GROUP 10 HERBICIDE

# **RHI Glufosinate Ammonium 150**

SOLUTION

COMMERCIAL

# FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND INTERIOR OF BRITISH COLUMBIA (INCLUDING THE PEACE RIVER)

ACTIVE INGREDIENT: glufosinate ammonium 150 g/L

REGISTRATION NUMBER: 35001 PEST CONTROL PRODUCTS ACT

# READ THE LABEL AND ATTACHED BROCHURE BEFORE USING

WARNING
POISON

SKIN AND EYE IRRITANT

Rath Holdco Inc.

346 Brighton Gate Saskatoon, Saskatchewan Canada S7V 0P9

**Product Information:** 1-888-466-0056

NET CONTENTS: 10 to 1000 L

**PRECAUTIONS:** KEEP OUT OF REACH OF CHILDREN. Harmful or fatal if absorbed through the skin. Harmful if swallowed. This product may cause eye irritation. DO NOT get in eyes, on skin or on clothing. Avoid breathing spray mist. Wash thoroughly after using and before eating, drinking or smoking.

- Workers must wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes, and protective eyewear (goggles or face shield) during mixing, loading, application, clean-up and repair. Gloves and protective eyewear (goggles or face shield) are not required during application within a closed cab and/or cockpit.
- Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.
- When tank-mixes are permitted, read and observe all label directions, including rates and restrictions for each product used in the tank-mix. Follow the more stringent label precautionary measures for mixing, loading and applying stated on both product labels.
- Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity, such as houses, cottages, schools and recreational areas, is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

CAUTION: Do not mix RHI Glufosinate Ammonium 150 with pesticides, fertilizers or any other chemical additives unless recommended on this label.

#### **ENVIRONMENTAL PRECAUTIONS:**

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

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

Avoid application when heavy rain is forecast.

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

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

**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 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 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 treatment advice

**TOXICOLOGICAL INFORMATION:** Treat symptomatically. Medical personnel should contact CANUTEC collect at 1-613-996-6666 or \*666 24 hours a day.

**STORAGE:** CANNOT be stored below freezing. If stored for one year or longer, shake well before using. Store this product away from food or feed. Do not use or store in or around the home. Keep in original container during storage.

#### **DISPOSAL:**

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

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

Returnable Container Disposal: Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer). Disposal of Unused, Unwanted Product: 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. Disposal of Unused Spray Solution: If any spray solution remains in the tank after spraying is finished, it should be sprayed on the perimeter of the area just sprayed, away from water supplies, ditches, and irrigation canals.

**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.

GROUP 10 HERBICIDE

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# SOLUTION

#### **COMMERCIAL**

# FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND INTERIOR OF BRITISH COLUMBIA (INCLUDING THE PEACE RIVER REGION)

REGISTRATION NUMBER: 35001

PEST CONTROL PRODUCTS ACT

#### READ THE LABEL AND ATTACHED BROCHURE BEFORE USING



SKIN and EYE IRRITANT

Rath Holdco Inc. 346 Brighton Gate Saskatoon, Saskatchewan Canada S7V 0P9

Contact number: 1-888-466-0056

NET CONTENTS: 10 to 1000 L

**PRECAUTIONS:** KEEP OUT OF REACH OF CHILDREN. Harmful or fatal if absorbed through the skin. Harmful if swallowed. This product may cause eye irritation. DO NOT get in eyes, on skin or on clothing. Avoid breathing spray mist. Wash thoroughly after using and before eating, drinking or smoking.

- Workers must wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes, and protective eyewear (goggles or face shield) during mixing, loading, application, clean-up and repair. Gloves and protective eyewear (goggles or face shield) are not required during application within a closed cab and/or cockpit.
- Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.
- When tank-mixes are permitted, read and observe all label directions, including rates and restrictions for each product used in the tank-mix. Follow the more stringent label precautionary measures for mixing, loading and applying stated on both product labels.
- Apply only to agricultural crops when the potential for drift to areas of human habitation and human activity, such as houses, cottages, schools and recreational areas, is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment, and sprayer settings.

CAUTION: Do not mix RHI Glufosinate Ammonium 150 with pesticides, fertilizers or any other chemical additives unless recommended on this label.

#### **ENVIRONMENTAL PRECAUTIONS:**

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

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

Avoid application when heavy rain is forecast.

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

#### **STORAGE**

CANNOT be stored below freezing. If stored for one year or longer, shake well before using. Store this product away from food or feed. Do not use or store in or around the home. Keep in original container during storage.

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

**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 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 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 treatment advice.

**TOXICOLOGICAL INFORMATION:** Treat symptomatically. Medical personnel should contact CANUTEC collect at 1-613-996-6666 or \*666, 24 hours a day.

#### **DISPOSAL**

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

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for further use. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

Returnable Container Disposal: Do not reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer). Disposal of Unused, Unwanted Product: 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.

**Disposal of Unused Spray Solution:** If any spray solution remains in the tank after spraying is finished, it should be sprayed on the perimeter of the area just sprayed, away from water supplies, ditches, and irrigation canals.

#### **GENERAL INFORMATION**

RHI Glufosinate Ammonium 150 may be used as a harvest aid (desiccant) in the listed crops. RHI Glufosinate Ammonium 150 will also desiccate weeds present in the field at application.

Desiccation of crops and weeds will be best when environmental conditions are favourable (warm temperatures, good moisture conditions, high humidity). The speed of action of RHI Glufosinate Ammonium 150 is influenced by environmental factors. At cool temperatures (below 10°C), poor moisture and low humidity, speed of action may be reduced. Generally, visual symptoms appear 2 to 4 days after application.

RHI Glufosinate Ammonium 150 provides control of a broad spectrum of grassy and broadleaf weeds in Canola varieties and hybrids that are specially developed to be tolerant to glufosinate ammonium. RHI Glufosinate Ammonium 150 is registered for aerial and ground application to glufosinate ammonium tolerant Canola varieties or hybrids [example: varieties or hybrids labelled with LibertyLink®]. RHI Glufosinate Ammonium 150 may also be applied to glufosinate ammonium tolerant Canola lines or varieties grown for seed production. Glufosinate ammonium tolerant Corn can be used as separator rows in hybrid Canola seed production, but must be destroyed and not used for food or feed.

When a rate range is given the higher rate should be utilised:

- 1) when crop or weed growth is dense.
- 2) when the weeds are large and/or mature i.e., advanced leaf stages and plant height;
- 3) when environmental conditions are cool and dry.

Refer to Post Emergent Use section on canola for weeds controlled.

If rainfall occurs within 4 hours of application, effectiveness may be reduced.

RHI Glufosinate Ammonium 150 is a non-selective herbicide. Avoid contact with desirable plants either from direct application or from spray drift as severe damage may occur. Crop injury may result if RHI Glufosinate Ammonium 150 is applied to a crop stressed by severe weather conditions, frost, drought, water-saturated soil, low fertility, disease or insect damage.

RHI Glufosinate Ammonium 150 works primarily as a contact herbicide. Thorough coverage of

the plant tissue to be desiccated or controlled is essential.

RHI Glufosinate Ammonium 150 breaks down rapidly in the soil.

# **MIXING INSTRUCTIONS**

RHI Glufosinate Ammonium 150 must be applied with properly calibrated clean equipment.

RHI Glufosinate Ammonium 150 is specially formulated to mix readily in water. Prior to adding RHI Glufosinate Ammonium 150 to the spray tank, ensure that the spray tank is thoroughly clean (see "CLEANING INSTRUCTIONS").

- 1. Fill tank one-half full of clean water prior to adding RHI Glufosinate Ammonium 150.
- 2. Add the correct amount of RHI Glufosinate Ammonium 150.
- 3. Add the remaining amount of water, begin agitation, and spray out immediately.

NOTE: Ensure that all circuits (pipes, booms, etc.) have the correct RHI Glufosinate Ammonium 150 /water concentration before application is started.

NOTE: The addition of an anti-foaming agent may reduce foaming, especially when using soft water.

#### TANK-MIXES:

NOTE: When tank mixing RHI Glufosinate Ammonium 150, always add the tank mix partner to the tank first, ensure that it is thoroughly mixed, and then add RHI Glufosinate Ammonium 150.

# RHI Glufosinate Ammonium 150 and Centurion or Select: Glufosinate Ammonium Tolerant Canola only

When tank mixing RHI Glufosinate Ammonium 150 and Centurion or Select, always add Amigo adjuvant to the tank first, then add RHI Glufosinate Ammonium 150 to the tank followed by Centurion or Select.

When using a tank-mix partner, always consult the respective product label for further precautionary and application information.

# Mixing Instructions:

- 1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
- 2. Fill clean spray tank half full with clean water. Start agitation system.
- 3. Add the correct amount of Amigo. Continue to agitate until Amigo is thoroughly mixed.
- 4. STOP agitation. Add the required amount of RHI Glufosinate Ammonium 150 to the spray tank. Start agitation system.
- 5. Add the correct amount of Centurion or Select along with the remaining amount of water necessary to fill the spray tank.
- 6. Continue to agitate or run the by-pass system, and spray out immediately.
- 7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to remix the spray materials. Do not allow the mixture to sit overnight.
- 8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution
- 9. Immediately after use, thoroughly clean the sprayer by flushing the system with water containing detergent.

RHI Glufosinate Ammonium 150 and FBN Clethodim 240 or Advantage Clethodim 240: Glufosinate Ammonium Tolerant Canola only (e.g., varieties or hybrids labelled LibertyLink)

FBN Clethodim 240 or Advantage Clethodim 240 may be tank-mixed with RHI Glufosinate Ammonium 150 for control of certain broadleaf and grass weeds in glufosinate ammonium tolerant canola varieties in one spray operation.

Follow all precautions, limitations and timing recommendations on the RHI Glufosinate Ammonium 150 label.

# Mixing Instructions:

- 1. Thoroughly clean the sprayer by flushing the system with water containing detergent.
- 2. Fill clean spray tank half full with clean water. Start agitation system.
- 3. Add the required amount of FBN Clethodim Adjuvant to the tank. Continue to agitate until thoroughly mixed.
- 4. STOP agitation. Add the correct amount of RHI Glufosinate Ammonium 150 to the spray tank. Start agitation system.
- 5. Add the correct amount of FBN Clethodim 240 or Advantage Clethodim 240 along with the remaining amount of water necessary to fill the spray tank.
- 6. Continue to agitate or run the by-pass system and spray out immediately.
- 7. After any break in the spraying operation, agitate thoroughly before spraying again. Check inside the tank to ensure that sprayer agitation is sufficient to re-mix the spray materials. Do not allow the mixture to sit overnight. In the case of tank mixtures with broadleaf herbicides, settling will occur if agitation is not continuous.
- 8. If an oil film starts to build up in the tank, drain it and clean tank with strong detergent solution.
- 9. Immediately after use, thoroughly clean the sprayer by flushing the system with clean water containing detergent.

#### **CLEANING INSTRUCTIONS**

Before and after using RHI Glufosinate Ammonium 150 always complete a thorough cleaning of the spray tank, lines and filter. Spray equipment should be thoroughly rinsed using a strong detergent solution.

# APPLICATION INSTRUCTIONS AND PRECAUTIONS

# **GROUND APPLICATION**

Field sprayer application: DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) medium classification. Boom height must be 60 cm or less above the crop or ground.

Apply RHI Glufosinate Ammonium 150 in a minimum of 110 litres of water per hectare at a pressure of 275 kPa and at a ground speed of 6 to 8 km/h. If check valves are used, apply at 310 kPa. The use of 80° or 110° flat fan nozzles is highly recommended for optimum spray coverage and canopy penetration.

For desiccation uses only, where crop canopy is dense, or weed growth is heavy, better spray coverage will be achieved with higher spray volumes. Under these conditions, apply 170-220 litres of water per hectare. Refer to Aerial Application for appropriate aerial water volumes.

- DO NOT USE FLOOD JET NOZZLES, CONTROLLED DROPLET APPLICATION EQUIPMENT OR AIR-ASSISTED SPRAY EQUIPMENT.
- UNIFORM, THOROUGH SPRAY COVERAGE IS IMPORTANT TO ACHIEVE CONSISTENT CROP DESICCATION AND WEED CONTROL.

Application of the spray at a 45° angle forward will result in better spray coverage. Follow directions elsewhere on the label for the correct rate and timing of application. The speed of action of RHI Glufosinate Ammonium 150 is influenced by environmental factors. At cool temperatures (below 10EC), poor moisture and low humidity, speed of action

may be reduced. Generally, visual symptoms appear 2-4 days after application.

For best results, apply to emerged, young, actively growing weeds. Weeds that emerge after application will not be controlled. RHI Glufosinate Ammonium 150 will have an effect on weeds that are larger than the recommended leaf stage; however speed of activity and control may be reduced. Weed control may be reduced when heavy dew, fog or mist is present at the time of application.

DO NOT apply when winds exceed 16 km/h when using open boom sprayers. DO NOT apply when winds exceed 25 km/h when using hooded sprayers.

#### **AERIAL APPLICATION**

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 12 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 S572.1) coarse classification. Reduce drift caused by turbulent Wingtip vortices. Nozzle distribution along the spray boom length MUST NOT exceed 65% of the wingspan or rotorspan.

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.

# **Product Specific Precautions:**

EXERCISE EXTREME CAUTION DURING THE AERIAL APPLICATION OF ANY INSECTICIDE, HERBICIDE OR FUNGICIDE. Drift of pesticides is not always visible with the human eye. Small droplets may drift into sensitive areas without obvious signs of danger. FOLLOW THESE DIRECTIONS PRECISELY!

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-888-466-0056 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:

When applying RHI Glufosinate Ammonium 150 by aircraft, uniform spray coverage is essential. Applicators are required to use the correct combination of spray nozzle tips, nozzle placement and spray pressures, which will provide a COARSE droplet size distribution, with a volume mean diameter greater than 350 microns. DO NOT USE RAINDROP NOZZLES.

For desiccation uses only, apply RHI Glufosinate Ammonium 150 in 33-55 litres of water per hectare. Where crop canopy is dense, or weed growth is heavy, better spray coverage will be achieved with higher spray volumes. Follow directions elsewhere on the label for the correct rate and timing of application.

For post-emergent use in glufosinate ammonium tolerant canola, apply RHI Glufosinate Ammonium 150 in a minimum of 55 L/ha of water only.

Aerial drift is increased under certain meteorological conditions. DO NOT apply RHI Glufosinate Ammonium 150 by aircraft when the wind speed is greater than 12 km/h.

# **DIRECTIONS FOR USE**

As this product is not registered for the control of pests in aquatic systems, DO NOT use to

control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

#### **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 Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

# **Aerial Application 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.

#### **SPRAY BUFFER ZONES**

For the protection of non-target habitats overspray or drift to sensitive habitats should be avoided. Accordingly, the following spray buffer zone is required. Leave a spray buffer zone of 30 metres between the edge of the last spray swath and the edge of sensitive habitats including emergent vegetation surrounding wetlands (sloughs, ponds, prairie potholes, lakes, rivers and streams) and adjacent areas consisting of short, long and mixed grass prairie. Do not contaminate these habitats when cleaning and rinsing spray equipment or containers. If a 30 metre spray buffer zone cannot be maintained by aerial application then apply by ground only. For ground application do not apply within 15 metres of the edge of crops or environmentally sensitive areas.

Spot treatments using hand-held equipment do not require a spray buffer zone.

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

		Spray Buffer Zones (metres) Required for the Protection of:							
Method of Application	Crop	Freshwater Habit	Terrestrial						
		Less than 1 m	Greater than 1	Habitat					
		LCSS than 1 m	m						
Field Sprayer	Canola	1	0	1					
Aerial (fixed- wing and rotary)	Canola	1	0	30					

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and

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apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

RHI Glufosinate Ammonium 150 MAY BE USED AS A DESICCANT IN THE FOLLOWING CROPS:

- LENTILS
  - POTATOES
  - ALFALFA (Grown for Seed)
  - CANOLA (only Roundup Ready canola with the pod shatter reduction trait)

RHI Glufosinate Ammonium 150 will also desiccate weeds present in the field at application (Wild Buckwheat may not be completely desiccated).

#### **LENTILS**

DO NOT APPLY TO LENTILS GROWN FOR SEED; THERE ARE NOT SUFFICIENT DATA TO SUPPORT SUCH USE.

Apply RHI Glufosinate Ammonium 150 at 2-2.7 litres of product per hectare. Apply when the crop is in the 40- 60% pod turn (yellow to brown) stage. Use the higher rate when the crop canopy is dense and/or there are high populations of weeds present at application. DO NOT harvest treated crop within 9 days after application.

RHI Glufosinate Ammonium 150 will provide assist in lentil plant drydown to facilitate straight combining, reducing the risks associated with adverse weather affecting the windrowed crop.

## **POTATOES**

DO NOT APPLY TO POTATOES GROWN FOR SEED STOCK.
DO NOT HARVEST THE TREATED CROP WITHIN 9 DAYS AFTER APPLICATION.

Apply RHI Glufosinate Ammonium 150 at 3 litres of product per hectare. Apply approximately 14-21 days prior to expected harvest. Desiccation of crops and weeds will be more rapid under warmer and drier conditions.

RHI Glufosinate Ammonium 150 may be applied to promote uniform drydown of an unevenly maturing crop and will allow for planning of harvest timing. Desiccation of vines and weeds will facilitate mechanical harvesting.

#### **ALFALFA (Grown for Seed)**

Apply at 50-75% pod turn (brown) stage. Apply RHI Glufosinate Ammonium 150 at 2.7 L/ha of product. Do not apply more than once per year.

# **CANOLA** (only Roundup Ready canola with the pod shatter reduction trait)

Apply RHI Glufosinate Ammonium 150 at 2.0-2.7 litres of product per hectare when the crop is in the 30-40% seed turn (green to brown) stage. Use the high rate when the crop canopy is very dense and/or there are high populations of weeds present at application. Do not apply more than once per year.

#### POST EMERGENT USE

# **CANOLA**

- RHI Glufosinate Ammonium 150 provides control of a broad spectrum of grassy and broadleaf weeds in Canola varieties and hybrids that are specially developed to be tolerant to glufosinate ammonium.
- RHI Glufosinate Ammonium 150 is registered for aerial and ground application to

- glufosinate ammonium tolerant Canola varieties or hybrids [example: varieties or hybrids labelled with LibertyLink].
- RHI Glufosinate Ammonium 150 may also be applied to glufosinate ammonium tolerant Canola lines or varieties grown for seed production.
- To assure crop safety and optimal herbicide performance, only use RHI Glufosinate Ammonium 150 on glufosinate ammonium tolerant (i.e., LibertyLink) Canola grown from certified seed.
- RHI Glufosinate Ammonium 150 is not registered for use on other glufosinate ammonium tolerant crops.
- Application of RHI Glufosinate Ammonium 150 to non-tolerant Canola varieties or hybrids or other non-tolerant crops will result in severe crop injury or death of the crop.
- Apply RHI Glufosinate Ammonium 150 from the cotyledon stage up until, but prior to, the early bolting stage of Canola.
- Slight discoloration of the Canola may be visible after application. This effect is temporary and will not influence crop growth, maturity or yield.
- For hybrid seed production Two applications are required to remove the segregating wild type plants. The first application should occur when the Canola is in the 2-4 leaf stage, the second application when the Canola plants are in the 4-6 leaf stage and the third application, if necessary, may be applied to the Canola up until, but prior to, the bolting stage. All applications of RHI Glufosinate Ammonium 150 for hybrid seed production should be made at 3.33 L/ha.

**SUSCEPTIBLE WEEDS:** RHI Glufosinate Ammonium 150 has an effect on all weeds and crops except for those crops which are developed to be tolerant to applications of RHI Glufosinate Ammonium 150. The following weeds are susceptible to application of RHI Glufosinate Ammonium 150. Best control will be obtained when RHI Glufosinate Ammonium 150 is applied in the recommended leaf stages.

		RECOMMENDED WEED LEAF STAGE							
WEED	1	1 2 2 4 5 6	. 7	0	1.33				
	1		3	4	3	0	'	o	L/ha
Cow Cockle									
Green		Maximum 3							
Foxtail	tillers								

WEED	R	RECOMMENDED WEED LEAF STAGE						RATE	
WEED	1	1 2 3 4 5 6 7 8							2 L/ha
Barnyard Grass									
Lady's-thumb									
Lamb's-quarters									
Russian Thistle	Up to	Up to 8 cm height							
Smartweed									
Stinkweed									
Volunteer Flax	Up to 6 cm height								
Wild Mustard									

WEED	R	RECOMMENDED WEED LEAF STAGE									
WEED	1	2	3	4	5	6	7	8	2.67 L/ha		
Canada Thistle <sup>1</sup>	Up to	10 cm	height								
Common Chickweed				L	eaf Pair	rs					
Hemp-nettle		Leaf Pairs									
Kochia	Up to	Up to 8 cm height									
Perennial Sow Thistle											
Quackgrass <sup>1</sup>											
Redroot Pigweed											
Round-leaved Mallow											
Scentless Chamomile	Up to 10 cm height										
Shepherd's-purse											
Volunteer Barley <sup>2</sup>				N	laximu	m 2 til	lers	•			

Volunteer Wheat	Maximum 2 tillers
Wild Buckwheat	

WEED	REC	RECOMMENDED WEED LEAF STAGE							
WEED	1	1 2 3 4 5 6 7 8							
Cleavers		Whorls							
Dandelion	1-15	cm rc	sette						
Flixweed	Up to	Up to 10 cm height							
Hemp-nettle		Leaf Pairs							
Quackgrass <sup>3</sup>									
Stork's-bill									
Wild Oats				N	<b>I</b> axim	um 2	tillers	•	

WEED	RECOMMENDED WEED LEAF STAGE								RATE
WEED	1	2	3	4	5	6	7	8	3.33 L/ha
<b>Heavy Populations</b>									
Canada Thistle <sup>1</sup>	Up to	Up to 10 cm height							
Quackgrass <sup>1</sup>									
Volunteer Barley <sup>2</sup>		Maximum 2 tillers							
Volunteer Wheat	Maximum 2 tillers								
Wild Buckwheat									

WEED	REC	AGE	RATE						
WEED	1	2	3	4	5	6	7	8	4 L/ha
Canada Thistle <sup>4</sup>	Up to	Up to 10 cm height							
Quackgrass <sup>5</sup>									

<sup>&</sup>lt;sup>1</sup>Top Growth Suppression Only

## SECOND APPLICATION

- A second application of RHI Glufosinate Ammonium 150 can be made to fields treated initially with up to 4.0 L/ha if new weed germination or growth is present.
- A first application of up to 4 L/ha may be followed by a second application of up to 3.33 L/ha,

#### OR

A first application of up to 3.33 L/ha may be followed by a second application of up to 4 L/ha.

- Do not apply more than a total of 7.33 L/ha per year.
- Apply when the new weed growth is in the correct leaf stage and up to early bolting stage of Canola.

#### THIRD APPLICATION: FOR HYBRID SEED PRODUCTION ONLY

- Three applications of RHI Glufosinate Ammonium 150, each at 3.33 L/ha, may be required for hybrid seed production. The third application must occur prior to bolting of the Canola crop.
- For best results, apply to emerged, young, actively growing weeds. Weeds that emerge after application will not be controlled.
- RHI Glufosinate Ammonium 150 will have an effect on weeds that are larger than the recommended leaf stage, however speed of activity and control may be reduced.

# Use of Corn separator rows in hybrid Canola seed production

- RHI Glufosinate Ammonium 150 is registered for use on glufosinate ammonium tolerant Corn varieties or hybrids when used as separator rows.
- Corn should be seeded at 20,000 30,000 plants/ha.
- Row spacing for glufosinate ammonium tolerant Corn should be 18-23 cm.

<sup>&</sup>lt;sup>2</sup>Suppression Only

<sup>&</sup>lt;sup>3</sup>Improved Top Growth Control

<sup>&</sup>lt;sup>4</sup>Better Top Growth Suppression

<sup>&</sup>lt;sup>5</sup>Season Long Control for Heavy Populations

• Note: Corn must be destroyed and not used for food or feed.

#### TANK MIXES

- Consult the label of the tank mix partner for further directions for use, restrictions and precautions. Tank mix partners may have additional restrictions for leaf staging.
- For enhanced activity RHI Glufosinate Ammonium 150 may be tank mixed with the following products.

#### **CANOLA**

TANK MIX PRODUCT	RATE	DIRECTIONS
Centurion® or Select®	63 mL/ha	For control of Volunteer Barley and Wild Oats, apply RHI Glufosinate Ammonium 150 at a rate of 2.67-4.0 L/ha plus Centurion or Select at 63 mL/ha with adjuvant as recommended on the Centurion or Select label. Apply when the weeds are in the 1-4 leaf stage with a maximum of 2 tillers.
FBN Clethodim 240 or Advantage Clethodim 240	63 mL/ha	For control of wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer oats plus all remaining grass weeds and broadleaf weeds listed on the RHI Glufosinate Ammonium 150 label, apply RHI Glufosinate Ammonium 150 at a rate of 2.67 to 4.0 L/ha plus FBN Clethodim 240 or Advantage Clethodim 240 at 63 mL/ha with FBN Clethodim Adjuvant at 0.5% v/v. Apply when the wild oats, volunteer wheat, volunteer oats and green foxtail are in the 1-5 leaf stage. Refer to the RHI Glufosinate Ammonium 150 label for application timing on all remaining grass and broadleaf weeds for 2.67 or 4.0 L/ha.
Clever® Dry Flowable Herbicide or Ingenious Herbicide	62 g/ha	Improved cleavers control in canola may be accomplished using a rate of 62 g/ha when tank mixed with RHI Glufosinate Ammonium 150 at a rate of 3.33 L/ha on LibertyLink Canola, or with glyphosate products (360 g/L acid equivalent (ae) isopropylamine salt formulations or 540 g ae/L potassium salt formulations) at a rate of 667 g ae/ha on Roundup Ready® Canola. All glyphosate products must be registered for post-emergent use on glyphosate tolerant canola varieties. Application should be made from the 2 to 6 leaf stage of the canola crop when cleavers are between the cotyledon to 3 whorls stage.

**Note:** Do not tank mix RHI Glufosinate Ammonium 150 with herbicides, fertilizers or chemical additives unless recommended on this label.

#### LIVESTOCK FEEDING AND PRE-HARVEST INTERVALS

#### LIVESTOCK FEEDING

## Canola:

- Grain and meal from treated crop can be fed to livestock.
- Do not graze the treated crop or cut for hay; sufficient data are not available to support such use.

# Corn (used as separator rows in Hybrid Canola Seed Production):

• Do not feed treated crop to livestock; sufficient data are not available to support such use.

# PRE-HARVEST INTERVALS

# Canola:

• When RHI Glufosinate Ammonium 150 is tank mixed with Centurion or Select, observe a PHI of 60 days from the date of treatment (or last treatment when a second application has been made).

- When RHI Glufosinate Ammonium 150 is tank mixed with FBN Clethodim 240 or Advantage Clethodim 240, observe a PHI of 60 days from the date of treatment.
- When RHI Glufosinate Ammonium 150 is tank mixed with Clever Dry Flowable Herbicide or Ingenious Herbicide, observe a PHI of 60 days from the date of treatment.

#### PLANT-BACK INTERVALS

- 70 days for buckwheat, barley, millet, oats, rye, sorghum, triticale and wheat.
- 120 days for all other crops except field corn, canola and soybeans, dry common beans (not grown for seed), alfalfa, carrot, lettuce, onion and potato.

#### RESISTANCE MANAGEMENT

For resistance management, RHI Glufosinate Ammonium 150 is a Group 10 herbicide. Any weed population may contain or develop plants naturally resistant to RHI Glufosinate Ammonium 150 and other Group 10 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

# To delay herbicide resistance:

- Where possible, rotate the use of RHI Glufosinate Ammonium 150 or other Group 10 herbicides within a growing season (sequence) or among growing seasons with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields, and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance- management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, Rath Holdco Inc. at 1-888-466-0056.

**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.

# FOR MORE INFORMATION CONTACT:

Rath Holdco Inc.

346 Brighton Gate Saskatoon, Saskatchewan Canada S7V 0P9

Contact number: 1-888-466-0056