\*

<b>BROWN AND DARK BROWN SOILS INTERVAL PRIOR TO PLANTING (MONTHS AFTER APPLICATION)</b>									
<b>Soil pH</b>	<b>SW</b>	<b>DW</b>	<b>BR</b>	<b>OT</b>	<b>RS</b>	<b>FL</b>	<b>LN</b>	<b>CS</b>	<b>YM</b>
<b>6.9 or Lower</b>	10	10	10	10	22	22	34	48	48
<b>7.0 to 7.9</b>	10	10	10	22	34	34	48	48	48

SW = spring wheat; DW = durum wheat; BR = barley; OT = oats; RS = canola; FL = flax; LN = lentils; CS = canary seed; YM = yellow mustard

- Do not use on soils with pH greater than 7.9.
- All other crops "FIELD BIOASSAY" section

**IMPORTANT:**

Land previously treated with **MPOWER PRO** cannot be rotated to crops other than those listed until a FIELD BIOASSAY confirms that residues of **MPOWER PRO** are not present. A FIELD BIOASSAY involves growing test strips of the crop(s) intended for production the following year in fields previously treated with **MPOWER PRO**. Crop response will indicate whether or not to rotate to the crop(s) used in the test strip. See "Field Bioassay" section. A successful bioassay would be anticipated in the 3<sup>rd</sup> or 4<sup>th</sup> season after application (soil pH 7.0 – 7.9) dependent on the rotational crop selected. Failure to follow these instructions could result in injury to subsequent crops.

**NOTE:**

Wherever **MPOWER PRO** is used on land previously treated with DuPont GLEAN® Herbicide, read the rotational guidelines on both labels and follow the one with the longest interval stated for your situation.

**NOTE:**

When considering interval prior to recropping broadleaf crops after an **MPOWER PRO** application, extend the rotational interval one year if rainfall was less than 130 mm in the Brown & Dark brown Soil Zones or 250 mm in the Black and Grey Wooded Soil Zones in any year within a stated interval prior to planting.



## **FIELD BIOASSAY:**

Select a representative area or areas of the field previously treated with **MPOWER PRO** to plant your bioassay crop(s). Be sure to consider factors such as size of field, soil texture, drainage and turn-around areas when selecting the site(s) that are most representative of the soil conditions in the field. On large fields, more than one site may be needed in order to obtain reliable results.

Plant the test strips perpendicular to the direction in which the field was sprayed. The strips should be long enough to cross the width of several spray swaths. Large test strip areas are more reliable than small ones. Use standard tillage and seeding equipment to plant the bioassay.

Prepare a seed bed and plant the crops and varieties you want the option of growing the following year. It is important to use the same planting time, conditions, techniques and cultural practices you normally use to plant and grow the bioassay crop(s). Also plant into an adjacent area not treated with **MPOWER PRO** to use as a comparison.

As the crop(s) emerges and grows, examine these key points in **MPOWER PRO** treated and non-treated areas:

- crop stand
- root development
- rate of growth
- plant colour and vigour yield

Allow the bioassay crop(s) to grow to maturity while making your observations.

Do not overspray the test strips with herbicides that may damage the bioassay crop(s).

If the bioassay indicates that **MPOWER PRO** residues are still present, continue crop ping only to those crops listed on the label, and do not rotate to other crops until bioassay results indicate that susceptible crops are growing normally.

## **RESISTANCE-MANAGEMENT RECOMMENDATIONS:**

For resistance management, **MPOWER PRO** is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to **MPOWER PRO** and other Group 2 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed. To delay herbicide resistance:

- Where possible rotate the use of **MPOWER PRO** or other Group 2 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from different groups when such use is permitted.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and consider s tillage or other mechanical, cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact AgraCity Crop & Nutrition Ltd. at 1-844-269-3276 for further information.

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