

26-FEB-2010

2009-4047

GROUP	9	HERBICIDE
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**ROUNDUP® RENEW**  
**Water Soluble Herbicide**

**AGRICULTURAL**

**DANGER      EYE IRRITANT**

**REGISTRATION NO. 24708 PEST CONTROL PRODUCTS ACT**

**GUARANTEE:** Glyphosate acid equivalent - 64.5 %; present as the mono-ammonium salt.  
Warning, contains the allergen sodium sulfite.

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

**MONSANTO CANADA, INC.**  
**900 - One Research Road**  
**Winnipeg MB R3T 6E3**  
**1-800-667-4944**

**PRECAUTIONS**

**NET CONTENTS 11.2 KILOGRAMS**

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## **PRECAUTIONS**

**KEEP OUT OF REACH OF CHILDREN.**

**CAUSES EYE IRRITATION.**

Avoid contact with eyes, skin or clothing.

Wash thoroughly with soap and water after handling.

**POTENTIAL SKIN SENSITIZER.**

Wear long-sleeved shirt and long pants or coveralls when applying the product. During mixing, loading, cleanup and repair, the above clothing should be worn along with chemical-resistant gloves and eye protection (goggles or face shield).

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

## **FIRST AID**

**IF IN EYES**, hold eye open and rinse slowly and gently with water for 15-20 minutes.

Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**IF SWALLOWED**, call a poison control centre or doctor immediately for treatment advice. Have a 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.

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

## **TOXICOLOGICAL INFORMATION**

Treat symptomatically.

## **ENVIRONMENTAL HAZARDS**

Avoid direct applications to any body of water. Do not contaminate water by disposal of waste or cleaning of equipment.

## **PHYSICAL OR CHEMICAL HAZARDS**

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fibreglass, plastic and plastic-lined steel containers. **DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.** This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

## **STORAGE**

Avoid contamination of seed, feed, and foodstuffs.

## **DISPOSAL**

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

For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer 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 Product Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

In case of an emergency involving this product, Call Monsanto collect, day or night:

Accident/Spills/Medical Emergency.....(314) 694-4000  
or..... 1-800-332-3111  
or CANUTEC.....(613) 996-6666

For additional information on this or other Monsanto agricultural products, call the Monsanto Canada Custom Care Line at: 1-800-667-4944.

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## **ROUNDUP® RENEW HERBICIDE**

### **1.0 COMPLETE DIRECTIONS FOR USE**

**Water soluble herbicide for non-selective weed control in FORAGE AND OTHER CROPLAND SITUATIONS.**

#### **USES INCLUDE:**

Removing forage stands prior to recropping or renovation; spot treatment control in forage grasses, legumes, including seed production, wheat, barley, oats, corn and soybeans; perennial weed control and preharvest applications in wheat, barley, oats, canola (rapeseed), flax (including low linolenic acid varieties), peas, lentils, dry beans and soybeans.

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**2.0** In case of an emergency involving this product, Call Monsanto collect, day or night:

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**2.1** For additional information on this or other Monsanto agricultural products, call the Monsanto Canada Custom Care Line at: 1-800-667-4944

### **3.0 PRECAUTIONS**

**KEEP OUT OF REACH OF CHILDREN.**

**CAUSES EYE IRRITATION.**

Avoid contact with eyes, skin or clothing.

Wash thoroughly with soap and water after handling.

**POTENTIAL SKIN SENSITIZER.**

Wear long-sleeved shirt and long pants or coveralls when applying the product. During mixing, loading, cleanup and repair, the above clothing should be worn along with chemical-resistant gloves and eye protection (goggles or face shield).

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

### **3.1 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 SWALLOWED**, Call a poison control centre or doctor immediately for treatment advice. Have a 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.

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

### **3.2 TOXICOLOGICAL INFORMATION**

Treat symptomatically.

### **3.3 ENVIRONMENTAL HAZARDS**

Avoid direct applications to any body of water. Do not contaminate water by disposal of waste or cleaning of equipment.

### **3.4 PHYSICAL OR CHEMICAL HAZARDS**

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fiberglass, plastic and plastic-lined steel containers. **DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS.** This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious

personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

### **3.5 STORAGE**

Avoid contamination of seed, feed, and foodstuffs.

### **3.6 DISPOSAL**

Make the empty container unsuitable for further use.

Dispose of the container in accordance with provincial requirements.

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

### **NOTICE**

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### **DIRECTIONS FOR USE**

#### **4.0 GENERAL INFORMATION**

Do not apply this product using aerial spray equipment.

Roundup Renew herbicide, a water soluble granule, mixes readily with water for application as a foliage spray for the control or removal of most herbaceous plants. It may be applied through most standard industrial or field type sprayers after dissolution and thorough mixing with water in accordance with the booklet instructions.

This herbicide moves through the plant from the point of foliage contact to and into the root system. Visible effects on perennial weeds will occur 7 to 10 days after treatment. Extremely cool or cloudy weather at treatment time may slow down activity of this product and delay visual effects. Visible effects are a gradual wilting and yellowing of the plant which advances to complete browning of above ground growth and deterioration of underground plant parts.

This product does not provide residual forage or weed control.



Delay application until vegetation has emerged to the stages described for control of such vegetation under the weed control sections of this booklet to provide adequate leaf surface to receive spray. Unemerged plants arising from underground rhizomes or root stocks of perennials will not be affected by the spray and will continue to grow. For this reason best control of most perennial weeds is obtained when treatment is made at late growth stages approaching maturity.

Do not treat weeds under poor growing conditions such as drought stress, disease or insect damage, as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust.

Heavy rainfall immediately after application may wash the chemical off the foliage and a repeat treatment may be required. Do not apply if rainfall is forecast for the time of application.

Do not mix with any surfactant, pesticide, herbicide oils or any other material other than water. For best results, spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

## **RESISTANCE-MANAGEMENT RECOMMENDATIONS**

For resistance management, Laredo Herbicide is a Group 9 herbicide. Any weed population may contain or develop plants naturally resistant to Laredo Herbicide and other Group 9 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 Laredo Herbicide or other Group 9 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 pesticides resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Monsanto Canada at 1-800-667-4944 or at [www.Monsanto.ca](http://www.Monsanto.ca)

## **5.0 MIXING AND APPLICATION**

### **5.1 PRECAUTIONS**

**ATTENTION: AVOID CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF CROPS, DESIRABLE PLANTS AND TREES SINCE SEVERE INJURY OR DESTRUCTION MAY RESULT.**

**APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES.**

**AVOID DRIFT - EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURING DESIRABLE PLANTS AND CROPS.** Do not allow spray mist to drift since even minute quantities of spray can cause severe damage or destruction to nearby crops, plants or other areas on which treatment is not intended, or may cause other unintended consequences. Apply only in wind conditions in compliance with local and/or provincial regulations. Do not apply when other climatic conditions, including lesser wind velocities, will allow drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in fine particles which are more likely to drift.

**DO NOT USE IN GREENHOUSES.**

**REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS WATER FROM PONDS AND UNLINED DITCHES.**

Clean sprayer and parts immediately after using this product by thoroughly flushing with water. Do not contaminate water sources by disposal of wastes or cleaning of equipment.

**NOTE:** Use of this product in any manner not consistent with this booklet may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

## **5.2 EQUIPMENT INFORMATION**

### **MIXING**

For ground or industrial type sprayers, ensure bypass agitation is off and begin adding water to the spray tank. Add the proper amount of Roundup Renew herbicide as the spray tank fills with water (see **'Weed Control'** sections of this booklet - 7.0, 8.0). Turn on agitation only after all the Roundup Renew has been added. Agitate at least 5 minutes before spraying. **DO NOT MIX WITH OTHER ADDITIVES (e.g. AMMONIUM SULFATE). APPLY THE SOLUTION THE DAY IT IS MIXED. PRECIPITATE MAY FORM IF THESE GUIDELINES ARE NOT FOLLOWED.**

In the mixing procedure, placing the filling hose below the surface of the liquid solution will prevent excessive foaming. Removing hose from tank immediately will avoid back siphoning into water source. Use of mechanical agitators may cause excessive foaming. Bypass lines should terminate at the bottom of the tank.

For use in knapsack sprayers, it is suggested that the proper amount of this herbicide be mixed with water in a larger container. Fill sprayer with the mixed solution.

### **APPLICATION EQUIPMENT**

## BOOM EQUIPMENT

**For control of perennial weeds and woody brush and trees listed on this booklet using conventional boom equipment--** Apply Roundup Renew in 50 to 300 litres of clean water per hectare as a broadcast spray using no more than 275 kPa pressure. See “**Weed Control**” sections of this booklet (8.0) for rates to control specific weeds.

## HAND HELD AND HIGH VOLUME EQUIPMENT (use coarse sprays only)

**For control of weeds and woody brush and trees listed in the "Weeds Controlled" section of this label using knapsack sprayers or high volume spraying equipment utilizing handguns or other suitable nozzle arrangements--** Unless otherwise specified, make a 0.6 percent solution of Roundup Renew herbicide in water (0.56 kilograms of this product in 100 litres of water) and apply to foliage of vegetation to be controlled. For best results, use a 1.1 percent solution (1.13 kilograms of this product in 100 litres of water) on harder to control perennials such as Canada thistle, dandelion, field bindweed, hemp dog-bane and milkweed. Applications should be made on a spray-to-wet basis. Spray coverage should be uniform and complete. Do not spray to point of runoff. Hand gun applications should be properly directed to avoid spraying desirable plants.

## SELECTIVE EQUIPMENT

Selective equipment such as **WIPER** and **ROLLER** applicators can be used for weed control in forages. For information regarding use of this product with selective equipment, refer to "**Selective Equipment**" section of this label (11.0).

## 6.0 WEEDS CONTROLLED

This product removes forage establishments, as well as controls many perennial grasses, broadleaf weeds, and woody brush and trees when applied as recommended and under conditions described. For information on how to control specific weeds including herbicide rate, refer to sections 7.1 and 8.1. The following is a partial list of weeds controlled.

### 6.1 PERENNIAL WEEDS

#### Perennial Broadleaved Weeds

##### **Alfalfa**

Medicago spp.

##### **Cottontop**

Eriophorum chamissionis

##### **Curled Dock**

Rumex crispus

##### **Dandelion**

Taraxacum officinale

##### **Field Bindweed**

Convolvulus arvensis

##### **Hemp Dogbane**

Apocynum cannabinum

##### **Hoary Cress**

Cardaria draba

##### **Knotweed (Japanese)**

Polygonum cuspidatum

##### **Milkweed (common)**

Asclepias syriaca

##### **Poison Ivy**

*Rhus radicans*

**Sow Thistle (perennial)**

*Sonchus arvensis*

**Thistle (Canada)**

*Cirsium arvense*

**Toad Flax**

*Linaria vulgaris*

**Wormwood (Absinth)**

*Artemisia absinthium*

**Perennial Grasses/Sedges**

**Blue Grass (Canada)**

*Poa compressa*

**Blue Grass (Kentucky)**

*Poa pratensis*

**Brome Grass (smooth)**

*Bromus inermis*

**Cattail (common)**

*Typha latifolia*

**Foxtail Barley**

*Hordeum jubatum*

**Quackgrass**

*Agropyron repens*

**Yellow Nutsedge**

*Cyperus esculentus*

**WOODY BRUSH AND TREES****Alder**

*Alnus* spp.

**Birch**

*Betula* spp.

**Broadleaved meadowsweet**

*Spiraea latifolia*

**Canadian rhododendron**

*Rhododendron canadenses*

**Cedar**

*Thuja* spp.

**Cherry**

*Prunus* spp.

**Douglas Fir**

*Pseudotsuga* spp.

**Hemlock**

*Tsuga* spp.

**Maple**

*Acer* spp.

**Mountain-fly honeysuckle**

*Lonicera villosa*

**Pine**

*Pinus* spp.

**Poplar**

*Populus* spp.

**Raspberry / Salmonberry**

*Rubus* spp.

**Sheep laurel**

*Kalmia angustifolia*

**Snowberry (Western)**

*Symphoricarpos occidentalis*

**Sweet fern**

*Comptonia peregrina*

**Willow**

*Salix* spp.

**Withrod**

*Viburnum cassinoides*

## 7.0 FORAGE USES

**ALWAYS READ PRECAUTIONARY STATEMENTS, GENERAL INFORMATION and MIXING and APPLICATION PRECAUTIONS (sections 3.0, 4.0 and 5.0) PRIOR TO SPECIFIC APPLICATION INFORMATION IN ANY LABEL SECTION.**

This product can be used to remove forage stands prior to recropping or renovation. The following table provides the rate and the specific application instructions for the removal of forage and pasture establishments. It can be applied as a broadcast spray, or using selective equipment (see Section 11.0)

### 7.1 FORAGE REMOVAL WITH ROUNDUP® RENEW HERBICIDE

<b>WEED</b>	<b>GROWTH STAGE</b>	<b>RATE (KG/ha)</b>	<b>WATER VOLUME (L/ha)</b>	<b>COMMENTS</b> (see section 10 for tillage information)
<b>Alfalfa</b>	Early bud to full bloom stage. Late summer or fall application only.	2.8	50-300	Allow 3 days before intensive grazing or cutting.
<b>Perennial Grasses</b>	Should be actively growing with 4-5 green leaves.	2.8	50-300	Allow 3 days before intensive grazing or cutting.

### 7.2 PREHARVEST/PREGRAZING

Use this product preharvest/pregrazing to remove forage stands. Allow 3 days before intensive grazing or cutting. Late summer (after August 15) or fall applications provide excellent control of alfalfa. Earlier applications will result in reduced control. It is recommended that Roundup Renew herbicide applied to second cut alfalfa. Heavy frosts prior to application may decrease control.

### 7.3 POSTHARVEST/POSTGRAZING

This product can be applied after cutting or grazing as a postharvest treatment for the removal of forage stands, and control of perennial weeds such as Canada thistle and quackgrass. Allow the forage crop and the weeds to regrow to the proper stage (20-25 centimetres for Canada thistle and quackgrass, early bud to bloom stage for alfalfa) before application and ensure they have a high proportion of green coloration. Heavy frosts prior to application may decrease control.

### 7.4 PASTURE RENOVATION

Use this product to control or suppress existing vegetation for direct-seeding of legumes into established sod for pasture renovation. Delay spraying until weed growth is at least 20 centimetres in height and a maximum number of seedlings or shoots have emerged. Application can be made

immediately before, during or after seeding, but before crop emergence.

## **7.5 SPOT TREATMENT (IN-CROP)**

This product can be applied as an in-crop spot treatment in forage grasses, legumes, including seed production, wheat, barley, oats, corn and soybeans. Applications should be made using the same rates and at the same growth stages as listed in the "**Weed Control**" Tables (7.1, 8.1) or use a 0.6 percent solution for quackgrass and a 1.1 percent solution for other perennial weeds (a 0.6 percent solution equals 0.56 kilograms Roundup Renew in 100 litres of spray solution). These solutions should be applied to wet, but not run-off. Applications can be made using boom sprayer, hose and handgun, or hand sprayer in accordance with instructions in the "**Application Equipment**" section (5.2).

Applications can be made up to heading of small grains, initial pod set on soy and dry beans, silking of corn and emergence of seed heads. The crop in the treated area will be killed. Take care to avoid drift for the same reason. **DO NOT APPLY IF CROP GROWTH HAS ADVANCED BEYOND SEED SET. ALLOW 3 TO 5 DAYS FOR ROUNDUP RENEW HERBICIDE TO TRANSLOCATE INTO ALL PLANT PARTS BEFORE GRAZING OR HARVESTING TREATED AREAS IN FORAGES.**

## **8.0 PERENNIAL WEED CONTROL**

**ALWAYS READ PRECAUTIONARY STATEMENTS, GENERAL INFORMATION and MIXING and APPLICATION SECTIONS (3.0, 4.0 AND 5.0) PRIOR TO SPECIFIC APPLICATION INFORMATION IN ANY LABEL SECTION.**

When applied as recommended under the conditions described, this product will control the perennial weeds listed in the following table.

### **8.1 PERENNIAL WEED CONTROL WITH ROUNDUP® RENEW HERBICIDE**

<b>WEED</b>	<b>GROWTH STAGE</b>	<b>RATE (KG/ha)</b>	<b>WATER VOLUME (L/ha)</b>	<b>COMMENTS</b> (see Section 10 for tillage information)
<b>Canada Thistle</b>	Bud stage or beyond.	2.8	100-300	- after first cut allow thistle to regrow a minimum of 5 weeks - thistles must be at least 20-25 cm in height.
<b>Quackgrass</b>	Should be actively growing with 3-4 green leaves or more.	2.8	50-300	
<b>Dandelion</b>	Rosette to full bloom.	2.8	50-300	
<b>Foxtail Barley</b>	Seedling to heading.	2.8	50-100	
<b>Perennial Sow Thistle</b>	Bud stage or beyond.	2.8	50-100	
<b>Blue Grass</b>	Seedling to heading.	2.8	50-100	
<b>Toadflax</b>	Bud stage to full bloom.	2.8	50-100	
<b>Woody Brush and Trees*</b> (see section 6.1)	Actively growing	1.7-3.4	100-300	- late summer through fall - fall application is optimum
<b>Other Perennials</b> (see section 6.1)	Early heading or early bud stage.	3.9-6.7	100-300	- late summer through fall application

\* Willow suppression only

## 8.2 ALL PERENNIAL WEEDS

**Weed Stages:** Weeds must be at the proper stage for effective control. Refer to '**Perennial Weed Control with Roundup Renew Herbicide**' (8.1).

**Nozzle Type:** For best results with conventional boom equipment, apply this product with 50 to 300 litres per hectare of clean water using flat fan nozzles and no more pressure than 275 kPa.

**Rhizome Dormancy:** Reduced control may result if rhizomes have become dormant. Dormancy may occur if soil fertility is low and/or the land has not been tilled for several years.

**Grazing/Mowing Effects:** Grazing or mowing prior to application will reduce effectiveness unless weeds are allowed to regrow to the proper stage before application. Refer to sections 7.1 and 8.1 for specific growing stages according to weed species.

**Rainfall Effects:** Heavy rainfall immediately after application may wash the chemical off the foliage and a repeat treatment may be required. Do not apply if rainfall is forecast for the time of application.

**Regrowth from Germinating Seeds:** This product only controls emerged plants. Repeat treatments or other weed control measures may be required to control weeds regenerating from seeds or other underground parts.



**Frost Effects:** Canada thistle can be treated after a mild frost provided the leaves are still green and actively growing at the time of application. Quackgrass can be treated after a mild frost provided there are 3 to 4 green leaves actively growing at the time of application. Heavy frosts prior to application may reduce control. Do not apply after the first damaging frost in the fall.

## **9.0 CROPLAND USES**

**ALWAYS READ PRECAUTIONARY STATEMENTS, GENERAL INFORMATION and MIXING and APPLICATION SECTIONS (3.0, 4.0 AND 5.0) PRIOR TO SPECIFIC APPLICATION INFORMATION IN ANY LABEL SECTION.**

This product can be applied as a broadcast spray preharvest in wheat, barley, oats, canola (rapeseed), flax (including low linolenic acid varieties), lentils, peas, soybeans and dry beans.

## **9.1 PREHARVEST CONTROL OF QUACKGRASS, CANADA THISTLE, DANDELION, MILKWEED, and TOADFLAX; SEASON-LONG CONTROL OF PERENNIAL SOW THISTLE, AND HARVEST MANAGEMENT**

For control of quackgrass, Canada thistle, dandelion, common milkweed, and toadflax; and season-long control of perennial sow thistle, Roundup Renew herbicide can be applied prior to harvest of wheat, barley (including malting barley), oats, canola (rapeseed), flax (including low linolenic acid varieties), lentils, peas, dry beans, and soybeans. DO NOT apply to crops if grown for seed production.

This treatment may also provide harvest management benefits, by drying down crop and weed vegetative growth, for example, where late flushes of annual weeds, green vegetative crop growth, or late tillering may interfere with harvest operations. **EXTREMELY COOL, WET AND/OR CLOUDY WEATHER CONDITIONS BETWEEN THE TIME OF APPLICATION AND THE ANTICIPATED HARVEST DATE MAY SLOW DOWN ACTIVITY OF THIS PRODUCT, THEREBY DELAYING CROP DRYDOWN AND HARVEST DATE.**

Roundup Renew herbicide should be applied pre-harvest at 1.4 kilograms per hectare in 50 to 100 litres per hectare of clean water, by ground application only. Apply only when the crop has 30 percent or less grain moisture content. This stage typically occurs 7 to 14 days before harvest. Consult the table "**Guidelines for Timing of Preharvest Applications**" for visual indicators of this stage in each crop. For the best weed control results quackgrass should be actively growing and have at least 4 to 5 green leaves. Canada thistle and perennial sow thistle should be actively growing and at or beyond the bud stage for best results. Common milkweed should be at the bud to bloom stage and actively growing for best results. Applications for weed control (not for harvest management) must be made at the correct stage of both weed and crop growth.

Apply only during the period 7-14 days before harvest to ensure best weed control and to maximize harvest management benefits. Earlier application may reduce crop yield and/or quality, and may lead to excess glyphosate residues in the crop.

Overspray or drift to important wildlife habitats such as bodies of water, wetlands (eg. sloughs), shelterbelts, woodlots and other cover on the edges of fields frequented by wildlife, should be avoided. Leave a 15 metre buffer zone between the last spray swath and the edge of any of these habitats.

Do not expose or contaminate any body of water or non-target vegetation by direct application, spray drift, or when cleaning and rinsing spray equipment.

**DO NOT APPLY BY AIRCRAFT**

## 9.2 GUIDELINES FOR TIMING OF PREHARVEST APPLICATIONS

CROP(S)	PERCENT GRAIN MOISTURE	VISUAL SYMPTOMS
WHEAT/BARLEY/OATS	Less than 30	Hard dough stage; a thumbnail impression remains on seed.
CANOLA	Less than 30	Pods are green to yellow; most seeds are yellow to brown.
FLAX (INCLUDING LOW LINOLENIC ACID VARIETIES)	Less than 30	Majority (75%-80%) of bolls are brown.
PEAS	Less than 30	Majority (75%-80%) of pods are brown.
LENTILS	Less than 30	Lowermost pods (bottom 15%) are brown and seeds rattle.
DRY BEANS	Less than 30	Stems are green to brown in color; pods are mature (yellow to brown in color); 80%-90% leaf drop (original leaves).
SOYBEANS	Less than 30	Stems are green to brown in color; pod tissue is dry and brown in appearance; 80%-90% leaf drop.

## 10.0 TILLAGE EFFECTS

Fall or spring tillage prior to spring applications will reduce the effectiveness on perennial weeds. Follow-up tillage after application must be delayed to allow proper translocation into underground plant parts. The following table describes the specific tillage intervals according to weed species.

### 10.1 TILLAGE INTERVALS WITH ROUNDUP RENEW HERBICIDE

WEED	TILLAGE INTERVAL
Alfalfa	5 days
Grasses	3 days
Broadleaves	7 days

It is recommended that tillage be delayed or avoided all together. Leaving the land undisturbed allows for maximum degradation of underground root systems. Fall or spring tillage prior to spring applications will reduce the effectiveness on perennial weeds.

## 11.0 SELECTIVE EQUIPMENT

**ALWAYS READ PRECAUTIONARY STATEMENTS, GENERAL INFORMATION and MIXING and APPLICATION SECTIONS (3.0, 4.0 AND 5.0) PRIOR TO SPECIFIC APPLICATION INFORMATION IN ANY LABEL SECTION.**

## WIPER APPLICATORS

This product may be applied with a wiper applicator, after dilution and thorough mixing with water, to listed weeds in forages.

A wiper applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution. Wiper applicators include either roller or wick devices which physically wipe appropriate concentrations or amounts of this product directly onto the weed. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation. Performance may be improved by reducing speed in areas of heavy weed infestations to insure adequate wiper saturation. Best results may be obtained if 2 applications are made in opposite directions.

**AVOID CONTACT WITH DESIRABLE VEGETATION.** Contact of the herbicide solution with the desirable vegetation may result in damage or destruction. Applicators used above desired vegetation should be adjusted so that wiper contact point is at least 5 centimetres above the desirable vegetation. Droplets or foam of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications should be made when the weeds are a minimum of 15 centimetres above the desirable vegetation. Best results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary. See the “**Weed Control**” Tables in this label (sections 7.1 and 8.1) for recommended stage of growth for specific weeds.

## NOTES

- **Maintain equipment in good operating condition. Avoid leakage or dripping onto desirable vegetation.**
- **Adjust height of applicator to insure proper contact with weeds.**
- **Keep wiping surfaces clean.**
- **Maintain recommended roller RPM on roller applicators while in use.**
- **Keep wiper material at proper degree of saturation with herbicide solution.**
- **DO NOT use wiper equipment when weeds are wet.**
- **DO NOT operate equipment at ground speeds below 4 and greater than 10 km/h. Weed control may be affected by speed of application equipment. As weed density increases, reduce equipment ground speed to insure good coverage of weeds.**
- **Be aware that on sloping ground the herbicide solution may migrate, causing dripping on the lower end and drying on the upper end of the wiper applicator.**
- **Variation in equipment design may affect weed control. With wiper applicators, the wiping**

**material and its orientation must allow delivery of sufficient quantities of the recommended herbicide solution directly to the weed.**

- . Care must be taken with all types of wipers to insure that the absorbent material does not become over-saturated, causing the herbicide to drip onto desirable vegetation.**
- . Mix only the amount of solution to be used during a one day period, as reduced activity may result from use of leftover solutions. With all equipment, drain and clean wiper parts immediately after using this product, by thoroughly flushing with water.**

**For Roller Applicators**--Mix 0.28 to 0.56 kilograms of this product in 10 litres water to prepare a 2.8 percent to 5.6 percent solution. Roller speed should be maintained at 50 to 150 rpm.

**For Wick or other Wiper Applicators**--Mix 0.18 kilograms of this product per litre of water to prepare an 18 percent solution.

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