# **CONTAINER LABEL**

GROUP 2 HERBICIDE

# **RETAIN A HERBICIDE**

Soluble Granule 50%

FOR SALE FOR USE ON WHEAT (SPRING OR DURUM) AND SPRING BARLEY

**AGRICULTURAL** 

REGISTRATION NO. 30129 PEST CONTROL PRODUCTS ACT

**ACTIVE INGREDIENTS:** Thifensulfuron methyl 33.35%

Tribenuron methyl 16.65%

Warning: Contains the allergen milk and sulfites.

NET CONTENTS: 121.5 – 486 GRAMS (1 X121.5 – 4 X 121.5 water soluble bags)

READ THE LABEL AND THIS ATTACHED BOOKLET BEFORE USING

DO NOT SELL WATER SOLUBLE BAGS SEPARATELY

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

Distributed by: LOVELAND PRODUCTS

CANADA INC. 789 Donnybrook Drive Dorchester, Ontario

N0L 1G5

# PRECAUTIONS:

- KEEP OUT OF REACH OF CHILDREN.
- AVOID BREATHING SPRAY MIST. USE WITH ADEQUATE VENTILATION.
- AVOID CONTACT WITH SKIN, EYES AND CLOTHING. WEAR GOGGLES OR FACE SHIELD, LONG-SLEEVED SHIRT, LONG PANTS, SOCKS AND CHEMICAL RESISTANT GLOVES AND FOOT WEAR DURING MIXING, LOADING, APPLICATION, CLEAN-UP AND REPAIR. CHEMICAL RESISTANT GLOVES ARE NOT REQUIRED WHILE OPERATING GROUNDBOOM SPRAYERS.
- 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 REUSE.
- DO NOT SELL WATER SOLUBLE BAGS SEPARATELY
- DO NOT USE HUMAN FLAGGERS

#### FIRST AID:

#### IF IN EYES:

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

#### IF ON SKIN OR CLOTHING:

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

# IF SWALLOWED:

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

#### IF INHALED:

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

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

IN CASE OF EMERGENCY, CALL TOLL FREE, DAY OR NIGHT: 1-800-331-3148

#### TOXICOLOGICAL INFORMATION:

Treat symptomatically.

# **ENVIRONMENTAL HAZARDS:**

- Overspray or drift to important wildlife habitats such as shelterbelts, wetlands, sloughs or dry slough borders and woodlots should be avoided. Observe buffer zones specified under DIRECTIONS FOR USE.
- Do not remove soil from treated fields for use on lawns, in gardens or for back fill.
- Do not contaminate irrigation water. Do not apply to land where tail water will be used to irrigate cropland.
- Do not apply more than 30 g per hectare of RETAIN A Herbicide per crop year.
- 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.

# STORAGE:

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

# **DISPOSAL:**

- 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.
- 5. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for 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.

Water Soluble Bag Label

# **RETAIN A HERBICIDE**

# KEEP OUT OF REACH OF CHILDREN

# CAUTION: SEE DIRECTIONS FOR USE FOLDER FOR COMPLETE PRECAUTIONARY STATEMENTS

ACTIVE INGREDIENTS: Thifensulfuron methyl 33.35%

Tribenuron methyl 16.65%

**SOLUBLE GRANULES** 

**NET CONTENTS: 121.5 GRAMS** 

THIS BAG TREATS 4 HECTARES (10 ACRES)

# **DFU Booklet**

GROUP 2 HERBICIDE

# **RETAIN A HERBICIDE**

Soluble Granule 50%

# FOR SALE FOR USE ON WHEAT (SPRING OR DURUM) AND SPRING BARLEY

# **AGRICULTURAL**

# REGISTRATION NO. 30129 PEST CONTROL PRODUCTS ACT

ACTIVE INGREDIENTS: Thifensulfuron methyl 33.35%

Tribenuron methyl 16.65%

Warning: Contains the allergen milk and sulfites

NET CONTENTS: 121.5 – 486 GRAMS (1 X121.5 – 4 X 121.5 water soluble bags)

# READ THE LABEL AND THIS ATTACHED BOOKLET BEFORE USING

DO NOT SELL WATER SOLUBLE BAGS SEPARATELY

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

Distributed by: LOVELAND PRODUCTS CANADA INC.

789 Donnybrook Drive Dorchester, Ontario

N0L 1G5

# PRECAUTIONS:

- KEEP OUT OF REACH OF CHILDREN.
- AVOID BREATHING SPRAY MIST. USE WITH ADEQUATE VENTILATION.
- AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

- WEAR GOGGLES OR FACE SHIELD, LONG-SLEEVED SHIRT, LONG PANTS, SOCKS AND CHEMICAL RESISTANT GLOVES AND FOOT WEAR DURING MIXING, LOADING, APPLICATION, CLEAN-UP AND REPAIR. CHEMICAL RESISTANT GLOVES ARE NOT REQUIRED WHILE OPERATING GROUNDBOOM SPRAYERS.
- 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 REUSE.
- DO NOT SELL WATER SOLUBLE BAGS SEPARATELY.
- DO NOT USE HUMAN FLAGGERS

# **FIRST AID:**

#### IF IN EYES:

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

# IF ON SKIN OR CLOTHING:

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

#### IF SWALLOWED:

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

#### IF INHALED:

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

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

IN CASE OF EMERGENCY, CALL TOLL FREE, DAY OR NIGHT: 1-800-331-3148

# **TOXICOLOGICAL INFORMATION:**

Treat symptomatically.

# **ENVIRONMENTAL HAZARDS:**

- Overspray or drift to important wildlife habitats such as shelterbelts, wetlands, sloughs or dry slough borders and woodlots should be avoided. Observe buffer zones specified under DIRECTIONS FOR USE.
- Do not remove soil from treated fields for use on lawns, in gardens or for back fill.
- Do not contaminate irrigation water. Do not apply to land where tail water will be used to irrigate cropland.
- Do not apply more than 30 g per hectare of RETAIN A HERBICIDE per crop year.
- 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.

#### TABLE OF CONTENTS:

PRECAUTIONS:	5
FIRST AID:	
<i>IF IN EYES</i> :	6
IF ON SKIN OR CLOTHING:	6
IF SWALLOWED:	6
IF INHALED:	6
TOXICOLOGICAL INFORMATION:	6
ENVIRONMENTAL HAZARDS	6
PRODUCT DESCRIPTION:	8
REPLANTING TO OTHER CROPS:	8
Minimum Crop Rotation Guidelines:	8
GRAZING/HARVEST RESTRICTIONS:	8
VARIETY RESTRICTIONS:	9
RAINFASTNESS INFORMATION:	9
APPLICATION INFORMATION:	
APPLICATION PRECAUTIONS:	
APPLICATION INSTRUCTIONS:	9
GROUND APPLICATION	9
AERIAL APPLICATION:	9
DIRECTIONS FOR USE:	
WHEAT (SPRING, DURUM) AND SPRING BARLEY	11
RETAIN A HERBICIDE	
RETAIN A HERBICIDE + RETAIN B HERBICIDE + 2,4-D ESTER	13
MIXING INFORMATION:	13
MIXING PRECAUTIONS:	13
MIXING DIRECTIONS:	14
SPECIAL MIXING INSTRUCTIONS FOR CHEMICAL HANDLERS	14
EQUIPMENT CLEANING INFORMATION:	
CLEANING PRECAUTIONS:	15
CLEANING INSTRUCTIONS:	
RESISTANCE-MANAGEMENT RECOMMENDATIONS:	15
STORAGE:	16
DISPOSAL:	16

#### PRODUCT DESCRIPTION:

RETAIN A HERBICIDE is recommended for selective post-emergent control or suppression of broadleaf weeds in wheat (spring or durum) and spring barley not underseeded to legumes or grasses, and in certain grasses for forage or seed production.

RETAIN A HERBICIDE is a 50% active ingredient herbicide formulated as a water soluble granule. It is non-corrosive, non-flammable, non-volatile and does not freeze.

RETAIN A HERBICIDE is to be mixed with water and a recommended adjuvant and applied as a uniform broadcast spray. Recommended adjuvants are: AGRAL90\*, AG-SURF\*, CITOWETT\* PLUS, LIBERATE\* ADJUVANT, AG-SURF\* II, HIACTIVATE\* NON-IONIC LIQUID SPREADER/ACTIVATOR, SUPER SPREADER ADJUVANT AND ENHANCE\*. Apply early postemergence, to the main flush of actively growing broadleaf weeds.

Warm, moist growing conditions promote active weed growth and enhance the activity of RETAIN A 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. For best results, ensure thorough spray coverage of target weeds. See "DIRECTIONS FOR USE" section of this label for complete use details.

RETAIN A 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.

Canola, flax, lentils and alfalfa may be planted two months after an application of RETAIN A HERBICIDE. Any crop may be planted in the year following the use RETAIN A HERBICIDE.

# IMPORTANT INFORMATION: READ BEFORE USING

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

# **REPLANTING TO OTHER CROPS:**

# **Minimum Crop Rotation Guidelines:**

Minimum Interval	Crop
2 months	Canola, Flax, Lentils, Alfalfa
Next crop year	All crops

#### **GRAZING/HARVEST RESTRICTIONS:**

Wheat or spring barley may not be grazed or fed to livestock within 7 days of application.

# **VARIETY RESTRICTIONS:**

Limit use of RETAIN A HERBICIDE to currently licensed varieties of wheat (spring, durum) and spring barley. Consult FMC prior to use on unlicensed varieties for crop tolerance information. DO NOT USE ON LEGER SPRING BARLEY OR BELVEDERE WHEAT VARIETIES.

# **RAINFASTNESS INFORMATION:**

Up to 25 mm of rain beginning 1 hour or more after spraying will not reduce the effectiveness of RETAIN A HERBICIDE.

#### APPLICATION INFORMATION:

# **APPLICATION PRECAUTIONS:**

- Do not apply to irrigated land where tail water will be used to irrigate cropland.
- Overspray or drift to important wildlife habitats such as shelterbelts, wetlands, sloughs or dry slough borders and woodlots should be avoided. Observe buffer zones specified under DIRECTIONS FOR USE.
- Apply with an adjuvant registered for use with RETAIN A HERBICIDE. Use only water as a carrier. Other carriers may accelerate breakdown of RETAIN A HERBICIDE and reduce its effectiveness.
- Do not apply to crops underseeded to legumes or grasses as injury to forage may result.
- Application to crops that are stressed by severe weather conditions, frost, low fertility, water logged soil (soil 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.
- Under certain conditions, such as heavy rainfall, prolonged cool weather, frost or wide fluctuations in day/night temperatures, temporary lightening in crop colour, and occasionally, a slight reduction in crop height may occur.
- Do not apply more than 30 grams/hectare of RETAIN A HERBICIDE per year.
- 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, application equipment and sprayer settings.

# **APPLICATION INSTRUCTIONS:**

# **GROUND APPLICATION**

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

# **AERIAL APPLICATION:**

Apply only by fixed-wing or rotary aircraft equipment, which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

#### **Use Precautions:**

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

#### **Operator Precautions:**

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted. It is desirable that the pilot have communication capabilities at each treatment site at the time of application. The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label. All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

# **Product Specific Precautions:**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-833-362-7722 or obtain technical advice from the distributor or your provincial agricultural representative.

Application of this specific product must meet and/or conform to the following:

Apply a minimum of 25 L of spray volume per hectare.

Apply a maximum of 50 L of spray volume per hectare.

# **DIRECTIONS FOR USE:**

- RETAIN A HERBICIDE is formulated as a soluble granule sealed within a water-soluble package (Toss-N-Go® bag). Drop intact Toss-N-Go® bag directly into spray tank. The Toss-N-Go® bag and pesticide will dissolve readily in water.
- Do not allow the Toss-N-Go® bag to become wet prior to use. Do not handle individual Toss-N-Go® bag with wet hands or wet gloves as this may cause breakage. Do not remove Toss-N-Go® bag from over-wrap container except for immediate use.
- Do not open Toss-N-Go<sup>®</sup> bag or attempt to remove the contents from them. The contents are not designed to be re-measured or subdivided.
- Do not use opened or punctured Toss-N-Go® bag.
- If broken Toss-N-Go® bag is found when the over-wrap container is opened, avoid contact with, and inhalation of the product. Handle with chemical-resistant gloves and dispose of broken Toss-N-Go® bag according to the DISPOSAL section.

<u>Field Sprayer Application:</u> **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.

<u>Aerial application</u>: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply when wind speed is greater than 16 km/h at flying height at the site of application. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length **MUST NOT** exceed 65% of the wing- or rotor span.

# **Buffer zones:**

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer, inter-row hooded sprayer, spot treatment, soil drench, and soil incorporation.

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

Method of	Cr	ор	Buffer Zones (metres) Required for the Protection of:		or the Protection of:
Application	n		Aquatic Habitats of Depths:		Terrestrial Habitats
			Less than 1 m	Greater than 1 m	
Field	Wheat,		1	0	15
sprayer*	spring barley,				
Aerial	Wheat, spring	Fixed wing	1	0	125
	barley,	Rotary wing	1	0	100

<sup>\*</sup> 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 or coarse classification.' To access the Buffer Zone Calculator, please visit the Pest Management Regulatory Agency web site.

# WHEAT (SPRING, DURUM) AND SPRING BARLEY

# RETAIN A HERBICIDE LOCATION: Not restricted CROP(S): wheat (spring, durum), spring barley

**TIMING:** Post-emergent application from 2-leaf to flag leaf (shot blade) growth stage of crop, prior to head emergence, but before the crop canopy will prevent thorough coverage of target weeds. For best results, apply to young, actively growing weeds that are less than 10 cm in height or diameter. Thorough coverage of target weeds is essential.

rams/hectare
/1000 litres spray solution

**MIXING:** Ensure RETAIN A HERBICIDE is completely dissolved, then adjuvant while maintaining agitation. Antifoaming agent may be required. Refer to MIXING DIRECTIONS section for general instructions.

Weeds Controlled	Stinkweed
Annual smartweed (green smartweed, lady's thumb)	Tartary buckwheat
Ball mustard	Volunteer rapeseed <sup>2</sup>
Chickweed <sup>1</sup>	Volunteer sunflower
Corn spurry	Wild buckwheat <sup>3</sup>
Cow cockle	Wild mustard
Flixweed	Weeds Suppressed
Groundsel (common)	Canada thistle <sup>4</sup>
Hemp-nettle	Cleavers (1-3 whorls)
Kochia	Round leaved mallow <sup>5</sup>
Lamb's-quarters	Scentless chamomile
Narrow-leaved hawk's beard	Sow thistle <sup>4</sup>
Redroot pigweed	Stork's bill (2-6 leaf)
Russian thistle	Yellow Toadflax <sup>6</sup>

# Notes:

- Apply when 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.
- 2. RETAIN A HERBICIDE alone will not control imazethapyr tolerant canola varieties (e.g. Clearfield\* varieties or other varieties with the Pursuit Smart\* trait)
- Apply to actively growing wild buckwheat in the cotyledon to 5-leaf stage. Under environmental stress, such as dry weather, control may be reduced. Large plants may regrow after treatment.
- 4. Apply when the majority of thistles have emerged and are actively growing. For best top growth control, apply before bud stage when thistles are no larger than 15 cm in height and before crop canopy prevents thorough coverage of weeds. A single application will effectively inhibit the ability of emerged thistles to compete with the crop. Later emerging thistles will not be controlled.
- 5. Apply to actively growing round leaved mallow from the 2-6 leaf stage (10-12 cm in height). RETAIN A HERBICIDE will keep mallow stunted, but may not reduce overall populations.
- 6. Apply to toadflax that is no larger than 15 cm in height. A control program for this weed includes both frequent tillage and chemical application.

# RETAIN A HERBICIDE + RETAIN B HERBICIDE + 2,4-D ESTER

**LOCATION:** For use in the prairie provinces and Peace River Region of British Columbia only.

CROP(S): Spring wheat, durum wheat and spring barley only. Not underseeded to legumes

**TIMING:** Post-emergent application from the 4-leaf to flag-leaf stage of the crop. Apply to cleavers at the seedling stage to 4-leaf/whorls stage.

TABLE BAIL	COMPONIENTO	AND ADD	LOATION	DATEO
IANKIWIX	COMPONENTS	AND APP	LIGATION	RAIES

RETAIN A HERBICIDE	30 grams/hectare
RETAIN B Herbicide	0.3 L/ha
2,4-D Ester LV700	0.4 L/ha (280 g a.e./ha)
Or	Or
2,4-D Ester LV600	0.5 L/ha (280 g a.e./ha)
Adjuvants: Agral* 90, Ag-Surf*, Citowett* Plus, Liberate* Adjuvant, Ag-Surf* II, HiActivate* Non-ionic Liquid Spreader/Activator, Super Spreader Adjuvant or Enhance*.	2L/1000 litres of spray solution

**MIXING:** Ensure that RETAIN A HERBICIDE is completely dissolved before adding Retain B Herbicide. Add Retain B Herbicide with reduced agitation, and then add the 2,4-D Ester. Then add adjuvant. Refer to MIXING DIRECTIONS section for general directions. Use a spray volume of 100 L/ha. Consult the Retain B Herbicide and 2,4-D Ester labels for additional application instructions and use precautions.

# **WEEDS CONTROLLED**

Broadleaf weeds controlled or suppressed by RETAIN A HERBICIDE alone, as well as cleavers (excluding Group 2 resistant cleavers).

**NOTES:** Do not permit lactating dairy animals to graze fields within 7 days after application. Do not harvest forage or cut hay within 30 days after application. Withdraw meat animals from treated fields at least 3 days prior to slaughter. Do not harvest the treated mature crop within 60 days after application.

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 INFORMATION:**

# **MIXING PRECAUTIONS:**

Once dissolved, RETAIN A HERBICIDE will not settle out, even if the sprayer is parked for long periods of time. If the sprayer has been left standing for a period of time and if a non-water soluble tank mix partner has been added, agitate thoroughly to re-suspend the tankmix partner before resuming spraying. Spray preparation should be used within 24 hours or product degradation may occur. Use spray preparation containing Assert\* within 12 hours or product degradation may occur.

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

#### **MIXING DIRECTIONS:**

Select a spray volume that will ensure thorough coverage and a uniform spray pattern. Use a minimum of 55 L of spray volume per hectare for ground application, and between 25 to 50 L of spray volume per hectare for aerial application. If tank mixing 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.

- 1. Always start with a clean and empty sprayer tank.
- 2. Fill the spray tank to 1/3 full with fresh water.
- With the agitator running, add the required amount of RETAIN A HERBICIDE. Continue to agitate for a minimum of 5 minutes to ensure that RETAIN A HERBICIDE is completely dissolved.
- 4. Make sure there are no un-dissolved granules, and then add the required amount of the tank mix partner.
- 5. If the tank mix partner is an Emulsifiable Concentrate (EC), reduce agitation to avoid inducing an invert emulsion. Once dissolved, RETAIN A HERBICIDE will remain in solution.
- 6. Add the rest of the water.
- 7. If required for the tank mixture, add the appropriate adjuvant. If an antifoam agent is required, add last.
- 8. Refer to the tank mix sections of this booklet for mixing order and other mixing instructions.
- 9. For repeat tank loads, reduce the material remaining in the tank to 10% of the original volume **or less** before proceeding with step 1, because remaining chemicals may prevent RETAIN A HERBICIDE granules from completely dissolving. If this is not possible, pre-slurry RETAIN A HERBICIDE in a small amount (5-10 L) of water before adding to the tank.

# SPECIAL MIXING INSTRUCTIONS FOR CHEMICAL HANDLERS

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

NOTE: Follow the cleanout procedure recommended for sprayer tanks for the chemical handler.

# **EQUIPMENT CLEANING INFORMATION:**

# **CLEANING PRECAUTIONS:**

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.

DO NOT CLEAN SPRAYER NEAR WELL OR WATER SOURCE OR NEAR TO DESIRABLE VEGETATION.

# **CLEANING INSTRUCTIONS:**

To avoid subsequent injury to crops other than wheat or spring barley immediately after spraying and prior to spraying other crops, thoroughly remove all traces of RETAIN A HERBICIDE from mixing and spray equipment as follows:

- 1. Drain tank and flush tank, boom and hoses with clean water. If boom is equipped with multiple nozzle bodies, be sure to rotate through all nozzles to ensure clean water reaches all parts of these assemblies.
- 2. Visually inspect tank to ensure removal of all visible herbicide residues. If necessary, repeat Step 1.
- 3. Fill the tank with clean water, and then add 1 litre household AMMONIA (containing minimum of 3% ammonia) or equivalent amount of a sprayer tank cleaner containing ammonia, per 100 litres of water. Ammonia will not neutralize the herbicide, but helps dissolve dried on herbicide deposits. If an emulsifiable concentrate has been tank mixed with RETAIN A HERBICIDE, use of a wetting agent in the cleaning process will assist in removing oily residue that may trap RETAIN A HERBICIDE on the tank and hoses.
- 4. Flush solution through boom and hoses, and then add more water to completely fill tank. Allow to sit for 15 minutes with agitation.
- 5. Drain the tank.
- 6. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
- 7. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing water through the hoses and boom.

NOTE: When using a chemical handler, follow the above cleanout procedure for this piece of equipment.

# RESISTANCE-MANAGEMENT RECOMMENDATIONS:

For resistance management, RETAIN A HERBICIDE is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to RETAIN A 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 RETAIN A HERBICIDE or other Group 2 herbicides 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.
- 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.

# STORAGE:

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

#### **DISPOSAL:**

- 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.
- 5. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for 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.

<sup>\*</sup> All other products mentioned are trademarks of their respective companies.