

2020-06-12  
Sub.No.2020-1059

GROUP	2	HERBICIDE
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## **REFINE EXTRA® 75 DF HERBICIDE**

WETTABLE GRANULES

FOR SALE FOR USE ON WHEAT (SPRING, WINTER OR DURUM), BARLEY AND OATS, AND SEEDLING AND ESTABLISHED GRASS SPECIES FOR FORAGE AND SEED PRODUCTION ONLY

COMMERCIAL

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

**ACTIVE INGREDIENT:** Thifensulfuron methyl 50%  
Tribenuron methyl 25%

WARNING - EYE AND SKIN IRRITANT

Warning: contains the allergens milk and sulfites

REGISTRATION. NO.: 22352 PEST CONTROL PRODUCTS ACT

**NET CONTENTS:** 160 grams – 13.6 Kg

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. Use with adequate ventilation.
- Avoid contact with skin, eyes and clothing.
- Do not contaminate any body of water.
- May be harmful if swallowed, inhaled or absorbed through skin.
- Causes eye and skin irritation.
- When using, do not eat, drink or smoke. Wash skin thoroughly with soap and water after handling.
- Remove contaminated clothing immediately after use. Store and wash contaminated clothing separately from household laundry before re-use.
- Do not apply by air.
- Wear goggles or face shield, coveralls, socks, suitable chemical resistant gloves and footwear during mixing and loading. Wear long-sleeved shirt, long pants, socks, and chemical-resistant gloves and footwear during application, clean-up and repair. Chemical-resistant gloves are not required while operating groundboom sprayers.
- **Do not** enter or allow entry into treated areas for 12 hours after application.

**FIRST AID:****EYE CONTACT:**

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.

**SKIN OR CLOTHING CONTACT:**

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.

**INGESTION:**

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.

**INHALATION:**

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 the product name and Pest Control Product Registration Number with you when seeking medical attention.

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

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**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. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.

3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.

**If this is a refillable container:**

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

**If this is a returnable container:**

Do not reuse this container for any other purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

**For all package types:**

For information on 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 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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- When using, do not eat, drink or smoke. Wash skin thoroughly with soap and water after handling.
- Remove contaminated clothing immediately after use. Store and wash contaminated clothing separately from household laundry before re-use.
- Do not apply by air.
- Wear goggles or face shield, coveralls, socks, suitable chemical resistant gloves and footwear during mixing and loading. Wear long-sleeved shirt, long pants, socks, and chemical-resistant gloves and footwear during application, clean-up and repair. Chemical-resistant gloves are not required while operating groundboom sprayers.
- **Do not** enter or allow entry into treated areas for 12 hours after application.

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**INGESTION:**

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.

**INHALATION:**

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 the product name and Pest Control Product Registration Number with you when seeking medical attention.

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

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**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, 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.

Carefully observe sprayer clean-up instructions, as spray tank residues may damage crops other than wheat, barley or oats.

APPLY WITH A SURFACTANT REGISTERED FOR USE WITH REFINE EXTRA® 75 DF HERBICIDE.

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### GENERAL INFORMATION

REFINE EXTRA® 75 DF Herbicide is recommended for selective postemergence control or suppression of broadleaf weeds in wheat (spring, winter or durum), barley and oats not underseeded to legumes or grasses. REFINE EXTRA® 75 DF Herbicide is a 75% active ingredient herbicide formulated as a dry flowable dispersible granule. REFINE EXTRA® 75 DF

Herbicide is to be mixed with water and a recommended surfactant and applied as a uniform broadcast spray. It is noncorrosive, nonflammable, nonvolatile and does not freeze.

REFINE EXTRA® 75 DF Herbicide MUST be applied with a recommended surfactant, early postemergence, to the main flush of actively growing broadleaf weeds. Recommended surfactants are AGRAL\* 90, AG-SURF\*, and CITOWETT\* PLUS.

Warm, moist growing conditions promote active weed growth and enhance the activity of REFINE EXTRA® 75 DF 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. APPLY REFINE EXTRA® 75 DF Herbicide WITH GROUND EQUIPMENT ONLY. For best results, ensure thorough spray coverage of target weeds. See "Postemergence Applications" section of this label for complete use details.

REFINE EXTRA® 75 DF Herbicide stops growth of susceptible weeds rapidly. 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 are dependent on weed sensitivity, weed size, crop competition, growing conditions at and following treatment, and spray coverage.

The following crops may be planted two months after an application of REFINE EXTRA® 75 DF Herbicide: canola, flax, lentils and alfalfa.

### DIRECTIONS FOR USE

- DO NOT re-enter treated fields until 12 hours after application.
- 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 wind speed, wind direction, temperature inversion, 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. Boom height must be 60 cm or less above the crop or ground.

#### **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, pastures, rangelands, riparian areas, and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of Application	Buffer zone (metres) required for the protection of:		
	Terrestrial habitat	Aquatic habitats of water depths:	
		<1m	>1m
Field sprayer*	15	1	0

\*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, 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, 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.

NOTE: Applicators may recalculate a site-specific buffer zone by combining information on current weather conditions and spray configuration for the following applications: all airblast applications, and for field and aerial applications which specify the following droplet size category wording on the product label: 'DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification.' To access the Buffer Zone Calculator, please visit the Pest Management Regulatory Agency web site.

#### **ENVIRONMENTAL HAZARDS:**

- **TOXIC** to plants. Observe buffer zones specified under DIRECTIONS FOR USE.
- **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, 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

### **REFINE EXTRA® 75 DF HERBICIDE**

#### **Wheat (Spring, winter and durum), Barley and Oats**

Apply 20 grams of REFINE EXTRA® 75 DF Herbicide per hectare with a surfactant which is recommended for use with REFINE EXTRA® 75 DF Herbicide at 2.0 litres per 1,000 litres of spray volume (see "Mixing Instructions" section of this label). Apply postemergence when the crop is in the two-leaf to flag leaf (shot blade) stage of growth, (prior to head emergence) but before the crop canopy will prevent thorough coverage of target weeds. For best results apply to emerged, young, actively growing weeds that are less than 10 cm tall or across. Thorough coverage of target weeds is essential.

#### **WEEDS CONTROLLED:**

Annual smartweed (green smartweed, lady's thumb)	Narrow-leaved hawk's-beard
Ball mustard	Redroot pigweed
Chickweed <sup>2</sup>	Russian thistle
Corn spurry	Shepherd's purse
Cow cockle	Stinkweed
Flixweed	Tartary buckwheat
Groundsel, common	Volunteer rapeseed <sup>6</sup>
Hemp-nettle	Volunteer sunflower
Kochia	Wild buckwheat <sup>3</sup>
Lamb's-quarters	Wild mustard

#### **WEEDS SUPPRESSED:**

Canada thistle<sup>1</sup>  
Cleavers (1 to 3 whorls)  
Round-leaved mallow<sup>4</sup>  
Scentless chamomile  
Sow thistle<sup>1</sup>  
Stork's-bill (2-6 leaf)  
Toadflax<sup>5</sup>

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

#### **Specific Weed Recommendations:**



1. Canada thistle, Sow thistle: Apply REFINE EXTRA® 75 DF Herbicide plus recommended surfactant postemergence when the majority of the thistles have emerged and are actively growing. For best top growth control, apply when thistles are no larger than 15 cm tall, before bud stage, and before crop canopy prevents thorough coverage of thistles. A single application will effectively inhibit the ability of emerged thistles to compete with the crop. Later emerging thistles will not be controlled.
2. Chickweed: Apply REFINE EXTRA® 75 DF Herbicide plus recommended surfactant when the chickweed is small (1-6 leaf) and actively growing but before crop canopy prevents thorough coverage of weeds. Chickweed emerging after application will not be controlled.
3. Wild Buckwheat: Apply REFINE EXTRA® 75 DF Herbicide plus surfactant to actively growing wild buckwheat in the cotyledon - 3 leaf stage. Under stress conditions such as dry weather control may be reduced. Large plants may regrow after treatment.
4. Round-leaved Mallow: Apply REFINE EXTRA® 75 DF Herbicide plus a surfactant to actively growing round leaved mallow in the 2-6 leaf stage (10-12 cm in height). REFINE EXTRA® 75 DF Herbicide will keep mallow stunted but may not reduce the overall populations.
5. Toadflax: Apply REFINE EXTRA® 75 DF Herbicide plus recommended surfactant when toadflax is no taller than 15 cm in height. A control program for this weed includes both frequent tillage and chemical application.
6. Volunteer rapeseed: REFINE EXTRA® 75 DF Herbicide alone will not control imazamox and imazethapyr tolerant canola, (e.g. Clearfield\* canola)

**NOTE:**

Avoid making applications to weeds when rainfall is threatening. Rainfall within 4 hours will result in reduced weed control of REFINE EXTRA® 75 DF Herbicide.

**TANK MIXES WITH REFINE EXTRA® 75 DF HERBICIDE**

**REFINE EXTRA® 75 DF HERBICIDE PLUS MCPA**

Wheat (Spring, winter and durum), Barley and Oats

Apply REFINE EXTRA® 75 DF Herbicide at 20 grams per hectare plus MCPA Amine or Ester 500 at 0.7 - 1.1 litres per hectare (or acid equivalent to deliver 350 - 560 grams active ingredient per hectare) plus a recommended surfactant at 2 litres per 1,000 litres of spray volume (see "Mixing Instructions" section of the label). Apply the tank mix from the full 3-leaf stage to just before the flag leaf stage of wheat (spring, durum, winter), barley and oats. This tank mix will control:

**WEEDS CONTROLLED:**

Annual smartweed †	Prickly lettuce
Ball mustard	Ragweed ††
Burdocks (seedling)	Redroot pigweed
Chickweed	Russian pigweed ††
Cocklebur ††	Russian thistle
Corn spurry	Shepherd's purse
Cow cockle	Stinkweed
False ragweed ††	Tartary buckwheat
Flixweed	Tumble mustard
Giant ragweed ††	Volunteer rapeseed †††
Hare's-ear mustard	Wild buckwheat
Hempnettle	Plaintain (common)
Indian mustard	Wild mustard
Kochia ††	Wild radish
Lamb's-quarters	Wormseed mustard

† Green smartweed and lady's thumb

†† Use a minimum of 400 grams MCPA active ingredient per hectare.

††† Including imazamox and imazethapyr tolerant canola (e.g., Clearfield\* canola).

#### **WEEDS SUPPRESSED:**

Canada thistle  
Round-leaved mallow  
Scentless chamomile  
Sow thistle  
Stork's-bill (2-6 leaf) (MCPA Ester only)

Follow "Specific Weed Recommendations" for Canada and sow thistle, wild buckwheat, round-leaved mallow and chickweed.

#### **WEEDS CONTROLLED BY REFINE EXTRA® 75 DF HERBICIDE PLUS MCPA (0.56 L/HA)**

Weeds controlled or suppressed by REFINE EXTRA® 75 DF Herbicide alone plus volunteer imazamox and imazethapyr tolerant canola(e.g., Clearfield\* canola)(2-4 leaf stage).

Consult the MCPA label for additional application instructions and use precautions .

#### **REFINE EXTRA® 75 DF HERBICIDE PLUS 2,4-D**

##### **Wheat or Barley –Do Not Use On Oats**

Apply REFINE EXTRA® 75 DF Herbicide at 20 grams per hectare tank mixed with 2,4-D and a recommended surfactant. Rates and formulation of 2,4-D include:

1. 2,4-D Amine 500 at 0.84 - 1.1 litres per hectare or
2. 2,4-D Ester LV700 at 0.6 - 0.8 litres per hectare or
3. 2,4-D Ester LV600 at 0.7 - 0.9 litres per hectare or
4. Acid equivalent.

A recommended surfactant at 2 litres per 1,000 litres of spray volume must be added (see "Mixing Instructions" section of the label). Apply the tank mix from the full 3-leaf stage to just before the flag leaf stage of wheat (spring, durum, winter) and barley. **DO NOT USE ON OATS.**

#### **WEEDS CONTROLLED:**

Annual smartweed †	Prickly lettuce
Ball mustard	Redroot pigweed
Burdocks (seedling)	Russian pigweed
Chickweed	Russian thistle
Cocklebur	Shepherd's purse
Common ragweed	Stinkweed
Corn spurry	Stork's-bill
Cow cockle	(2-6 leaf)
False ragweed	(2,4-D ester only)
Flixweed	Sweet clover
Giant ragweed	Tartary buckwheat
Hare's-ear mustard	Tumble mustard
Hemp-nettle	Volunteer rapeseed ††
Indian mustard	Wild buckwheat
Kochia	Wild mustard
Lamb's-quarters	Wild radish

Plantain (common)

Wormseed mustard

† green smartweed and lady's thumb

†† including imazamox and imazethapyr tolerant canola varieties (e.g., Clearfield\* canola). Consult the 2,4-D label for appropriate use rates.

**WEEDS SUPPRESSED:**

- Canada thistle
- Round-leaved mallow
- Scentless chamomile
- Sow thistle
- Toadflax (2,4-D Ester only)

Follow "Specific Weed Recommendations" for Canada and sow thistle, chickweed, wild buckwheat and round-leaved mallow.

Consult the 2,4-D label for additional application instructions and use precautions.

**REFINE EXTRA® 75 DF HERBICIDE PLUS ASSERT\* 300 Herbicide**

**Spring Wheat and Spring Barley Only**

**For Use in the Prairie Provinces and Peace River Region of British Columbia Only.**

Apply REFINE EXTRA® 75 DF Herbicide at 20 grams per hectare plus ASSERT\* 300 Herbicide at 1.3 to 1.6 litres of product per hectare for the control of broadleaf weeds controlled by REFINE EXTRA® 75 DF Herbicide, and wild oats.

Use the low rate of ASSERT\* 300 Herbicide when the majority of wild oats are in the 1 - 3 leaf stage and the higher rate if wild oats are in the 4 leaf stage. Application can be made from the 2-leaf up to and including the 6-leaf stage of the crop.

Consult the ASSERT\* 300 Herbicide label for additional application instructions; use precautions and recropping information.

Use the spray preparation within 12 hours or product degradation may occur.

**REFINE EXTRA® 75 DF HERBICIDE + ASSERT\* 300 Herbicide  
+ MCPA ESTER 500**

**Spring Wheat and Spring Barley Only**

**For Use in the Prairie Provinces and Peace River Region of British Columbia Only**

Apply REFINE EXTRA® 75 DF Herbicide at 20 grams per hectare plus ASSERT\* 300 Herbicide at 1.3 - 1.6 litres of product per hectare plus MCPA Ester 500 at 0.7 - 1.1 litres per hectare (or acid equivalent to deliver 350 - 560 grams active ingredient per hectare) for the control of broadleaf weeds controlled by REFINE EXTRA® 75 DF Herbicide plus MCPA, and wild oats.

Apply at the 4-leaf to 6-leaf stage of the crop.

<b>SOIL ZONES</b>	<b>ASSERT* 300 Herbicide RATE</b>
Black and Grey Wooded	1.6 L/ha
Brown and Dark Brown	1.3 L/ha if the majority of the wild oats are in the 1-3 leaf stage. Apply Assert* 300 Herbicide at the 1.6 L/ha if the wild oats are in the 4-leaf stage.

Consult the ASSERT\* 300 Herbicide label for additional application instructions, use precautions and recropping information.

Use the spray preparation within 12 hours or product degradation may occur.

**REFINE EXTRA® 75 DF HERBICIDE + PUMA\* SUPER**

**For Use On Spring Wheat (Including Durum) And Barley  
In The Prairie Provinces And Peace River Region Of British Columbia Only.**

**APPLY:**

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
<b>Plus</b>	
PUMA* SUPER	at 0.5 Or 1.0 Litres per hectare

A non-ionic surfactant is NOT required when REFINE EXTRA® 75 DF Herbicide is tankmixed with PUMA\* SUPER.

Apply the REFINE EXTRA® 75 DF Herbicide + PUMA\* SUPER tankmix to spring and durum wheat at the 1 to 6-leaf plus 3 tillers stage or to barley at the 1 to 5-leaf plus 2 tillers stage. Apply the tankmix to annual grasses in the 1-6 leaf stage (up to emergence of third tiller). Consult the PUMA\* SUPER label for additional information on appropriate weed staging, application instructions, environmental and use precautions.

**WEEDS CONTROLLED:**

- Green Foxtail (PUMA\* SUPER at 0.5 or 1.0 L/ha)
- Wild Oats (PUMA\* SUPER at 1.0 L/ha)
- Barnyard Grass (PUMA\* SUPER at 1.0 L/ha)

This tankmix will also control or suppress the broadleaf weeds listed for REFINE EXTRA® 75 DF Herbicide alone at 20 grams/ha.

**REFINE EXTRA® 75 DF HERBICIDE + MCPA ESTER 500 + PUMA\* SUPER**

**For Use On Spring Wheat (Including Durum) And Barley  
In The Prairie Provinces And Peace River Region Of British Columbia Only.**

**APPLY:**

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
<b>Plus</b>	
MCPA ESTER 500	at 0.84 Litres per hectare
<b>Plus</b>	
PUMA* SUPER	at 0.5 OR 1.0 Litres per hectare

A non-ionic surfactant is NOT required when REFINE EXTRA® 75 DF Herbicide is tankmixed with MCPA ESTER 500 + PUMA\* SUPER. Use ONLY MCPA ESTER 500 in this tankmix and only at the recommended rate or a decrease in wild oat control may be observed.

Apply the REFINE EXTRA® 75 DF Herbicide + MCPA ESTER 500 + PUMA\* SUPER tankmix to spring and durum wheat at the 1 to 6-leaf plus 3 tillers stage or to barley at the 1 to 5-leaf plus 2 tillers stage. Apply to annual grasses in the 1-6 leaf stage (up to emergence of third tiller). Consult the MCPA ESTER 500 and PUMA\* SUPER labels for additional information on appropriate weed staging, application instructions, environmental and use precautions.

**WEEDS CONTROLLED:**

Green Foxtail (PUMA\* SUPER at 0.5 or 1.0 L/ha)  
 Wild Oats (PUMA\* SUPER at 1.0 L/ha)  
 Barnyard Grass (PUMA\* SUPER at 1.0 L/ha)

This tankmix will also control or suppress the broadleaf weeds listed for REFINE EXTRA® 75 DF Herbicide at 20 grams/ha + MCPA ESTER 500 at 0.84 Litres/ha.

**REFINE EXTRA® 75 DF HERBICIDE + PUMA\* 120 SUPER**

**For Use On Spring Wheat (Including Durum) And Barley  
 In The Prairie Provinces And Peace River Region Of British Columbia Only.**

**APPLY:**

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
<b>Plus</b>	
PUMA* 120 SUPER	at 770 mL/Ha or 385 mL/Ha

A non-ionic surfactant is NOT required when REFINE EXTRA® 75 DF Herbicide is tank mixed with PUMA\* 120 SUPER.

Apply the REFINE EXTRA® 75 DF Herbicide + PUMA\* 120 SUPER tankmix to spring and durum wheat at the 1 to 6-leaf plus 3 tillers stage or to barley at the 1 to 5-leaf plus 2 tillers stage. Apply the tankmix to annual grasses in the 1-6 leaf stage (up to emergence of third tiller). Consult the PUMA\* 120 SUPER label for additional information on appropriate weed staging, application instructions, environmental and use precautions.

**WEEDS CONTROLLED:**

Green Foxtail (PUMA\* 120 SUPER at 385 mL/Ha)  
 Wild Oats, Green Foxtail, (PUMA\* 120 SUPER at 770 mL/ha)  
 Yellow Foxtail, Barnyard Grass  
 Broadleaf weeds controlled or suppressed by REFINE EXTRA ® alone.

**REFINE EXTRA® 75 DF HERBICIDE + PUMA\* 120 SUPER + MCPA Ester 500**

**For Use On Spring Wheat (Including Durum) And Barley  
 In The Prairie Provinces And Peace River Region Of British Columbia Only.**

**APPLY:**

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
<b>Plus</b>	
PUMA* 120 SUPER	at 770 mL/Ha or 385 mL/Ha
<b>Plus</b>	
MCPA Ester 500	0.84 or 0.56 L/Ha

A non-ionic surfactant is NOT required when REFINE EXTRA® 75 DF Herbicide is tank mixed with PUMA\* 120 SUPER and MCPA Ester 500.

Use ONLY MCPA ESTER 500 in this tank mix and only at the recommended rate or a decrease in wild oat control may be observed.

Apply the REFINE EXTRA® 75 DF Herbicide + PUMA\* 120 SUPER + MCPA Ester 500 tank mix to spring and durum wheat at the 1 to 6-leaf plus 3 tillers stage or to barley at the 1 to 5-leaf plus 2 tillers stage. Apply the tank mix to annual grasses in the 1-6 leaf stage (up to emergence of third tiller). Consult the MCPA Ester 500 and PUMA\* 120 SUPER label for additional information on appropriate weed staging, application instructions, environmental and use precautions.

**WEEDS CONTROLLED:**

Green Foxtail (PUMA\* 120 SUPER at 385 mL/Ha)  
 Wild Oats, Green Foxtail, (PUMA\* 120 SUPER at 770 mL/ha)  
 Yellow Foxtail, Barnyard  
 Grass  
 Broadleaf weeds controlled or suppressed by REFINE EXTRA® 75 DF  
 Herbicide alone  
 Broadleaf weeds controlled by MCPA Ester 500 at 0.84 L/Ha,

**OR**

Volunteer imazamox and imazethapyr tolerant canola (e.g., Clearfield\*  
 canola) (2-4 leaf stage) when MCPA Ester 500 is applied at 0.56 L/ha.

**REFINE EXTRA® 75 DF HERBICIDE + HORIZON\* 240 EC**

**Spring Wheat (Including Durum) Only**

**For Use in The Prairie Provinces And Peace River Region Of British Columbia Only.**

For control of wild oats, apply REFINE EXTRA® 75 DF Herbicide at 20 grams per hectare with HORIZON\* 240 EC at 230 mL per hectare and 800 mL per hectare of SCORE\* at the 2 leaf to flag leaf stage of the crop. Add REFINE EXTRA® 75 DF Herbicide to the spray tank first, followed by HORIZON\* 240 EC, and add SCORE\* Adjuvant last. A non-ionic surfactant is NOT required when REFINE EXTRA® 75 DF Herbicide is tank mixed with HORIZON\* 240 EC plus the SCORE\* adjuvant.

For control of wild oats and green foxtail, apply REFINE EXTRA® 75 DF Herbicide at 20 grams per hectare with HORIZON\* 240 EC at 290 mL per hectare and 1 L per hectare of SCORE\* at the 2 leaf to flag leaf stage of the crop. Add REFINE EXTRA® 75 DF Herbicide to the spray tank first, followed by HORIZON\* 240 EC, and add Score Adjuvant last. A non-ionic surfactant is NOT required when REFINE EXTRA® 75 DF Herbicide is tank mixed with HORIZON\* 240 EC plus the SCORE\* adjuvant.

Consult the HORIZON\* 240 EC label for additional application instructions and use precautions.

**WEEDS CONTROLLED:**

Wild Oats  
 Green Foxtail

This tankmix will also control or suppress the broadleaf weeds listed for REFINE EXTRA® 75 DF Herbicide alone at 20 grams per hectare.

**REFINE EXTRA® 75 DF HERBICIDE + MCPA ESTER 500 + HORIZON\* 240 EC**

**Or Use On Spring Wheat (Including Durum) Only**

**In The Prairie Provinces And Peace River Region Of British Columbia.**

APPLY:

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
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<b>Plus</b>	
MCPA Ester 500	at 0.84 - 1.1 L per hectare <b>OR</b> at 0.56 L per hectare
<b>Plus</b>	
HORIZON* 240 EC	at 230 mL per hectare
<b>Plus</b>	
SCORE* Adjuvant	at 0.8% v/v

Apply at the 3 to flag leaf stage of the crop, to actively growing wild oats in the 1 to 6 leaf stage, prior to emergence of the 4<sup>th</sup> tiller, and to green foxtail in the 1 to 5 leaf stage, prior to emergence of the 3<sup>rd</sup> tiller. Consult the MCPA Ester 500 and HORIZON\* 240 EC labels for additional application instructions and use precautions.

**WEEDS CONTROLLED:**

Green Foxtail†

Wild Oats

PLUS broadleaf weeds controlled by REFINE EXTRA® 75 DF Herbicide and broadleaf weeds controlled by MCPA Ester 500 at 0.84-1.1 L per hectare or volunteer imazamox and imazethapyr tolerant canola (e.g. Clearfield\* canola) (2-4 leaf stage) when MCPA Ester 500 is applied at 0.56 L per hectare.

†NOTE:

A reduction in control of green foxtail may be observed with the tankmix of REFINE EXTRA® 75 DF Herbicide + HORIZON\* + MCPA Ester 500

**REFINE EXTRA® 75 DF Herbicide + ACCORD\* DF Herbicide + HORIZON\* 240 EC**

**Or Use On Spring Wheat (Including Durum) Only  
In The Prairie Provinces And Peace River Region Of British Columbia.**

**APPLY:**

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
<b>Plus</b>	
ACCORD* DF Herbicide	at 67 grams per hectare
<b>Plus</b>	
HORIZON* 240 EC	at 230 mL per hectare
<b>Plus</b>	
SCORE* Adjuvant	at 0.8% v/v

Make application when the crop is in the 2-5 leaf stage, to actively growing wild oats in the 1 to 6 leaf stage, prior to emergence of the 4<sup>th</sup> tiller, and to green foxtail in the 1 to 5 leaf stage, prior to emergence of the 3<sup>rd</sup> tiller. Thorough coverage of foliage is important for consistent weed control. Prior to use, consult the ACCORD\* DF Herbicide label for additional rotational cropping restrictions, application instructions, use precautions and other restrictions. Do not graze the treated crops or cut for hay within 77 days.

**WEEDS CONTROLLED:**

Green foxtail
Wild oats
Cleavers (1-3 whorl)
PLUS broadleaf weeds controlled or suppressed by REFINE EXTRA® 75

DF Herbicide

**REFINE EXTRA® 75 DF HERBICIDE + LONTREL\* 360 + 2,4-D ESTER or MCPA ESTER**

**For Use On Spring Wheat (Excluding Durum) And Barley Only.  
For Use in Western Canada Only.**

APPLY:

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
<b>plus</b>	
LONTREL* 360	at 0.21 litres per hectare
<b>plus</b>	
MCPA Ester (500 g/L)	at 0.84 litres per hectare
<b>or</b>	
2,4-D Ester (600 g/L)	at 0.7 litres per hectare

Add a recommended non-ionic surfactant such as AGRAL\* 90, AG-SURF\* or CITOWETT® PLUS at a rate of 0.2% of the final spray volume (i.e., 2.0 litres per 1000 litres of spray solution).  
See "Mixing Instructions" section of the label.

**WEEDS CONTROLLED:**

Canada thistle†  
Lady's thumb  
Perennial sow thistle  
Stinkweed  
Volunteer canola  
Wild buckwheat  
Wild mustard

† Provides seasonal control of Canada thistle

**WEEDS SUPPRESSED:**

Cleavers

PLUS: all other broadleaf weeds controlled or suppressed by REFINE EXTRA® 75 DF Herbicide alone at 20 grams per hectare.

Refer to the MCPA Ester or 2,4-D Ester labels for additional broadleaf weeds controlled at the rates recommended above.

Consult the LONTREL\* and 2,4-D Ester or MCPA Ester labels for additional application instructions, use precautions, and other label restrictions.

**DO NOT USE ON OATS.**



**REFINE EXTRA® 75 DF HERBICIDE + CURTAIL\* M**

**For Use On Spring Wheat (Excluding Durum) And Spring Barley Only.  
For Use in the Prairie Provinces and Peace River Region of British Columbia Only.**

APPLY:

REFINE EXTRA® 75 DF Herbicide	20 grams per hectare
<b>plus</b>	
CURTAIL* M	1.5 litres per hectare
<b>plus</b>	
a recommended surfactant	at 2 litres per 1,000 litres of spray volume

See “Mixing Instructions” section of the label for proper mixing/application instructions. Ensure that REFINE EXTRA® 75 DF Herbicide is completely in suspension in the spray tank before adding CURTAIL\*M.

Apply the tank mix from the full 3-leaf stage of spring wheat and spring barley. Consult the CURTAIL\* M label for additional application instructions and use precautions.

**WEEDS CONTROLLED:**

Canada thistle†  
Wild buckwheat††

PLUS all other broadleaf weeds controlled or suppressed by REFINE EXTRA® 75 DF Herbicide alone at 20 grams per hectare.

† Canada thistle: Apply REFINE EXTRA® 75 DF Herbicide plus CURTAIL\* M plus a recommended surfactant postemergence after all the thistles have emerged, and are actively growing. For best control, apply when thistles are no larger than 15 cm tall, before bud stage and before canopy prevents thorough coverage of thistles. Later emerging thistles will not be controlled.

†† Wild buckwheat: Apply REFINE EXTRA® 75 DF Herbicide plus CURTAIL\* M plus a recommended surfactant to actively growing wild buckwheat in the cotyledon to 5 leaf stage. Under stress conditions such as dry weather, control may be reduced. Large plants may regrow after treatment.

**REFINE EXTRA® 75 DF HERBICIDE + ACCORD\* DF HERBICIDE**

**SPRING WHEAT (Including Durum) AND SPRING BARLEY (grown for feed purposes only. Not Underseeded To Forages.  
For Use in the Prairie Provinces and Peace River Region of British Columbia**

APPLY:

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
<b>plus</b>	
ACCORD* DF Herbicide	At 67 <b>OR</b> at 135-165 grams per hectare
<b>plus</b>	
MERGE* adjuvant	at 1.0% v/v (10 litres per 1000 litres spray volume)

A non-ionic surfactant is NOT required when REFINE EXTRA® 75 DF Herbicide is tank mixed with ACCORD\* DF Herbicide plus the MERGE\* adjuvant.

Make application when crop is in the 2-5 leaf stage. Use the 165 grams per hectare rate of ACCORD\* DF Herbicide when green foxtail is the target weed. Thorough coverage of foliage is important for consistent weed control. Do not apply this tank mixture more often than once every two years. Prior to use, consult the ACCORD\* DF Herbicide label for additional rotational cropping restrictions, application instructions, use precautions and other restrictions. Do not graze the treated crops or cut for hay within 77 days of application.

<b>WEEDS CONTROLLED WHEN ACCORD* DF HERBICIDE IS USED AT 135-165 GRAMS/HA</b>	<b>APPLICATION TIMING</b>
Green Foxtail	1-5 leaf, 2 tillers
Barnyard Grass	1-5 leaf
Volunteer Flax	1-8 cm
Cleavers	1-4 whorls
Annual Sowthistle	1-4 leaf
PLUS: Weeds controlled or suppressed by REFINE EXTRA® 75 DF Herbicide alone	

Refer to the ACCORD\* DF Herbicide label for additional information on appropriate weed staging at application.

Do not graze the treated crops or cut for hay within 77 days (spring wheat, durum) or 80 days (spring barley) of application.

<b>WEEDS CONTROLLED WHEN ACCORD* DF Herbicide IS USED AT 67 GRAMS/HA</b>	<b>APPLICATION TIMING</b>
Cleavers	1-3 whorls
Annual Sowthistle	1-4 leaf
PLUS: Weeds controlled or suppressed by REFINE EXTRA® 75 DF Herbicide alone	

### **REFINE EXTRA® 75 DF HERBICIDE + ACCORD\* DF HERBICIDE**

#### **+ PUMA\* 120 SUPER**

**SPRING WHEAT (Including Durum) AND SPRING BARLEY (grown for feed purposes only). Not Underseeded To Forages.**

**For Use in the Prairie Provinces and Peace River Region of British Columbia**

REFINE EXTRA® 75 DF Herbicide	20 grams per hectare
Accord* DF Herbicide	67 grams per hectare
Puma* 120 Super	0.77 Litres per hectare

Merge\* adjuvant is NOT required when REFINE EXTRA® 75 DF Herbicide and Accord\* DF Herbicide are tank mixed with Puma\* 120 Super.

Apply the REFINE EXTRA® 75 DF Herbicide + Accord\* DF Herbicide + Puma\* 120 Super tank mix to spring and durum wheat at the 2 to 5-leaf stage or to barley at the 2 to 4-leaf stage. Apply the tank mix to annual grasses in the 1-6 leaf stage (up to emergence of third tiller), or to cleavers in the 1-4 whorl. Consult the Accord\* DF Herbicide and Puma\* 120 Super labels for additional information on appropriate weed staging, application instructions, environmental and use precautions.

#### **WEEDS CONTROLLED:**

Weeds controlled or suppressed
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by REFINE EXTRA® 75 DF Herbicide alone
Green Foxtail
Wild Oats
Barnyard Grass
Cleavers

Do not graze the treated crops or cut for hay within 77 days (spring wheat, durum) or 80 days (spring barley) of application.

**REFINE EXTRA® 75 DF HERBICIDE + ACCORD\* DF HERBICIDE  
+ AVENGE\* 200-C - SPRING WHEAT ONLY.**

**Use Only On the Spring Wheat Varieties On The Avenge\* 200 C Label. Not Underseeded To Forages.  
For Use in the Prairie Provinces and Peace River Region of British Columbia**

APPLY:

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare.
<b>plus</b>	
ACCORD* DF Herbicide	at 135-165 grams per hectare
<b>plus</b>	
AVENGE* 200-C	at 3.5 litres per hectare
<b>plus</b>	
MERGE* adjuvant	at 1.0% v/v (10 litres per 1000 litres spray volume).

A non-ionic surfactant is NOT required when REFINE EXTRA® 75 DF Herbicide is tank mixed with ACCORD\* DF Herbicide + AVENGE\* plus the MERGE\* adjuvant.

Make application when crop is in the 2-5-leaf stage. Use the 165 grams per hectare rate of ACCORD\* DF Herbicide when green foxtail is the target weed. Thorough coverage of foliage is important for consistent weed control. Do not apply this tank mixture more often than once every two years. Prior to use, consult the ACCORD\* DF Herbicide label for additional rotational cropping restrictions, application instructions, use precautions and other restrictions. Do not graze the treated crops or cut for hay within 77 days of application.

NOTE:

AVENGE\* 200-C can cause some crop injury. Always refer to the AVENGE\* 200-C and the ACCORD\* DF Herbicide labels for additional application instructions, use precautions and other restrictions.

**WEEDS CONTROLLED:**

Wild Oats when populations are between 1-200 plants per square metre.

Plus weeds listed as controlled or suppressed by the REFINE EXTRA® 75 DF Herbicide alone and the REFINE EXTRA® 75 DF Herbicide + ACCORD\* DF Herbicide tankmix.

NOTE:

Refer to the ACCORD\* DF Herbicide + AVENGE\* 200-C labels for additional information on appropriate weed staging at application.

**REFINE EXTRA® 75 DF HERBICIDE + ATTAIN\* HERBICIDE TANK MIX**

**For Use On Spring Wheat (Excluding Durum), And Spring Barley Only, Not Underseeded to Legumes.  
In The Prairie Provinces and Peace River Region of British Columbia Only.**

**APPLY:**

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
<b>plus</b>	
ATTAIN* Herbicide Tank Mix	Attain A (fluroxypyr) at 0.30 L/ha
	Attain B(2,4-D ester) at 0.50 L/ha
<b>plus</b>	
Adjuvants: AGRAL* 90, AG-SURF*, or CITOWETT*	at 2L/1000 litres of spray solution

Apply from the 4-leaf to flag-leaf stage of spring wheat or spring barley and seedling stage to 4-leaf/whorls of weed.

Mixing order is REFINE EXTRA® 75 DF Herbicide, then Attain\* A then Attain\* B then adjuvant. Refer to MIXING DIRECTIONS section for general instructions. Use a spray volume of 100 L/ha.

Do not permit lactating dairy animals to graze fields within 7 days of application. Do not harvest forage or cut hay within 30 days after application. Withdraw meat animals from treated fields at least 3 days before slaughter. Do not harvest the treated mature crop within 60 days after application. Consult the Attain\* Herbicide Tank Mix labels for additional application instructions and use precautions.

**WEEDS CONTROLLED:**

Weeds controlled or suppressed by REFINE EXTRA® 75 DF Herbicide alone
Cleavers (excluding Group 2 resistant cleavers).

**REFINE EXTRA® 75 DF HERBICIDE + LONTREL\* 360**

**For Use On Spring Wheat (Excluding Durum), And Spring Barley Only  
In The Prairie Provinces and Peace River Region of British Columbia Only.**

**APPLY:**

REFINE EXTRA® 75 DF Herbicide	at 20 grams per hectare
<b>plus</b>	
LONTREL* 360	at 0.21 litres per hectare
<b>plus</b>	
a recommended surfactant	at 2 litres per 1000 litres of spray volume

See "Mixing Instructions" section of the label for proper mixing/application instructions. Ensure that REFINE EXTRA® 75 DF Herbicide is completely in suspension in the spray tank before adding LONTREL\* 360.

Apply the tankmix from the full 3 leaf stage to the flag leaf stage of spring wheat and barley. Consult the LONTREL\* 360 label for additional application instructions and use precautions.

**WEEDS CONTROLLED:**

Canada Thistle (seasonal control) †  
Wild Buckwheat††

PLUS: All other broadleaf weeds controlled or suppressed by REFINE EXTRA® 75 DF Herbicide alone at 20 grams/ha.

†Canada Thistle (seasonal control): Apply REFINE EXTRA® 75 DF Herbicide plus LONTREL\* 360 plus a recommended surfactant postemergent, after all the thistles have emerged, and are actively growing. For best control, apply when thistles are no larger than 15 cm tall, before bud stage and before crop canopy prevents thorough coverage of thistles. Later emerging thistles will not be controlled.

†† Wild Buckwheat: Apply REFINE EXTRA® 75 DF Herbicide plus LONTREL\* 360 plus a recommended surfactant to actively growing wild buckwheat in the cotyledon to 5-leaf stage. Under stress conditions such as dry weather, control may be reduced. Large plants may regrow after treatment.

### **REFINE EXTRA® 75 DF HERBICIDE + BANVEL II\* HERBICIDE**

**For Use On Spring Wheat (Excluding Durum), And Spring Barley Only. Not Underseeded To Forages. In The Prairie Provinces and Peace River Region of British Columbia Only.**

Apply from the 2-5 leaf stage of spring wheat or spring barley and seedling stage to 8 leaf stage of kochia.

REFINE EXTRA® 75 DF Herbicide	20 grams/hectare
Banvel II* Herbicide	0.110 litres/hectare
Adjuvants: Agral*90, Ag-surf* or Citowett* Plus	2 litres/1000 litres of spray solution

Mixing order is REFINE EXTRA® 75 DF Herbicide then Banvel II\* Herbicide then adjuvant. Refer to the MIXING DIRECTIONS section for general instructions. Use minimum volume of 55 L/ha.

Do not permit lactating dairy animals to graze fields within 7 days after application. Consult the Banvel II\* Herbicide label for additional application instructions and use precautions.

#### **WEEDS CONTROLLED:**

Broadleaf weeds controlled or suppressed by REFINE EXTRA* Herbicide
Kochia, including Group 2 resistant kochia

### **REFINE EXTRA® HERBICIDE + HORIZON\* 240 EC HERBICIDE + BANVEL II\* Herbicide**

**For Use On Spring Wheat (Excluding Durum). Not Underseeded To Forages. In the Prairie Provinces and Peace River Region of British Columbia Only.**

Apply from the 2-5 leaf stage of spring wheat or spring barley and seedling stage to 8 leaf stage of kochia.

REFINE EXTRA® 75 DF Herbicide	20 grams/hectare
Horizon* 240 EC Herbicide	0.230 L/Ha
Banvel II* Herbicide	0.110 L/Ha
Adjuvant: Score*	0.8 L/Ha

Mixing order is REFINE EXTRA® 75 DF Herbicide then Banvel II\* Herbicide then Horizon\* 240 EC then Score\*. Refer to the MIXING DIRECTIONS section for general instructions. Use minimum volume of 55 L/ha.

Do not permit lactating dairy animals to graze fields within 7 days after application. Consult the Horizon\* 240 EC and Banvel II\* Herbicide labels for additional application instructions and use precautions.

**WEEDS CONTROLLED:**

Broadleaf weeds controlled or suppressed by REFINE EXTRA* 75 DF Herbicide
Kochia, including Group 2 resistant kochia
Wild oats
Green foxtail

**REFINE EXTRA® 75 DF HERBICIDE + 2,4-D AMINE OR ESTER + EVEREST\* SOLUPAK\* 70 DF OR EVEREST 70 WDG**

**For Use On Spring Wheat (Including Durum) Only**

**In The Prairie Provinces and Peace River Region of British Columbia Only**

Apply one of the following tank mixes from the 1 to 6-leaf (1 to 4 leaves on main stem, plus 2 tillers) growth stage of the crop. For wild oats, green foxtail and volunteer tame oats, apply from the 1 to 6-leaf (1 to 4 leaves on main stem, plus 2 tillers):

TANK MIX COMPONENTS AND APPLICATION RATES								
Component 1		Component 2		Component 3		Component 4		WEEDS CONTROLLED - Broadleaf weeds controlled or suppressed by REFINE EXTRA® 75 DF Herbicide alone plus:
Refine Extra®	20 g/ha	Everest* 70 WDG	43 g/ha	Agral * 90 or Agsurf*	0.25% v/v			Wild oats, green foxtail, volunteer tame oats.  Use 43 g/ha when wild oat infestations are greater than 100 plants/m <sup>2</sup> or when plants are not actively growing due to poor environmental conditions.
Refine Extra®	20 g/ha	Everest* 70 WDG or Everest* Solupak 70 DF	43 g/ha	2,4-D Amine or Ester	up to 560 g ae/ha	Agral * 90 or Agsurf*	0.25% v/v	Wild oats, green foxtail and volunteer tame oats.  Use 43 g/ha when wild oat infestations are greater than 100 plants/m <sup>2</sup> or when plants are not actively growing due to poor environmental conditions.

Refine Extra®	20 g/ha	Everest* 70 WDG or Everest* Solupak 70 DF	28.5 g/ha	2,4-D Amine or Ester	up to 560 g ae/ha	Agral * 90 or Agsurf*	0.25% v/v	Wild oats and volunteer tame oats only.  Use 28.5 g/ha when wild oat populations are below 100 plants/m2 and when plants are actively growing.
Refine Extra®	20 g/ha	Everest* 70 WDG or Everest* Solupak 70 DF	21.5 g/ha	2,4-D Amine or Ester	up to 560 g ae/ha	Agral * 90 or Agsurf*	0.25% v/v	Green foxtail only

Mixing order is Everest\* Solupak\* 70 DF or Everest 70 WDG then REFINE EXTRA® 75 DF Herbicide then 2,4-D Amine or Ester then adjuvant. Refer to MIXING DIRECTIONS section for general instructions.

Observe minimum interval to harvest of 80 days after treatment. For black, dark brown and gray-wooded soil zones only, field peas may be grown the year following Everest\* Solupak\* application in fields where precipitation has been normal or above normal (10 year average) during the growing season, and where organic matter content is above 4% and pH below 7.5. Re-crop spring wheat only in brown soil zone. Consult the 2,4-D Amine or Ester and Everest\* Solupak\* 70 DF or Everest\* 70 WDG labels for additional information on rotational cropping restrictions, application instructions, use precautions and other restrictions.

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

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

**SEEDLING AND ESTABLISHED GRASS SPECIES FOR FORAGE AND SEED PRODUCTION**

For broadleaf weed control, apply 20 grams of REFINE EXTRA® 75 DF Herbicide per hectare with a surfactant recommended for use with REFINE EXTRA® 75 DF Herbicide at 2.0 litres per 1,000 litres of spray volume. (See "Mixing Instructions" section of the label.)

Apply postemergence to the following Seedling or Established Grasses for Forage or Seed Production:

- |                         |                       |
|-------------------------|-----------------------|
| Meadow Bromegrass       | Pubescent Wheatgrass  |
| Smooth Bromegrass       | Tall Wheatgrass       |
| Creeping Red Fescue     | Slender Wheatgrass    |
| Tall Fescue             | Streambank Wheatgrass |
| Orchard Grass           | Northern Wheatgrass   |
| Crested Wheatgrass      | Western Wheatgrass    |
| Intermediate Wheatgrass |                       |

Apply postemergence to the following Established Grasses for Forage or Seed Production:  
Kentucky Bluegrass

REFINE EXTRA® 75 DF Herbicide will control the broadleaf weeds listed for REFINE EXTRA® 75 DF Herbicide alone. For best results apply to emerged, young, actively growing weeds that are less than 10 cm tall or across. Thorough coverage of target weeds is essential.

Apply with ground equipment only. Make only one application per growing season.  
The above grasses may not be grazed by or fed to livestock within 7 days of application.

Please refer to the appropriate sections of this label for additional use precautions, application and/or mixing instructions.

In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact FMC at 1-833-362-7722 for information before mixing any pesticide or fertilizer that is not specifically recommended on this label. The user assumes the risk of losses that result from the use of tank mixes that do not appear on this label or that are not specifically recommended by FMC.

### **MIXING INSTRUCTIONS:**

1. Select a spray volume that will ensure thorough coverage and uniform spray pattern. Use a minimum of 55-L spray volume per hectare. If tankmixing with other herbicides, always consult the label of the tank mix partner(s) for minimum spray volume requirements and apply the tank mixture using a water volume recommended for all products.
2. Fill the spray tank 1/4 – 1/3 full with fresh water and start agitation.
3. Add the required amount of REFINE EXTRA® 75 DF Herbicide to the tank. Make sure all of the REFINE EXTRA® 75 DF Herbicide is in suspension before proceeding to the next step. Continuous agitation is recommended throughout the entire mixing procedure to ensure products are completely dissolved and/or in suspension.
4. If using REFINE EXTRA® 75 DF Herbicide alone, a recommended surfactant such as AGRAL\* 90, AG-SURF\* or CITOWETT® PLUS must be added to the spray mixture at a rate of 2 litres per 1000 litres of spray solution.
5. Specific Tank Mix Instructions:  
If tankmixing with MCPA, 2,4-D, CURTAIL\* M, or LONTREL\* 360, add the required amount of MCPA, 2,4-D, CURTAIL\* M, or LONTREL\* 360 to the tank while maintaining agitation. Once the herbicide is completely in suspension, add a recommended surfactant such as AGRAL\* 90, AG-SURF\* or CITOWETT® PLUS at 2 L per 1000 L spray solution. Anti-foaming agents may be required.

If tankmixing with PUMA\* SUPER or MCPA + PUMA\* SUPER, add the required amount of PUMA\* SUPER and/or MCPA while maintaining agitation. DO NOT ADD A SURFACTANT.

If tank mixing with ASSERT\* 300 Herbicide or ASSERT\*300 Herbicide /MCPA: once REFINE EXTRA® 75 DF Herbicide is completely in suspension, add the required amount of Spray Water pH Adjuster and agitate until dissolved. Add the required amount of ASSERT\* 300 Herbicide while maintaining agitation. If adding MCPA, add it to the tank last. Addition of surfactant is not required with this mixture.

When mixing with LONTREL\* 360 + 2,4-D Ester or MCPA Ester, mix REFINE EXTRA\* first in fresh water, then add the required amount of LONTREL\* 360 followed by MCPA or 2,4-D. Add the recommended non-ionic surfactant such as AGRAL\* 90, AG-SURF\* or CITOWETT® PLUS last, at a rate of 2 litres per 1000 litres spray solution.

If tankmixing with HORIZON\* 240 EC, or HORIZON\* 240 EC + MCPA Ester, add the required amount of HORIZON\* 240 EC and/or MCPA Ester after REFINE EXTRA® 75 DF Herbicide is completely in suspension, and maintain agitation. Add the SCORE\* adjuvant at the appropriate rate last. DO NOT ADD AN ADDITIONAL NON-IONIC SURFACTANT.



When tankmixing with ACCORD\* DF Herbicide or ACCORD\* DF Herbicide plus AVENGE\* 200-C, add the required amount of REFINE EXTRA® 75 DF Herbicide and ACCORD\* to the tank. When these products have completely dissolved and are in suspension, add the appropriate amount of AVENGE\* 200-C if required and maintain agitation. Add the MERGE\* adjuvant at the appropriate rate last. Do not add an additional non-ionic surfactant.

6. Continue to fill tank and maintain agitation for at least 5 minutes to ensure thorough mixing.
7. On repeat 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 mixed.
8. Use the spray preparation of REFINE EXTRA® 75 DF Herbicide within 24 hours or product degradation may occur. Use spray preparation containing ASSERT\* 300 Herbicide within 12 hours or product degradation may occur. If spray solution is left standing without agitation, thoroughly agitate and re-suspend any settled REFINE EXTRA® 75 DF Herbicide before resuming the spraying operation.

The volumetric measuring guide to measure REFINE EXTRA® 75 DF Herbicide is to be used only as a guide. For precise measurement use scales calibrated in grams.

#### **APPLICATION INSTRUCTIONS:**

Apply the spray mixture uniformly with properly calibrated ground equipment only. Ensure thorough coverage and a uniform spray pattern. Flat fan nozzles are recommended (minimum 55 litres spray volume per hectare). Use 50 mesh filter screens or larger (metal or nylon). A spray pressure of 210-275 kPa is recommended. Continuous agitation is required to keep REFINE EXTRA® 75 DF Herbicide in suspension. Apply uniformly. Avoid overlapping and shut off spray boom while starting, turning, slowing or stopping to prevent crop injury from over application.

#### **SPRAYER CLEANUP:**

To avoid subsequent injury to crops other than wheat, barley or oats, immediately after spraying and prior to spraying other crops, thoroughly remove all traces of REFINE EXTRA® 75 DF Herbicide from mixing and spray equipment as follows:

1. Drain tank; then flush tank, boom and hoses with clean water for a minimum of ten minutes. Visually inspect tank to ensure removal of all visible residues of REFINE EXTRA® 75 DF Herbicide. If necessary, repeat Step 1. **DO NOT CLEAN SPRAYER NEAR WELL OR WATER SOURCE OR NEAR TO DESIRABLE VEGETATION.**
2. Fill the tank with clean water, then add 1 litre household AMMONIA (containing minimum of 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.

#### **USE PRECAUTIONS:**

#### **RESISTANCE-MANAGEMENT RECOMMENDATIONS:**

For resistance management, REFINE EXTRA® 75 DF Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to REFINE EXTRA® 75 DF Herbicide 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 used of REFINE EXTRA® 75 DF Herbicide or other Group 2 herbicides with different herbicide groups that control the same weeds in a field.
- ◆ Use tank mixtures with herbicides from different group 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 considers 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 your local FMC representative or the FMC hotline at 1-833-362-7722 for further information.
  
- ◆ Applications to wheat, barley or oats that are stressed by severe weather conditions, frost, low fertility, drought, water logged soil (soils at or near field capacity), disease or insect damage may result in crop injury. Drought, disease or insect damage following application may also result in crop injury.
  
- ◆ Do not apply to irrigated land where tail water will be used to irrigate cropland.
  
- ◆ Do not contaminate irrigation water.
  
- ◆ Do not apply to crops underseeded to legumes or grasses as injury to forage may result.
  
- ◆ Do not remove soil from treated fields for use on lawns, in gardens or for back fill.
  
- ◆ REFINE EXTRA® 75 DF Herbicide should be applied only with water as a carrier. Other carriers may accelerate breakdown of the product and reduce its effectiveness.
  
- ◆ Do not exceed a total of 20 g of REFINE EXTRA® 75 DF Herbicide per hectare per crop year.
  
- ◆ Do not plant to any crop until two months after application.
  
- ◆ Wheat, barley or oats may not be grazed by or fed to livestock within 7 days of application.
  
- ◆ 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 use on highly variable soils that have large gravelly or sandy areas, eroded knolls, or calcium deposits.
  
- ◆ Limit use of REFINE EXTRA® 75 DF Herbicide to currently licensed varieties of wheat (spring, durum, winter), barley and oats. Consult FMC prior to use on unlicensed varieties for crop tolerance information. DO NOT USE ON LEGER BARLEY AND BELVEDERE WHEAT.

Overspray or drift to important wildlife habitats such as shelterbelts, wetlands, sloughs or dry slough borders and woodlots should be avoided.

**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. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.

**If this is a refillable container:**

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

**If this is a returnable container:**

Do not reuse this container for any other purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

**For all package types:**

For information on 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 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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