GROUP 2 HERBICIDE

# **MUSTER® HERBICIDE**

75% WETTABLE GRANULAR

FOR SALE FOR USE ON CANOLA, BROWN CONDIMENT MUSTARD AND ORIENTAL MUSTARD (CONDIMENT AND OIL SEED TYPES) IN THE PRAIRIE PROVINCES AND INTERIOR OF BRITISH COLUMBIA (INCLUDING THE PEACE RIVER REGION); CANOLA IN THE OKANAGAN AND CRESTON VALLEY AREAS OF BRITISH COLUMBIA, SOUTHERN ONTARIO, QUEBEC AND THE MARITIMES; ALSO FOR USE ON SUNFLOWER, LAURENTIAN RUTABAGA AND BRASICA CARINATA

COMMERCIAL (AGRICULTURAL)

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

**ACTIVE INGREDIENT:** Ethametsulfuron methyl 75%

Warning, contains the allergen sulfites

REGISTRATION NO.: 21555 PEST CONTROL PRODUCTS ACT

**NET CONTENTS: 80-800 GRAMS** 

FMC of Canada Limited 6755 Mississauga Road, Suite 204 Mississauga, ON L5N 7Y2 1-833-362-7722

### 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.
- Wash hands and face before eating, drinking, smoking and using the toilet.
- Take a shower immediately after use.
- DO NOT APPLY BY AIR.
- Wash protective clothing in detergent and hot water, separately from household laundry, before reuse.
- Wear long-sleeved shirt, long pants, socks and chemical-resistant gloves and footwear during mixing, loading, application, clean-up and repair. Chemical-resistant gloves are not required while operating ground boom sprayers.

### 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.

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

For emergencies call 1-800-331-3148 (24 hours).

**TOXICOLOGICAL INFORMATION:** Treat Symptomatically.

ENVIRONMENTAL PRECAUTIONS: TOXIC to aquatic organisms and non target terrestrial plants. Observe spray buffer zones specified under DIRECTIONS FOR USE.

### STORAGE:

Store this product away from food or feed. Store product in original container in a secure and dry area. Not for use or storage in or around the home. Keep container tightly closed.

# **DISPOSAL:**

**RECYCLABLE CONTAINER:** Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer or the provincial regulatory agency in case of spills and for clean-up 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.

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GROUP 2 HERBICIDE

# **MUSTER® HERBICIDE**

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Warning, contains the allergen sulfites

FMC of Canada Limited 6755 Mississauga Road, Suite 204 Mississauga, ON L5N 7Y2 1-833-362-7722

### 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.
- Wash hands and face before eating, drinking, smoking and using the toilet.
- Take a shower immediately after use.
- DO NOT APPLY BY AIR.
- Wash protective clothing in detergent and hot water, separately from household laundry, before reuse.
- Wear long-sleeved shirt, long pants, socks and chemical-resistant gloves and footwear during mixing, loading, application, clean-up and repair. Chemical-resistant gloves are not required while operating ground boom sprayers.

#### 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.

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

For emergencies call 1-800-331-3148 (24 hours).

**TOXICOLOGICAL INFORMATION:** Treat Symptomatically.

# **ENVIRONMENTAL PRECAUTIONS**

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

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

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

This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

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, recreational grounds 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.

### DO NOT APPLY BY AIR. APPLY WITH GROUND EQUIPMENT ONLY.

Carefully clean sprayer after use, as spray tank residue may damage crops other than canola, brown condiment mustard and oriental mustard (condiment and oilseed types).

### FOR USE ONLY AS AN AGRICULTURAL HERBICIDE.

The manufacturer has not tested all possible surfactants for compatibility, efficacy, crop damage, or adverse effects. Therefore, FMC does not recommend the use of other surfactants not listed on the label and is not responsible for any consequences of such use.

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

### **GENERAL INFORMATION**

Muster® Herbicide is recommended for use on spring planted canola varieties, brown condiment mustard and oriental mustard (condiment and oilseed types), sunflower, Laurentian rutabagas and *Brassica carinata* grown in Canada. Muster® Herbicide is a 75% active ingredient herbicide formulated as a dry flowable dispersible granule. Muster® Herbicide is to be mixed in water and applied as a uniform broadcast spray with a recommended surfactant, for selective control or suppression of certain broadleaf weeds. It is noncorrosive, non-flammable, non-volatile and does not require heated storage. Do not graze or feed crop to livestock within 60 days of treatment. Do not harvest within 60 days of treatment.

Muster® Herbicide MUST be applied with a recommended surfactant early postemergence, to the main flush of actively growing broadleaf weeds. Registered surfactants are AG-SURF\*, AGRAL\* 90, CITOWETT\* PLUS, CANPLUS\* 411, HI-MIX\* or SURE-MIX\* and MERGE\*. Warm, moist growing conditions promote active weed growth and enhance the activity of Muster® Herbicide by allowing maximum foliar uptake and contact activity. Weeds hardened off by cold weather or drought stress may not be adequately controlled or suppressed and regrowth may occur. Regrowth may also occur if crop competitiveness is impaired by thin stands and/or reduced vigour. Muster® Herbicide may only be applied with ground spray equipment. For best results, ensure thorough spray coverage of target weeds. See "Postemergence Applications" section of this label for complete use details.

Muster® Herbicide is an ALS inhibitor herbicide and thus rapidly inhibits the growth of susceptible weeds, however, typical symptoms (discoloration) 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, and spray coverage.

### **DIRECTIONS FOR USE**

- Do not re-enter treated fields until 12 hours after application.
- As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests
- DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.
- Apply only to agricultural crops when the potential for drift to areas of human habitation and areas
  of human activity (houses, cottages, schools and recreational areas) is minimal. Take into
  consideration wind speed, wind direction temperature, 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 S572.1) medium classification.
- Boom height must be 60cm or less above the crop or ground.

# **Spray Buffer Zones:**

Use of the following spray methods or equipment DO NOT require a spray buffer zone: hand-held or backpack sprayer and spot treatment.

The spray 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, rangelands, riparian areas and shrub lands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks marshes, streams, reservoirs and wetlands) and marine/estuarine habitats.

Method of	Crop	Region of	Spray Buffer Zones (metres) Required for the Protection of:  Aquatic Habitat of Depths: Terrestrial		
Application		Production			Terrestrial
			Less than	Greater than	Habitat
			1m	1m	
	Mustard	Prairie provinces	3	2	40
	(Condiment	and Interior of			
Field sprayer <sup>†</sup>	Brown and	British Columbia			
	Oriental	(including Peace			
	including both	River Region) and			
	the Condiment	Western Canada			
	types and the				
	Oil seed types)				
	Rutabaga	National	3	1	30
		Southern Ontario,	3	1	30
		Québec and the			
	Canola	Maritimes (New			
		Brunswick, Prince			
		Edward Island and			
		Nova Scotia)			
		Prairie Provinces,	4	2	55
		Peace River,			
		Okanagan and			
		Creston Valley			
		areas of British			
		Columbia			
	Sunflower and	National	4	2	55
	Brassica				
	carinata				

<sup>†</sup>For field sprayer application, spray 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 spray buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields are no more than 30 cm above the crop canopy or ground, the labelled spray buffer zone can be reduced by 30%.

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

### **MUSTER® HERBICIDE USED ALONE:**

### **SPRING CANOLA**

### MUSTER® Herbicide + NON-IONIC SURFACTANT (AG-SURF\*, AGRAL\* 90 OR CITOWETT\* PLUS)

Apply Muster® Herbicide at 20 or 30 grams per hectare with a recommended surfactant at 2.0 litres surfactant per 1000 litres of spray volume (see "Mixing Instructions" section of label). For optimum weed control apply Muster® Herbicide at the cotyledon to six (6) leaf stage of the target weeds, see specific recommendation for stinkweed. For best results apply to the main flush of young, actively growing weeds. Apply before the crop canopy prevents thorough coverage of the small target weeds. Thorough spray coverage of the small target weeds is important for good weed control. When very high weed seedling populations occur, larger weed seedlings may interfere with coverage of smaller seedlings, and control may be reduced. Weeds that emerge after application may not be controlled. Muster® Herbicide can be applied to canola from the two (2) leaf stage to the beginning of bolting.

20 g/ha	WEEDS CONTROLLED	WEEDS SUPPRESSED <sup>1</sup>
	Flixweed (spring seedlings)	Stinkweed
	Green Smartweed	
	Hempnettle	
	Wild Mustard	
30 g/ha	WEEDS CONTROLLED	WEEDS SUPPRESSED*
	Weeds controlled at 20 g/ha plus Stinkweed	Redroot Pigweed

<sup>&</sup>lt;sup>1</sup>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.

# BROWN CONDIMENT MUSTARD AND ORIENTAL MUSTARD (CONDIMENT AND OILSEED TYPES)

### MUSTER® Herbicide + NON-IONIC SURFACTANT (AG-SURF\*, AGRAL\* 90 OR CITOWETT\* PLUS)

Apply Muster® Herbicide at 20 grams per hectare with a recommended surfactant at 2.0 litres per 1000 litres of spray volume (see "Mixing Instructions" section of label). Apply from the 4-leaf to late rosette stage of brown condiment mustard and oriental mustard (condiment and oilseed types), when target weeds are in the cotyledon to 6-leaf stage. For best results, apply to the main flush of young actively growing weeds. Thorough spray coverage of weeds is important for good control. When very high weed seedling population occurs, larger weeds may interfere with coverage of smaller seedlings, and control may be reduced.

- Do not use more than 20 grams per hectare on brown condiment mustard and oriental mustard (condiment and oilseed types) or injury may result.
- Do not use on yellow mustard varieties.
- · Do not apply in combination with other pesticides.

20 g/ha	WEEDS CONTROLLED	WEEDS SUPPRESSED <sup>1</sup>
	Flixweed (spring seedlings)	Stinkweed
	Green Smartweed	
	Hempnettle	
	Wild Mustard	

<sup>&</sup>lt;sup>1</sup> 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.

### NOTE:

If rain occurs soon after application control may be reduced. At least 4 - 6 hours of dry weather are needed to allow Muster® Herbicide to be absorbed by weed foliage. Environmental conditions that slow the drying of Muster® Herbicide on the foliage such as high relative humidity, cool air temperature or cloud cover, may increase the time required.

### SPECIFIC WEED RECOMMENDATIONS:

Stinkweed: For best results apply Muster® Herbicide plus recommended surfactant to actively growing emerged stinkweed that are in the 1-4 leaf stage. Ensure thorough coverage.

### FOR CONTROL OF WILD MUSTARD IN SPRING-SEEDED CANOLA IN SOUTHERN ONTARIO:

### MUSTER® Herbicide + NON-IONIC SURFACTANT (AG-SURF\*, AGRAL\* 90 OR CITOWETT\* PLUS)

Apply Muster® Herbicide at 15 grams per hectare with a recommended surfactant at 2.0 litres surfactant per 1000 litres of spray volume. This rate should be used only in Southern Ontario. Apply when wild mustard is in the cotyledon to 6-leaf stage, before the crop begins to bolt. Land treated with Muster® Herbicide must not be planted to crops other than winter wheat in the year of treatment; soybeans or spring cereals in the year following treatment.

### **MUSTER® HERBICIDE TANK MIXTURES:**

# TANK MIXTURES IN SPRING CANOLA (PRAIRIE PROVINCES AND INTERIOR OF BRITISH COLUMBIA (INCLUDING THE PEACE RIVER REGION))

### MUSTER® Herbicide Plus POAST\* ULTRA LIQUID EMULSIFIABLE Herbicide

For control of broadleaf weeds and grasses in canola apply a tank mixture of Muster® Herbicide plus POAST\* herbicide. Use 20 or 30 grams per hectare Muster® Herbicide plus 0.8 to 1.9 litres per hectare POAST\* plus the recommended amount of MERGE\* adjuvant as stated on the POAST\* label. Additional surfactant is not required when using MERGE\*. For best results follow the timing restrictions and specific weed control recommendations stated on each label. Stinkweed will be controlled by 20 grams of Muster® Herbicide per hectare when used in this mixture with POAST\* and MERGE\*.

### MUSTER® Herbicide Plus ASSURE\* II Herbicide

For control of broadleaf weeds and grasses in canola, apply a tank mixture of Muster® Herbicide plus ASSURE\* II Herbicide. Use Muster® Herbicide at 20 or 30 grams per hectare plus 0.38 - 0.5 litre per hectare ASSURE\* II plus CANPLUS\* 411 or MERGE\* at 5-10 litres per 1000 litres of spray solution or SURE-MIX\* at 5 litres per 1000 litres of spray solution. Additional surfactant is not required when using CANPLUS\* 411, MERGE\*, HI-MIX\* or SURE-MIX\*. For best results follow the timing restrictions and specific weed control recommendations stated on each label. Consult the ASSURE\* II label for desired use rates and grass weeds controlled. Muster® Herbicide will control stinkweed at the 20 grams per hectare rate when used with HI-MIX\*, MERGE\* or SURE-MIX\* adjuvant and ASSURE\* II.

# TANK MIXTURE IN ORIENTAL MUSTARD (CONDIMENT AND OILSEED TYPES) FOR WESTERN CANADA:

### MUSTER® Herbicide Plus ASSURE\* II Herbicide

For control of broadleaf weeds and grasses in oriental mustard (condiment and oilseed types), apply a tank mixture of Muster® Herbicide plus ASSURE\* II Herbicide. Use Muster® Herbicide at 20 grams per hectare plus 0.38 - 0.5 litre per hectare ASSURE\* II Herbicide plus MERGE\* at 5-10 litres per 1000 litres of spray solution or SURE-MIX\* at 5 litres per 1000 litres of spray solution. Additional surfactant is not required when using MERGE\* or SURE-MIX\*. For best results follow the timing restrictions and specific weed control recommendations stated on each label. Consult the ASSURE\* II Herbicide label for desired use rates and grass weeds controlled. Muster® Herbicide will control stinkweed at the 20 grams per hectare rate when used with MERGE\* or SURE-MIX\* adjuvant and ASSURE\* II Herbicide.

• Do not use on yellow mustard varieties.

This product may be tank mixed with a fertilizer, a supplement, or 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 at 1-833-362-7722 for information before applying any tank mix that is not specifically recommended on this label.

When tank-mixes are permitted, read and observe all label directions, including rates and restrictions for each product used in the tank-mix. Follow the more stringent label precautionary measures for mixing, loading and applying stated on all product labels.

### **MIXING INSTRUCTIONS:**

Do not mix, load or apply within 15 metres of all wells, including abandoned wells and drainage wells.

- 1. Fill the tank with clean water with agitator running. Use a minimum of 100 litres of spray volume per hectare.
- 2. Add the required amount of Muster® Herbicide with the agitator running. Continuous agitation is required for a uniform suspension and application.
- 3. Once the Muster® Herbicide is completely in suspension, add a recommended non-ionic surfactant at 2 litres per 1000 litres of spray solution. Antifoaming agents may be needed.
- 4. FOR TANK MIXTURES WITH ASSURE\* II OR POAST\*: If tank mixing Muster® Herbicide with ASSURE\* II or POAST\*, add the required amount of ASSURE\* II or POAST\* to the tank with the agitator running. Once the herbicide is completely in suspension, SLOWLY add the required amount of partner surfactant: ASSURE\* II with CANPLUS\* 411, MERGE\* or SURE-MIX\*, ASSURE\* with HIMIX\*, POAST\* with MERGE\*. ADDITIONAL SURFACTANT IS NOT REQUIRED.

On repeat tank loads, ensure that the amount of spray solution left in the tank from the previous load is less than 10% of the volume about to be sprayed.

Use the spray preparation of Muster® Herbicide within 24 hours or product degradation may occur. If spray preparation is left standing without agitation, thoroughly agitate and ensure product is resuspended before resuming spray operation.

Avoid over-filling of spray tank. Mix only enough product for the job at hand.

During spraying operation, make scheduled checks of spray equipment to help ensure proper application.

#### **APPLICATION INSTRUCTIONS:**

Apply the spray mixture with ground equipment only, using a minimum of 100 litres spray volume per hectare. Only use a properly calibrated sprayer that will ensure thorough coverage of target weeds and give a uniform spray pattern. When calibrating a sprayer, always use clean water and calibrate away from well sites or any sources of water. Flat fan nozzles are recommended. Use 50-mesh (metal or nylon) screens or larger. A spray pressure of 210-275 kPa is recommended.

Continuous agitation is required to keep Muster® Herbicide in suspension. Avoid overlapping, and shut off spray booms while starting, turning, slowing or stopping to prevent over application.

NOTE: Care must be taken to prevent drift to desirable plants or non-target agricultural land.

### SPRAYER CLEANUP:

On completion of spraying with Muster® Herbicide, thoroughly remove all traces of herbicide from mixing and spray equipment in order to avoid subsequent injury to sensitive crops other than canola.

### Follow these instructions:

- Drain tank and flush tank, boom and hoses with clean water for a minimum of ten minutes. Visually
  inspect tank to assure removal of all visible residues of Muster® Herbicide. If necessary, repeat step
  1. DO NOT CLEAN SPRAYER NEAR WELL OR WATER SOURCE OR NEAR TO DESIRABLE
  VEGETATION.
- 2. Fill tank with clean water while adding 1 litre household ammonia (containing a minimum 3% ammonia) per 100 litres of water. Flush solution through boom and hoses, and then add more water to completely fill tank. Allow to sit for 15 minutes with agitation. Again flush the hoses, boom and nozzles with the cleaning solution and drain tank.
- 3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
- 4. Repeat Step 2.
- 5. Thoroughly rinse the tank with clean water for a minimum of 5 minutes flushing water through the hoses and boom.

### 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:

Minimum interval is that time from the last application of Muster® Herbicide to date of planting the rotational crop.

# INTERVAL PRIOR TO PLANTING (MONTHS AFTER APPLICATION)

Replanting Interval	Сгор	
10 months	Spring Wheat, Durum Wheat, Barley, Oats, Flax	
22 months	Canola, Lentils, Peas, Fababeans, Tame Mustard, Alfalfa, Canary Grass, Dry Beans, Fescue, Red Clover	

All other crops field bioassay at 22 months.

#### NOTE:

Wherever Muster® Herbicide is used on land previously treated with ALLY® Herbicide, read the rotational quidelines on both labels and follow the label with the longest interval stated for your situation.

### FIELD BIOASSAY:

Select a representative area or areas of the field previously treated with Muster® herbicide 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 Muster® Herbicide to use as a comparison.

As the crop(s) emerges and grows, examine these key points in Muster® Herbicide 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 Muster® Herbicide residues are still present, continue cropping 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.

### **USE PRECAUTIONS:**

- Do not use more than 20 grams per hectare per year on brown condiment mustard or oriental mustard (condiment and oilseed types).
- Do not use more than 30 grams per hectare per year on canola.
- Avoid overspray or drift to important wildlife habitats.
- Licensed canola varieties and condiment varieties of brown condiment mustard and oriental mustard (condiment and oilseed types) have shown acceptable tolerance to Muster® Herbicide. Consult FMC prior to use on unlicensed varieties for crop tolerance information.
- Do not apply to irrigated land where tail water will be used to irrigate other crop land.
- Do not contaminate irrigation water.
- Do not use on highly variable soils that have large gravelly or sandy areas, eroded knolls, or calcium deposits.
- Do not apply Muster® Herbicide to canola, brown condiment mustard, oriental mustard (condiment and oilseed types), rutabaga, sunflower or *Brassica carinata* that are stressed by severe conditions such as drought, low fertility, saline soils, waterlogged soils (soils at or near field capacity), disease or

- insect damage as crop injury may result. Drought, disease or insect damage following application may also result in crop injury.
- Do not apply to canola, brown condiment mustard, oriental mustard (condiment and oilseed types), rutabaga, sunflower or *Brassica carinata* 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.
- Heavy rainfall soon after application may result in visual crop injury or possible yield reduction.
   Conditions such as thin crop stand, application prior to the 2-leaf stage of canola or 4-leaf stage of brown condiment mustard and oriental mustard (condiment and oilseed types), sandy soil or low soil organic matter may increase the severity of injury.
- The additive effect of soil residues from the use of Muster® Herbicide 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 Muster® Herbicide 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 "Field Bioassay" section of this label) demonstrates that other crops can be successfully grown.

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

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than FMC Canada Ltd. under the User Requested Minor Use Label Expansion program. For these uses, FMC Canada Ltd. has not fully assessed performance (efficacy) and/or crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

# FOR USE ON SPRING SEEDED CANOLA VARIETIES IN QUEBEC AND IN THE MARITIMES (NEW BRUNSWICK, PRINCE EDWARD ISLAND AND NOVA SCOTIA):

For postemergent control of wild mustard in canola, apply Muster® Herbicide at 15 grams per hectare with a recommended NON-IONIC SURFACTANT (AG-SURF\*, AGRAL\* 90, or CITOWETT\* PLUS) at 2 litres per 1000 litres of spray volume OR a recommended adjuvant (SURE-MIX\* at 5 litres per 1000 litres of spray volume.

For optimum weed control apply Muster® Herbicide at the cotyledon to six (6) leaf stage of wild mustard. For best results apply to the main flush of young, actively growing weeds. Apply before the crop canopy prevents thorough coverage of the small target weeds. Wild mustard seedlings that occur after application may not be controlled. Muster® Herbicide can be applied to canola from the two (2) leaf stage to the beginning of bolting.

Land treated with Muster® Herbicide must not be planted to crops other than spring wheat, barley or oats with a recropping interval of 10 months and winter wheat, which may be planted in the year of treatment.

Apply with ground equipment only. Make only one application per growing season. Do not harvest crop within 60 days of treatment.

Refer to other sections of this booklet for additional application and/or use precaution instructions.

# SPRING SEEDED CANOLA VARIETIES IN THE OKANAGAN AND CRESTON VALLEY AREAS OF BRITISH COLUMBIA:

Muster® Herbicide + Non-Ionic Surfactant (AG-SURF\*, AGRAL\* 90 OR CITOWETT\* PLUS) Apply Muster® Herbicide at 20 or 30 grams per hectare with a recommended surfactant (AG-SURF, AGRAL\* 90 OR CITOWETTT PLUS) at 2 litres surfactant per 1000 litres of spray volume (see "Mixing Instructions" section of label).

For optimum weed control apply Muster® Herbicide at the cotyledon to six (6) leaf stage of the target weeds, see specific recommendation for stinkweed. For best results apply to the main flush of young, actively growing weeds. Apply before the crop canopy prevents thorough coverage of the small target weeds. Thorough spray coverage of the small target weeds is important for good weed control. When very high weed seedling populations occur, larger weed seedlings may interfere with coverage of smaller seedlings, and control may be reduced. Weeds that occur after application may not be controlled. Muster® Herbicide can be applied to canola from the two (2) leaf stage to the beginning of bolting.

20 g/ha WEEDS CONTROLLED WEEDS SUPPRESSED1

Flixweed (spring seedlings) Stinkweed

Green Smartweed Hempnettle Wild Mustard

30 g/ha WEEDS CONTROLLED WEEDS SUPPRESSED¹
Weeds controlled at 20 g/ha plus Stinkweed Redroot Pigweed

<sup>1</sup>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.

Apply with ground equipment only. Make only one application per growing season. Do not harvest crop within 60 days of treatment.

Refer to other sections of this booklet for additional application and/or use precaution instructions.

# FOR USE ON SUNFLOWER

For postemergent control of weeds listed on the "Muster® Herbicide" section of the label, apply Muster® Herbicide at 20-30 grams per hectare with a recommended NON-IONIC SURFACTANT (AG-SURF\*, AGRAL\* 90, or CITOWETT\* PLUS) at 2 litres per 1000 litres of spray volume. Use a minimum spray volume of 100 L/ha.

For optimum weed control apply Muster® Herbicide at the cotyledon to six (6) leaf stage of target weeds, see specific recommendations for stinkweed. For best results apply to the main flush of young, actively growing weeds. Apply before the crop canopy prevents thorough coverage of the small target weeds. Weed seedlings that occur after application may not be controlled. Muster® Herbicide can be applied to sunflower from 15 to 45 cm in height (2 to 8 leaf stage).

Do not graze the treated crops or cut for hay; sufficient data are not available to support such use.

Land treated with Muster® Herbicide must not be planted to crops other than spring wheat, barley or oats with a recropping interval of 10 months. See the "INTERVAL PRIOR TO PLANTING" section of the label for additional recropping restrictions and recommendations.

Apply with ground equipment only. Make only one application per growing season. Do not harvest crop within 60 days of treatment.

Refer to other sections of this booklet for additional application and/or use precaution instructions.

### FOR USE ON LAURENTIAN RUTABAGA:

For postemergent control of wild mustard, apply Muster® Herbicide at 15 grams per hectare with a recommended NON-IONIC SURFACTANT (AG-SURF\*, AGRAL\* 90, or CITOWETT\* PLUS) at 2 litres per 1000 litres of spray volume OR a recommended adjuvant (SURE-MIX\*) at 5 litres per 1000 litres of spray volume.

Apply Muster® Herbicide from the cotyledon to the 6-leaf stage of wild mustard. For best results apply to the main flush of young, actively growing weeds. Apply before the crop canopy prevents thorough coverage of the small target weeds. Weeds that emerge after application may not be controlled.

Muster® Herbicide can be applied post-emergent to Laurentian rutabaga prior to crop bolting.

Apply with ground equipment only. Use a spray volume of at least 100 L/Ha. Make only one application per growing season. Do not harvest crop within 45 days of treatment.

See the "INTERVAL PRIOR TO PLANTING" section of the label for additional recropping restrictions and recommendations.

Refer to other sections of this booklet for additional application and/or use precaution instructions.

### FOR USE ON BRASSICA CARINATA

### MUSTER® Herbicide + NON-IONIC SURFACTANT (AG-SURF\*, AGRAL\* 90 OR CITOWETT\* PLUS)

Apply Muster® Herbicide at 20 grams per hectare with a recommended surfactant at 2.0 litres per 1000 litres of spray volume (see "Mixing Instructions" section of label). Apply from the 4-leaf to late rosette stage of Brassica carinata, when target weeds are in the cotyledon to 6-leaf stage. For best results, apply to the main flush of young actively growing weeds. Thorough spray coverage of weeds is important for good control. When very high weed seedling population occurs, larger weeds may interfere with coverage of smaller seedlings, and control may be reduced.

• Do not use more than 20 grams per hectare on Brassica carinata or injury may result.

20 g/ha	Weeds Controlled	Weeds Suppressed <sup>1</sup>
	Flixweed (spring seedlings)	Stinkweed
	Stinkweed	
	Green Smartweed	
	Hemp-nettle	
	Wild Mustard	

<sup>1</sup>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.

# NOTE:

If rain occurs soon after application control may be reduced. At least 4 - 6 hours of dry weather are needed to allow Muster® Herbicide to be absorbed by weed foliage. Environmental conditions that slow the drying of Muster® Herbicide on the foliage such as high relative humidity, cool air temperature or cloud cover, may increase the time required.

### SPECIFIC WEED RECOMMENDATIONS:

Stinkweed: For best results apply Muster® Herbicide plus recommended surfactant to actively growing emerged stinkweed that are in the 1-4 leaf stage. Ensure thorough coverage.

Refer to other sections of this booklet for additional application and/or use precaution instructions.

### RESISTANCE-MANAGEMENT RECOMMENDATIONS:

For resistance management, Muster® Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Muster® Herbicide and other Group 2 herbicides. The resistance 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 Muster® Herbicide or other Group 2 herbicides within a growing season (sequence) or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted. To delay
  resistance, the less resistance-prone partner should control the target weed(s) as effectively as the
  more resistance-prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistancemanagement and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact your local FMC representative or the FMC hotline at 1-833-362-7722 for further information.

### STORAGE:

Store this product away from food or feed. Store product in original container in a secure and dry area. . Not for use or storage in or around the home. Keep container closed.

### **DISPOSAL:**

**RECYCLABLE CONTAINER:** Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer or the provincial regulatory agency in case of spills 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.

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