

18-Mar-2011  
2010-4001

[Booklet]

GROUP	9	HERBICIDE
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# GLYPHOSATE

HERBICIDE – AGRICULTURAL AND INDUSTRIAL

Soluble Concentrate

**WARNING** [symbol] **EYE IRRITANT**

**NET CONTENTS: 10 L**

**GUARANTEE:** glyphosate 360 g/L (acid equivalent) present as the isopropylamine salt

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

REGISTRATION NO. 26846 PEST CONTROL PRODUCTS ACT

**EMERGENCY TELEPHONE NUMBER**

IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT, 1-800-228-5635, EXT 153.

Interprovincial Cooperative Ltd.  
P.O. Box 1050  
Saskatoon, Saskatchewan  
S7K 3M9

RC 000-0206

## GLYPHOSATE HERBICIDE – AGRICULTURAL AND INDUSTRIAL - LABEL INDEX

General precautions; first aid; emergency telephone number  
Environmental hazards; physical or chemical hazards; storage; disposal  
Precautions for use  
General product information  
General application notes  
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Vegetation controlled (lists)

### APPLICATION EQUIPMENT & MIXING INSTRUCTIONS

Ground boom and boomless sprayers  
Knapsack sprayers, hand-held & high volume equipment  
Mist blowers  
Wiper, wick and roller equipment  
Aerial application

### AGRICULTURAL AND CROPLAND USES

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Minimum and zero tillage tank mixes  
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### RATES AND USES CHARTS:

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Tank mixes for perennial weed control  
Guidelines for timing of preharvest applications  
Weed control in noncropland, industrial uses  
Weed control in tree, vine, and berry crops  
Annual weed control  
Perennial weed control

## READ ENTIRE LABEL CAREFULLY BEFORE USE

GLYPHOSATE is a non-selective, non-residual herbicide containing 360 g/L glyphosate as isopropylamine salt, formulated as a water soluble liquid. It is used for the control of most herbaceous weeds in agricultural and industrial sites. The product is absorbed through the foliage and translocated throughout the plant down to the root system. Visible symptoms such as gradual wilting and yellowing are usually obvious within 2 to 4 days of application to annual weeds, but may not be apparent for 7 to 10 days on perennial weeds.

### GENERAL PRECAUTIONS

- KEEP OUT OF REACH OF CHILDREN
- CAUSES EYE IRRITATION
- HARMFUL IF SWALLOWED
- AVOID CONTACT WITH EYES AND SKIN
- WASH HANDS AND EXPOSED SKIN BEFORE EATING, DRINKING, OR SMOKING, AND AFTER WORK

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)

### FOR GOOD AGRICULTURAL PRACTICE:

- DURING MIXING, LOADING, CLEANUP, AND REPAIR PROCEDURES WEAR GLOVES, COVERALLS, AND EYE PROTECTION
- WASH SPLASHES FROM SKIN AND EYES IMMEDIATELY

### FIRST AID

**IN CASE OF CONTACT WITH 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 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 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.

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

### EMERGENCY TELEPHONE NUMBER

IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT, 1-866-303-6950.

### TOXICOLOGICAL INFORMATION

Treat symptomatically.

### ENVIRONMENTAL HAZARDS

HARMFUL to aquatic organisms. Avoid direct application to any body of water populated with fish or used for domestic purposes. Do not use in areas where adverse impact on domestic water or aquatic species is likely. Do not contaminate water by disposal of waste or cleaning of equipment. Avoid all drift or contact with vegetation for which treatment is not intended as damage or destruction may occur.

### PHYSICAL OR CHEMICAL HAZARDS

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fibreglass, plastic, or plastic-lined 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 the 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**

KEEP AWAY FROM FOOD, DRINK, AND ANIMAL FEEDSTUFFS.  
KEEP ONLY IN ORIGINAL CONTAINER, TIGHTLY CLOSED.

**DISPOSAL****RECYCLABLE CONTAINERS:**

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

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

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

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

**RETURNABLE CONTAINERS:**

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

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 spill, and for clean-up of spills.

**RETURNABLE REFILLABLE CONTAINERS:**

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

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 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 offense under the Pest Control Products 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.

**PRECAUTIONS FOR USE**

Avoid contact with desirable vegetation by direct application or spray drift as severe injury or destruction may result. Avoid drift or overspray to non-target vegetation and wildlife habitats.

**DO NOT USE IN GREENHOUSES.**

Drain and clean sprayer and parts immediately after using this product.

Do not contaminate water sources by disposal of wastes or cleaning of equipment.

Reduced results may occur if water containing soil is used such as water from ponds and ditches. Poor control may also occur when treating weeds heavily covered with dust.

## GENERAL PRODUCT INFORMATION

GLYPHOSATE is a water soluble herbicide for non-selective weed control. GLYPHOSATE is applied as a foliar spray for the control of most herbaceous plants. It may be applied through most standard industrial or field type sprayers after dilution and thorough mixing with water in accordance with the booklet instructions.

GLYPHOSATE moves through the plant from the point of foliage contact into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most perennial weeds may not occur until 7 to 10 days. Extremely cool or cloudy weather at treatment time may slow down the activity of this product and delay visible effects of control. 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. 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.

GLYPHOSATE does not provide residual weed control. For subsequent residual weed control, apply a registered residual herbicide. Read and carefully observe cautionary statements and all other information appearing on the labels of all herbicides used.

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.

## GENERAL APPLICATION NOTES

Results are best when weeds are actively growing. If weeds have been mowed, allow to return to recommended growth stage.

Delay application until vegetation has emerged to the stage described for the control of such vegetation under the **ANNUAL** and **PERENNIAL WEED CONTROL** charts of this booklet to provide adequate leaf surface to receive the 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 the treatment is made at the late growth stages approaching maturity. Always use higher rates of GLYPHOSATE per hectare within the recommended range when weed growth is heavy or dense or weeds are growing in an undisturbed (non-cultivated) area.

Weed control may not be satisfactory if this product is applied to weeds growing under poor growing conditions such as drought, flooding, frost, high temperatures, disease or insect damage. Reduced results may also occur when treating weeds heavily covered with dust.

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

GLYPHOSATE should only be mixed with products recommended on this label. Do not mix with any surfactant, pesticide, herbicide oils or any other material other than water unless specified.

## TANK MIXES

**GLYPHOSATE may be used with the following surfactants:** Agral 90<sup>®</sup>, AgSurf<sup>®</sup>, Companion<sup>™</sup>, Frigate<sup>®</sup>. See charts on **TANK MIXES for ANNUAL** and **for PERENNIAL WEED CONTROL**.

**GLYPHOSATE may be used with the following herbicides:** Banvel<sup>®</sup>, Pardner<sup>®</sup>, Pursuit<sup>®</sup>, 2,4-D low volatile ester or amine formulations: See section on **MINIMUM AND ZERO TILLAGE TANK MIXES**. Princep<sup>®</sup> Nine-T<sup>®</sup>, Simadex<sup>®</sup>: See section on **TREE, VINE, AND BERRY CROPS**.

DyCleer<sup>®</sup> Herbicide, Simazine 80W, Simadex<sup>®</sup> Flowable, 2,4-D amine: See section on **NONCROPLAND AND INDUSTRIAL USES**.

Always refer to the surfactant and herbicide labels for specific instructions regarding the use of that product.

### Trade Name

Agral, DyCleer, Frigate, Princep, Nine-T  
AgSurf  
Banvel, Pursuit  
Companion  
Pardner, Simadex

### Trademark of

Syngenta  
IPCO  
BASF  
Dow AgroSciences Canada Inc.  
Bayer CropScience

## VEGETATION CONTROLLED

GLYPHOSATE controls many annual and perennial grasses, broadleaf weeds and woody brush and trees when applied as recommended and under the conditions described. For information on how to control specific weeds, including herbicide rate, refer to the **ANNUAL WEED CONTROL** and **PERENNIAL WEED CONTROL** charts of this label. The following is a partial list of the weeds controlled:

### Annual weeds:

Annual blue grass	<i>Poa annua</i>
Annual sowthistle	<i>Sonchus oleraceus</i>
Common lamb's quarters	<i>Chenopodium album</i>
Common ragweed	<i>Ambrosia artemisiifolia</i>
Crab grass	<i>Digitaria sanguinalis</i>
Dodder	<i>Cuscuta spp.</i>
Downy brome	<i>Bromus tectorum</i>
Fleabane (Canada)	<i>Erigeron canadense</i>
Flixweed	<i>Descurainia sophia</i>
Giant foxtail	<i>Setaria faberii</i>
Green foxtail	<i>Setaria viridis</i>
Kochia	<i>Kochia scoparia</i>
Lady's Thumb	<i>Polygonum persicaria</i>
Narrow-leaf hawk's beard	<i>Crepis tectorum</i>
Narrow-leaf vetch	<i>Vicia angustifolia</i>
Persian dandelion	<i>Lolium persicum</i>
Prickly lettuce	<i>Lactuca scariola</i>
Redroot pigweed	<i>Amaranthus retroflexus</i>
Russian thistle	<i>Salsola pestifer</i>
Shepherd's purse	<i>Capsella bursa-pastoris</i>
Stinkweed	<i>Thlaspi arvense</i>
Volunteer barley	<i>Hordeum spp.</i>
Volunteer canola	<i>Brassica spp.</i>
Volunteer corn	<i>Zea mays</i>
Volunteer flax	<i>Linum spp.</i>
Volunteer wheat	<i>Triticum spp.</i>
Wild buckwheat	<i>Polygonum convolvulus</i>
Wild mustard	<i>Brassica kaber</i>
Wild oats	<i>Avena fatua</i>

Perennial weeds:

Alfalfa	<i>Medicago sativa</i>
Blue grass (Canada)	<i>Poa compressa</i>
Blue grass (Kentucky)	<i>Poa pratensis</i>
Brome grass (smooth)	<i>Bromus inermis</i>
Canada thistle	<i>Cirsium arvense</i>
Common cattail	<i>Typha latifolia</i>
Common milkweed	<i>Asclepias syriaca</i>
Cottontop	<i>Eriophorum chamissionis</i>
Curled dock	<i>Rumex crispus</i>
Dandelion	<i>Taraxacum officinale</i>
Field bindweed	<i>Convolvulus arvensis</i>
Foxtail barley	<i>Hordeum jubatum</i>
Hemp dogbane	<i>Apocynum cannabinum</i>
Hoary cress	<i>Cardaria draba</i>
Japanese knotweed	<i>Polygonum cuspidatum</i>
Perennial sowthistle	<i>Sonchus arvensis</i>
Poison ivy	<i>Rhus radicans</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Quackgrass	<i>Agropyron repens</i>
Toad flax	<i>Linaria vulgaris</i>
Wormwood (Absinth)	<i>Artemisia absinthium</i>
Yellow nutsedge	<i>Cyperus esculentus</i>

Woody weeds, brush, and trees:

Alder	<i>Alnus spp.</i>
Birch	<i>Betula spp.</i>
Broadleaf meadowsweet	<i>Spiraea latifolia</i>
Canadian rhododendron	<i>Rhododendron canadense</i>
Cedar	<i>Thuja spp.</i>
Cherry	<i>Prunus spp.</i>
Douglas fir	<i>Pseudotsuga spp.</i>
Hemlock	<i>Tsuga spp.</i>
Maple	<i>Acer spp.</i>
Mountain-fly honeysuckle	<i>Lonicera villosa</i>
Pine	<i>Pinus spp.</i>
Poplar	<i>Populus spp.</i>
Raspberry	<i>Rubus spp.</i>
Salmonberry	<i>Rubus spp.</i>
Sheep laurel	<i>Kalmia angustifolia</i>
Snowberry (western)	<i>Symphoricarpos occidentalis</i>
Sweet fern	<i>Comptonia peregrina</i>
Willow	<i>Salix spp.</i>
Withrod	<i>Viburnum cassinoides</i>

**RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, GLYPHOSATE is a Group 9 herbicide. Any weed population may contain or develop plants naturally resistant to GLYPHOSATE 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 GLYPHOSATE 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 pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Interprovincial Cooperative Ltd. at 1-204-233-3461.

## **APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS**

### **GROUND BOOM AND BOOMLESS SPRAYERS**

**Mixing:** For field or industrial type sprayers, fill the spray tank with one-half the required amount of water. Add the proper amount of GLYPHOSATE herbicide (see appropriate chart) and mix well before adding the remaining portion of water. Placing the filling hose below the surface of the liquid solution will prevent any excessive foaming. Remove the hose from the tank immediately after filling to avoid back siphoning into water source (a one-way valve should be installed to prevent back siphoning). Use of mechanical agitators may cause excessive foaming. By-pass lines should terminate at the bottom of the tank.

**Application:** Use flat fan nozzles in boom sprayers. To control perennial weeds, woody brush, and trees as listed, apply GLYPHOSATE in 50 to 300 L of water per hectare as a broadcast spray. Use no more than 275 kPa pressure.

To control annual weeds as listed, apply GLYPHOSATE in 50 L to 100 L of water per hectare as a broadcast spray. Use no more than 275 kPa pressure.

### **KNAPSACK SPRAYERS, HAND HELD & HIGH VOLUME EQUIPMENT**

High volume spraying utilizes handguns or other suitable nozzle arrangements to apply a **directed spray** to weeds, woody brush, and trees. Use coarse sprays only.

**Mixing:** Mix the proper amount of GLYPHOSATE with water in a large container. Fill the sprayer with the mixed solution. Unless otherwise stated, make a 1% solution of GLYPHOSATE in water (1 L of GLYPHOSATE in 100 L of water). A 2% solution (2 L of GLYPHOSATE in 100 L of water) should be used on harder to control perennials.

**Application:** Spray coverage should be uniform and complete. Apply on a spray-to-wet basis. Do not spray to the point of runoff. Hand gun application should be properly directed to avoid spraying desirable plants.

### **MIST BLOWERS**

For control of woody weeds, brush, and trees listed in the **VEGETATION CONTROLLED** lists, use the recommended rate of GLYPHOSATE in at least 200 L of water per hectare.

### **WIPER, WICK AND ROLLER EQUIPMENT**

These applicators apply GLYPHOSATE solution directly onto the weeds by contacting the weed with an absorbent material containing the herbicide solution. Weeds should be a minimum of 15 cm above the desired vegetation to prevent contact of GLYPHOSATE with the desired vegetation.

**Mixing:** Mix the proper amount of GLYPHOSATE with water in a large container. Use this mixed solution in the wiper, wick or roller equipment.

**Application:** These applicators can be used to control weeds in:

- Industrial sites, tree plantings, and non-crop sites as specified.
- The following agricultural crops:
  - apple, cherry, peach, pear and plum orchards, grape vineyards, soybeans, dry beans, strawberries, and cranberries (note: applications must be made before initial pod set in soybeans)



and dry beans).

The applicator should be adjusted so that the contact point of the wiper, roller, or wick is at least 5 cm above the desirable vegetation. Droplets or foam of the GLYPHOSATE solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Best results are obtained when more of the weed is exposed to the herbicide solution. It is recommended that two applications be made in opposite directions, if possible.

Weeds not contacted will not be affected. This may occur in dense clumps, severe infestation, or when the height of the weeds varies so that not all weeds are contacted. In these instances, a repeat treatment may be necessary.

**AVOID CONTACT WITH DESIRABLE VEGETATION**

#### **Wiper, Wick, Roller Application Notes:**

- Maintain wiper equipment in good operating condition. Care must be taken with all types of wipers to ensure that the absorbent material does not become over-saturated, causing the herbicide to drip onto desirable vegetation.
- Avoid leakage or dripping onto desirable vegetation.
- Adjust height of wiper applicator to ensure proper contact with weeds.
- Keep wiping surfaces clean.
- Maintain recommended roller speed on roller applicators while in use.
- DO NOT use wiper equipment when weeds are wet.
- DO NOT operate equipment at ground speeds less than 4 or greater than 10 km/h. Weed control may be affected by speed of application equipment. As weed density increases, reduce equipment ground speed to ensure 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 GLYPHOSATE herbicide solution directly to the weed.
- Mix only the amount of solution to be used during a one-day period, as reduced activity may result from use of leftover solution. Thoroughly drain and clean all equipment immediately after use.

#### **AERIAL APPLICATION**

**Directions for Use (for additional information see section on AERIAL APPLICATIONS: For industrial rights-of-way only)**

Apply only by fixed-wing and 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. Ensure that the maximum boom width does not exceed 65% of the wing span. Nozzle type, size and orientation must be configured to deliver a droplet size VMD in the coarse (400-600 microns) or very coarse (600-1000) range. 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. The use of a spotter plane is recommended.

#### **Aerial Use Precautions**

Apply only when weather 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 Federal/Provincial/Territorial Committee on Pest Management and Pesticides*.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

#### **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 1-204-233-3461, 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: Volume: Apply the recommended rate in a spray volume of 30-100 L/ha.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of GLYPHOSATE accumulated during spraying or from spills. PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE. The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38412 may prevent corrosion.

### **AGRICULTURAL AND CROPLAND USES**

The following are use situations for GLYPHOSATE herbicide. The type of vegetation present and the use situation will dictate the choice of application equipment. Information on the equipment selected to apply GLYPHOSATE can be found in the **APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS** section. Use rates can then be selected from the **ANNUAL** and **PERENNIAL WEED CONTROL** charts.

### **PREPLANT TREATMENT**

GLYPHOSATE can be applied prior to planting of all crops for control of emerged weeds listed on the label. Ensure weeds are at the recommended growth stage at the time of application. Apply BEFORE seeding or transplanting crop.

### **SUMMER FALLOW**

GLYPHOSATE may be applied in summer fallow to control weeds listed on the label. Ensure weeds are at the recommended growth stage and actively growing at the time of application. Reduced control may result if weeds are drought stressed. Repeat treatments may be necessary to control later germinating weeds.

### **MINIMUM AND ZERO TILLAGE SYSTEMS (ALL FIELD CROPS INCLUDING CEREALS, OILSEEDS, PULSES, FORAGES AND CORN)**

GLYPHOSATE may be applied before or after seeding but before crop emerges for control of emerged weeds in minimum and zero tillage cropping systems for all field crops. Weeds should be treated at the growth stage according to the **ANNUAL** and **PERENNIAL WEED CONTROL** charts.

**DO NOT APPLY AFTER CROP EMERGENCE.**

Since GLYPHOSATE does not provide residual control, application too far in advance of seeding may allow weeds to germinate between application and crop emergence.

### **MINIMUM AND ZERO TILLAGE TANK MIXES**

**GLYPHOSATE herbicide plus Pardner** (bromoxynil) can be applied prior to seeding or after seeding, but before crop emergence in **wheat, barley, and oats**. See chart on **TANK MIXES for ANNUAL WEED CONTROL**.

**GLYPHOSATE herbicide plus Pursuit** can be applied before or after seeding, but prior to crop emergence in **soybeans**. GLYPHOSATE herbicide will control emerged weeds listed on this label when applied as directed (see **VEGETATION CONTROLLED** lists). Pursuit will control weeds germinating from

seed. Add the recommended rates of both products in 100 L of water/ha following the instructions on the Pursuit herbicide label.

**Refer to the Pursuit label for further information on weeds controlled, application directions, and use precautions. Only SOYBEANS, FIELD CORN, SPRING BARLEY, SPRING WHEAT and WINTER WHEAT may be planted the season following a Pursuit application. Winter wheat may be planted the same year as a Pursuit application to soybeans, but not earlier than 120 days after the application.**

**DO NOT APPLY AFTER CROP EMERGENCE.**

**GLYPHOSATE TANK MIXES for ANNUAL WEED CONTROL  
SUMMER FALLOW & MINIMUM TILLAGE SYSTEMS**

<b>TANK MIXTURES</b>	<b>RATE L/ha</b>	<b>WEEDS CONTROLLED++</b>	<b>COMMENTS: Apply in 50-100 L/ha water; add 350 mL/ha surfactant (see NOTE below)</b>
GLYPHOSATE + Banvel	0.75 - 1.0  +  0.29	Volunteer cereals, wild oats, green foxtail, volunteer canola (rapeseed), wild mustard, flixweed*, lamb's quarters, lady's thumb, stinkweed, kochia, Russian thistle, cow cockle Redroot pigweed**, wild buckwheat**	<b>This tank mix for summer fallow use only.</b> Weeds should be less than 15 cm tall and actively growing. Use higher rate if weeds are taller than 8 cm.  *GLYPHOSATE applied at 1.0 L/ha rate only. **Suppression only. See other tank mixtures for control options.
GLYPHOSATE + Pardner	0.75 - 1.0  +  1.25	Volunteer cereals, green foxtail, volunteer canola (rapeseed), wild mustard, lady's thumb, stinkweed, wild buckwheat*   Redroot pigweed**, kochia**, wild oats**	<b>This tank mix for summer fallow use; and prior to planting wheat, oats, and barley in minimum tillage systems.</b> Weeds should be less than 15 cm tall and actively growing. Use higher rate if weeds are taller than 8 cm. *Use GLYPHOSATE at 1.0 L/ha rate for wild buckwheat control. **1.0 L rate, suppression only. See other tank mixtures for control options.
GLYPHOSATE + 2,4-D#	0.75 - 1.0  +  1.2	Volunteer cereals, wild oats*, green foxtail*, volunteer canola (rapeseed), wild mustard, flixweed, redroot pigweed, lady's thumb, stinkweed, kochia   Lamb's quarters**, Russian thistle**	<b>This tank mix for summer fallow use only.</b> Weeds should be less than 15 cm tall and actively growing. Use higher rate if weeds are taller than 8 cm. *Use GLYPHOSATE at 1.0 L/ha rate only for wild oat and green foxtail control. **Suppression only. See other tank mixtures for control options.

#0.56 kg ai/ha of 2,4-D. Adjust rates accordingly for other 2,4-D formulations. Use only low volatile ester or amine formulations of 2,4-D.

++ For foxtail barley suppression, refer to chart on **ANNUAL WEED CONTROL**.

**NOTE:** All GLYPHOSATE herbicide tank mixtures for annual weed control require the addition of a non-ionic surfactant registered for this use, such as Agral 90, AgSurf and Companion. Surfactant should be added at a rate of 350 mL per hectare in 50-100 L of clean water.

**GLYPHOSATE TANK MIXES for PERENNIAL WEED CONTROL**

## SUMMER FALLOW OR FALL STUBBLE

TANK MIXTURES	RATE L/ha	WEEDS CONTROLLED	COMMENTS: Apply in 100-200 L/ha water; add 350 mL/ha surfactant (see NOTE below)
GLYPHOSATE	1.7	Canada thistle, perennial sow thistle	<b>Summer fallow:</b> Cultivate in the spring and apply when majority of thistles are 15 to 25 cm tall, and before the bud stage. Cultivate 3 weeks after application. <b>Fall stubble:</b> Apply to actively growing thistles at least 2 weeks prior to a killing frost.
+	+		
Banvel	1.25		

**NOTE:** All GLYPHOSATE herbicide tank mixtures for perennial weed control require the addition of a non-ionic surfactant registered for this use, such as Agral 90, AgSurf, or Companion. Grow only cereals, canola (including rapeseed), soybeans, field corn, sweet corn, or white beans after application of this tank mix. If application is made after September 1<sup>st</sup>, or if soil moisture levels are extremely low after application, crop injury may occur in the spring following application.

## FALL STUBBLE

Apply in the fall as a postharvest stubble treatment for control of perennial weeds including quackgrass and Canada thistle. Allow the Canada thistle and quackgrass to regrow to 20-25 cm tall. Straw should be removed or evenly spread to allow for proper regrowth and spray coverage. Heavy frost prior to treatment may decrease control.

## SPOT TREATMENT (IN CROP)

GLYPHOSATE may be applied for the control of Canada thistle, quackgrass and other perennial weeds in forage crops, barley, wheat, oats, soybeans and legumes, including seed production. Treatments may be made up to heading of small grain, initial pod set on soybeans and legumes, silking of corn, and emergence of seed heads. Avoid drift beyond the treated area.

Application can be made using a boom sprayer, knapsack, or high volume equipment (see **APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS** section). Applications should be made using the same growth stages as listed in the **ANNUAL** and **PERENNIAL WEED CONTROL** charts. Or, use a 1% solution for annual weeds and quackgrass and a 2% solution for other perennial weeds (a 1% solution equals 1 litre GLYPHOSATE herbicide in 100 litres of spray solution). The one and two percent solutions should be applied to wet, but not to run off.

**NOTE: THE CROP IN THE TREATED AREA WILL BE KILLED BY THE TREATMENT.**

DO NOT APPLY IF CROP GROWTH HAS ADVANCED BEYOND SEED SET. ALLOW 3 TO 5 DAYS BEFORE GRAZING IN, OR HARVESTING TREATED AREAS AS FORAGES.

## FORAGE GRASSES AND LEGUMES

Use GLYPHOSATE to control or suppress existing vegetation prior to emergence of legumes and grasses. If legumes and grasses are underseeded with a cover crop, GLYPHOSATE must be applied prior to planting any cover crop.

## PASTURE RENOVATION

GLYPHOSATE may be used to control or suppress existing vegetation for zero tillage seeding of legume or grass pasture into established sod for renovation. Weed growth should be at least 20 cm high and most weed seeds should have germinated at the time of spraying.

## FORAGE SEED PRODUCTION (FOR SPOT TREATMENT)

GLYPHOSATE may be applied as a spot treatment for control of perennial weeds such as quackgrass and Canada thistle in seed fields. Apply to weeds at least 20-25 cm in height but before emergence of seed head.

**The crop in the treated area will be killed. For this reason, take particular care to avoid drift outside the treated area.**

**PREHARVEST CONTROL OF QUACKGRASS, CANADA THISTLE, AND MILKWEED; SEASON-LONG CONTROL OF PERENNIAL SOW THISTLE; AND HARVEST MANAGEMENT**

For control of quackgrass, Canada thistle, common milkweed, and season-long control of perennial sow thistle, GLYPHOSATE can be applied prior to harvest of wheat, barley (including malting barley), canola (rapeseed), flax (including low-linolenic acid varieties), lentils, peas, dry beans and soybeans. DO NOT apply to crops 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 THE ACTIVITY OF THIS PRODUCT, THEREBY DELAYING CROP DRYDOWN AND HARVEST DATE.

GLYPHOSATE should be applied pre-harvest at 2.5 L/ha in 50 to 100 L/ha of clean water, by **GROUND APPLICATION ONLY**.

**When to Apply:** Apply only when the crop has 30% or less grain moisture content. This stage typically occurs 7 to 14 days before harvest. Consult the **GUIDELINES FOR TIMING OF PREHARVEST**

**APPLICATIONS** chart for visible 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.

**Use Precautions:** Overspray or drift to important wildlife habitats such as bodies of water, wetlands (e.g., 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

<b>GUIDELINES FOR TIMING OF PREHARVEST APPLICATIONS</b>		
<b>CROP(S)</b>	<b>PERCENT GRAIN MOISTURE</b>	<b>VISIBLE SYMPTOMS</b>
WHEAT/BARLEY	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-linoleic 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 colour; pods are mature (yellow to brown in colour); 80%-90% leaf drop (original leaves).

SOYBEANS	Less than 30	Stems are green to brown in colour; pod tissue is dry and brown in appearance; 80%-90% leaf drop.
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### TREE, VINE, AND BERRY CROPS

GLYPHOSATE controls annual and perennial weeds in established vineyards or orchards, in blueberry, cranberry, strawberry and sugar beets, or for site preparation prior to transplanting tree or vine crops. See chart on **WEED CONTROL IN TREE, VINE, AND BERRY CROPS** for rate and time of application information.

This product does not provide residual or pre-emergent weed control. Repeat applications may be necessary to control weeds originating from underground parts of untreated weeds or from seeds. For subsequent weed control, follow a program using residual herbicides or use repeated applications of GLYPHOSATE.

DO NOT APPLY MORE THAN 35 L OF GLYPHOSATE HERBICIDE PER HECTARE PER YEAR. EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF THE HERBICIDE SOLUTION, SPRAY DRIFT OR MIST WITH FOLIAGE OR GREEN BARK OF TRUNK, BRANCHES, SUCKERS, FRUIT, CANES OF BLUEBERRY BUSHES OR OTHER PARTS OF TREES OR VINES. CONTACT OF THIS PRODUCT WITH OTHER THAN MATURE BROWN BARK CAN RESULT IN SERIOUS CROP DAMAGE.

Allow annual and perennial weeds that have been mowed, grazed, or cut, time to regrow to recommended growth stage for treatment.

Applications may be made with boom sprayer, shielded sprayers, hand held and high volume orchard guns, or with wiper, wick, or roller equipment (orchards, vineyards, cranberry and strawberry only).

### TREE PLANTING - Shelterbelts, Nursery Stock, Woody Ornamentals

GLYPHOSATE may be applied to control annual and perennial weeds listed on this label. This may be used for site preparation prior to establishing plantations, or as a post directed spray in established plantations of the following species:

#### Deciduous

Ash - *Fraxinus spp.*  
 Caragana - *Caragana spp.*  
 Cherry - *Prunus spp.*  
 Elm - *Ulmus spp.*  
 Lilac - *Syringa spp.*  
 Maple - *Acer spp.*  
 Mountain ash - *Sorbus americana*  
 Poplar - *Populus spp.*  
 Russian olive - *Elaeagnus spp.*  
 Willow - *Salix spp.*

#### Coniferous

Fir - *Abies spp.*  
 Juniper - *Juniperus spp.*  
 Pine - *Pinus spp.*  
 Spruce - *Picea spp.*  
 Yew - *Taxus spp.*

SPRAY MAY CONTACT MATURE BROWN BARK ONLY.

Avoid contact with non-target plants, foliage, or suckers of established plantations.

NOTE: This product is not recommended for use as an over-the-top broadcast spray in forest tree nurseries or in Christmas tree plantations. Application in such sites should be limited to directed sprays. DO NOT treat Christmas tree plantations in the year of anticipated harvest.

### NONCROPLAND AND INDUSTRIAL USES

When applied as recommended under the conditions described, GLYPHOSATE will control weeds in the noncropland and industrial uses as listed in the **WEED CONTROL IN NONCROPLAND, INDUSTRIAL USES** chart.

## **TURFGRASS**

GLYPHOSATE may be applied to control existing vegetation prior to turfgrass establishment or renovation. **DO NOT DISTURB SOIL OR UNDERGROUND PLANT PARTS BEFORE TREATMENT.** Where existing vegetation is growing under field or unmowed conditions, apply GLYPHOSATE to actively growing weeds at the growth stages given in the charts on **ANNUAL** and **PERENNIAL WEED CONTROL.** Where the vegetation is growing under mowed turfgrass management, apply GLYPHOSATE after omitting at least one regular mowing to allow sufficient growth for good spray interception and translocation into underground plant parts.

Tillage or renovation techniques, such as vertical mowing, coring or slicing, should be delayed for 7 days after application to allow proper translocation into the underground plant parts. Delay establishment of the turfgrass to determine if regrowth from escaped underground plant parts occurs. When repeat treatments are necessary, sufficient weed regrowth must be attained prior to application.

**AVOID ALL CONTACT WITH DESIRABLE VEGETATION IN THE VICINITY OF THE RENOVATION OR ESTABLISHMENT AREA.**

## **TREE INJECTION APPLICATIONS**

See **VEGETATION CONTROLLED** lists for species controlled.

Trees may be controlled if GLYPHOSATE is injected directly into the trunk using suitable equipment that penetrates into the living tissue.

GLYPHOSATE is to be used at a rate of 1 mL (undiluted product) per 10 cm of trunk diameter at chest height. The injections should be spaced evenly around the tree and below any major branches.

Application may be done during periods of active growth and full leaf expansion.

Control of trees greater than 20 cm may not be acceptable. Total control may not be evident for 1-2 years following treatment. This treatment will only provide suppression of big-leaf maple; late fall application will provide optimum suppression of big-leaf maple.

## **CUT STUMP APPLICATIONS**

See **VEGETATION CONTROLLED** lists for species controlled.

Woody vegetation may be controlled by the application of this product to freshly cut stumps to prevent regrowth. Application must be made using low-pressure equipment (i.e., squirt bottle).

Apply GLYPHOSATE immediately to the surface of the freshly cut stump (i.e., within 5 minutes) at a rate of 0.5 mL GLYPHOSATE for every 5 cm of trunk diameter at chest height. Treat only the cambial tissues (outer edge) of the cut surface. Do not treat the central area of the stump, or exposed roots or bark.

This treatment may be made at any time of year, except during heavy sap flow or when freezing temperatures prevent application of GLYPHOSATE. A water soluble dye added to the solution may be used as a treatment indicator. Total control may not be apparent until 1-2 years after treatment.

## **WOODY BRUSH AND TREES (FOLIAR APPLICATIONS)**

Spray coverage should be uniform and complete. Do not spray to the point of run off.

Do not allow spray drift to contact desirable vegetation as severe injury or destruction may occur. For woody brush and trees, early season applications may take 30-45 days for symptoms to develop on the target species. Late season application may be made to species that have some autumn colours provided no major leaf drop has occurred. Control will be observed the following spring.

**EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE OF DESIRABLE TURFGRASSES, TREES, SHRUBS, OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT.**

For woody brush and trees, apply 3 to 6 litres of GLYPHOSATE per hectare. Use ground boom or boomless equipment, or apply as a 1 to 2% solution using hand held high volume equipment. Use the 6 L/ha rate for maple, alder and willow\* species, as well as hard to control perennial weed species. (\*suppression only).

## **INDUSTRIAL SITES, RIGHTS-OF-WAY, RECREATIONAL AND PUBLIC AREAS**

GLYPHOSATE may be applied to control brush, trees, and annual and perennial weeds listed on this label in **industrial** and **rights-of-way areas**, such as:

railways  
highways  
telephone and power rights-of-way, etc.

forest roadsides  
pumping stations

pipelines  
petroleum tank farms

and in **recreational** and **public areas**, such as:

parks, golf courses, schoolyards, airports and other public areas.

NOTE: For all industrial sites, rights-of-way, recreational and public areas, repeat treatment may be necessary to control regeneration or new growth.

EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF SPRAY WITH FOLIAGE OF DESIRABLE TURFGRASS, TREES, SHRUBS, OR OTHER DESIRABLE VEGETATION SINCE SEVERE DAMAGE OR DESTRUCTION MAY RESULT..

**Ground application** for all noncropland uses: For woody brush and trees, apply GLYPHOSATE at 3 to 6 L/ha using ground boom, or boomless, or mist blower equipment. Or, apply as a 1 to 2% solution using hand-held high volume equipment. Use the higher rate for maple, alder and willow\* species, and for hard to control perennial weeds (\*suppression only).

Apply as directed to foliage of actively growing vegetation. Spray coverage should be uniform and complete. Do not spray to the point of runoff, or allow spray drift to contact desirable vegetation as severe injury or destruction may occur.

Mowed or tilled weeds should be allowed to reach optimum growth stage at time of application.

DO NOT APPLY UNDER WIND OR OTHER CONDITIONS THAT ALLOW DRIFT.

#### **AERIAL APPLICATIONS: For industrial rights-of-way only**

##### **Directions for Use**

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. The use of a spotter plane is recommended.

##### **Use Precautions**

###### **Directions for Use:**

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

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

##### **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 Interprovincial Cooperative Ltd. at 1-204-233-3461, 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:

Volume: Apply the recommended rate in a spray volume of 30-100 L/ha.

Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure.

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of GLYPHOSATE accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38412 may prevent corrosion.

For woody brush and trees, apply 3-6 litres of this product per hectare. Use 6 litres per hectare for maple, alder and willow\* species, and for hard to control perennial weed species. Use the recommended rates of this herbicide in 30 to 100 litres of water per hectare. As density of vegetation increases, spray volume should be increased within the allowed range to ensure complete coverage. (\*suppression only)

### **PURPLE LOOSESTRIFE CONTROL**

- DO NOT TREAT PLANTS OVER OPEN WATER. GLYPHOSATE herbicide is not registered for direct application to bodies of water.
- Treat when plants are actively growing at or beyond the bloom stage. If using hand-held equipment, spray-to-wet.
- For wiper applications, see the **WIPER, WICK AND ROLLER EQUIPMENT** section.
- Where feasible, remove flower heads before treatment to ensure prevention of seed set.
- For large (>1.6 ha) monocultures of loosestrife, work from the periphery inward in successive years to allow competing vegetation to invade the treated area.
- A long-term control strategy should include measures to control both established plants and seedlings. Sprayed areas should be monitored to determine the appropriate follow-up management. Early detection and treatment of second and third generation seedlings is important to prevent re-infestation of purple loosestrife. Desirable native plant communities will then have a chance to become re-established.

**WEED CONTROL IN NONCROPLAND, INDUSTRIAL USES**

WEEDS	GROUND APPLICATION			COMMENTS
	BOOM APPLICATION		Hand Held High Volume Application % Solution	
	Rate L/ha	Water Vol. L/ha		
<b>Annual grasses and broad leaves</b>	2.25 - 3.5	50 - 100	1	Actively growing weeds.
<b>Perennial weeds</b>	2.5	50 - 300	1	Actively growing weeds.
Quackgrass	4.75 - 7.0	50 - 300	2	Add 0.5% v/v of a recommended surfactant when using more than 150 L of water (see <b>MINIMUM AND ZERO TILLAGE TANK MIXES</b> ).
Canada thistle (bud stage)	4.75 - 7.0	100 - 300	2	Use higher rate for heavy infestations and for long term control.
Purple loosestrife	6.0	300 - 600	2	See <b>PURPLE LOOSESTRIFE CONTROL</b> section for instructions on application.
Other perennials	7.0 - 12	100 - 300	1 - 2 (or 33% for wiper application)	Summer through fall is optimum.
<b>Brush and trees</b>	3.0 - 6.0	100 - 300	1 - 2	Summer through early fall.
Birch, cherry, poplar, western snowberry, willow				
Maple, raspberry, salmonberry, alder	6.0	100 - 300	2	Late summer through fall. Fall is optimum.
<b>Turfgrass renovation</b> Annual & perennial weeds	2.5 - 12.0	100 - 300	1 - 2	Use higher end of rate range for perennials.

<b>Roadside vegetation (1-2 metres wide along shoulder)</b>	1) 0.75 - 1.0 + 1.25 - 2.5 L DyClear Herbicide <b>or</b> 2) 0.75 - 1.0 + 0.30 L DyClear Herbicide + 1.2 L 2,4-D amine 500	25 - 150	-	Refer to Tank Mix sections on product labels for specific weeds controlled. Refer to chart on <b>ANNUAL WEED CONTROL</b> for rates for specific weeds. For different 2,4-D amine formulations, adjust the rate accordingly. Do not apply to standing water.
<b>Residual control</b> Annual & perennial weeds	2.5 - 12 + 1) 2.5 - 5.6 kg Simazine 80W <b>or</b> 2) 4.0 - 9.0 L Simadex Flowable	200 - 400	-	The simazine part of this tank mix will provide season-long control of most germinating broadleaf weeds and grasses, and may also provide post-emergent control of certain annual weeds. Do not apply to coarse, sandy soil or gravelly soil. One application per year. Use the most restrictive label directions for each product in the mix. For other simazine products registered for this use, use rates equivalent to 2.0-4.5 kg active simazine/ha.

#### WEED CONTROL IN TREE, VINE AND BERRY CROPS

Crop	Rate (L/ha)	Pre-Harvest Interval (days)	Max. App. per year	Weeds Controlled	Comments
Apples Apricot Cherry (sweet/sour) Peaches Pears Plums	2.25 - 12 (directed spray)	30	3	Annual and perennial weeds	Apply as directed spray with no more than 275 kPa pressure.
Apples Grapes	Tank Mix 2.25 - 12 + Simazine 2.0 - 4.5 kg ai/ha	-	1	Annual and perennial weeds	Will provide season-long pre-emergent control. Do not apply to coarse, sandy or gravelly soil. Use the more restrictive label direction for each product in the mix. DO NOT apply to orchards established less than 1 year or vineyards established less than 3 years. Simazine rate is equivalent to 2.25 - 5.0 kg/ha Princep Nine-T; or 4.0 - 9.0 kg/ha Simadex.

Grapes	2.25 - 12 (directed spray)	14	3	Annual and perennial weeds	Remove all sucker growth from the spray zone before spraying, except for the Concord variety of grape. Suckering should be conducted within 2 weeks prior to application. Do not apply to vines that have been established less than 3 years.
Highbush blueberry (cultivated)	2.8 - 5.6 (directed spray)	30	1	Quackgrass	Use as a directed spray, with no more than 275 kPa pressure.
Lowbush blueberry	1 - 2% solution (spot treatment)	Apply in non- bearing year only	1	Wood brush	Apply as directed spray in mid-summer of the vegetative (non-bearing) year. See <b>AGRICULTURAL AND CROPLAND USES</b> section for instructions on spot treatments.
Filberts Hazelnut (established plantations)	2.25 - 3.5 (directed spray)	14	-	Annual weeds	Use as directed spray, with no more than 275 kPa pressure.
Walnut Chestnut Japanese chestnut	2.25 - 12 (directed spray)	-	2	Annual and perennial weeds	Apply late spring and fall, post-harvest but prior to a killing frost. Apply in 200 - 300 L water as a directed spray, using no more than 275 kPa pressure. Apply alternatively as a 2% wiper solution. See <b>APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS</b> section for instructions on wiper applications.
Cranberry	20% Solution (1 L GLYPHOS ATE + 4 L water)	30	1	Annual and perennial weeds	Apply using wick or wiper applicators. See <b>APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS</b> section for instructions on wiper applications.
Strawberry	1 - 2% solution (spot treatment) 33% solution (wiper applicator)	30	1	Emerged perennial weeds	Apply when weeds are at a susceptible growth stage. See <b>AGRICULTURAL AND CROPLAND USES</b> section for instructions on spot treatments. See <b>APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS</b> section for instructions on wiper applications.
Sugar beets	1 - 2% solution (spot treatment)	Treated crop <b>MUST</b> <b>NOT</b> be harvested	1	Dodder species	Apply when dodder is vigorously growing but before flowering. See <b>AGRICULTURAL AND CROPLAND USES</b> section for instructions on spot treatments.

**ANNUAL WEED CONTROL**

<b>Equipment</b>	<b>Weeds Controlled</b>	<b>Growth Stage</b>	<b>Rate L/ha</b>	<b>Water Vol. L/ha</b>	<b>Comments</b>
Boom or boomless	Wild oats, green foxtail, volunteer barley, volunteer wheat, volunteer canola, wild mustard, lady's thumb, stinkweed	Weeds up to 8 cm in height	0.75	50 - 100	For wild oats apply at 1-3 leaf stage. Add 350 mL of a surfactant registered for use such as Agral 90, AgSurf, and Companion. For heavy wild oat infestations use 1.0 L/ha rate.
	All annual grasses listed above plus foxtail barley* (suppression only) All annual broadleaf weeds listed above plus flixweed** and kochia**	Weeds 8 cm to 15 cm	1.0	50 - 100	Add 350 mL of surfactant registered for use as listed above *Apply before initiation of seed head or senescence of the lower leaves. ** Suppression only. Refer to higher rates of this table.
	All annual grasses listed above plus downey brome, giant foxtail and Persian dandelion. All annual broadleaf weeds listed above plus lamb's quarters, redroot pigweed, hempnettle, flixweed, Russian thistle, volunteer flax, common ragweed*, Canada fleabane*, wild buckwheat**, narrow-leaf hawk's beard***	Weeds up to 15 cm in height	1.25 - 1.9	50 - 100	No additional surfactant required. *DO NOT use these rates on plants greater than 8 cm in height. **For 3-4 leaf stage use 1.9 L/ha rate. ***For weeds 8 cm to 15 cm in height use 1.9 L/ha.

	All annual grasses listed above plus crab grass and annual blue grass. All annual broadleaf weeds listed above plus kochia, prickly lettuce, shepherd's purse, annual sow thistle, and narrow-leaf vetch	Weeds up to 15 cm in height	2.25	50 - 100	
	All annual grasses and broadleaf weeds listed above.	Weeds over 15 cm in height	3.5	50 - 100	
Wipers and wicks	Annual weeds	Weeds to be at least 15 cm above desirable vegetation	1	2	This mixture is a 33% solution. Contact point for wiper or wick must be at least 5 cm above desirable vegetation. In severe weed infestations, reduce ground speed to ensure adequate control. See <b>APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS</b> section for instructions on wiper and wick application.
Rollers	Annual weeds	Weeds to be at least 15 cm above desirable vegetation	0.5 - 1.0	10	This mixture is a 5-10% solution. Roller speed 50-150 rpm. See <b>APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS</b> section for instructions on roller application.

**PERENNIAL WEED CONTROL**

<b>Equipment</b>	<b>Weeds Controlled</b>	<b>Growth Stage</b>	<b>Rate L/ha</b>	<b>Water Vol. L/ha</b>	<b>Comments</b>
Boom or boomless	Fall application (after harvest)	3-5 green leaves (approx. 20 cm height)	2.5  2.5 – 7	50 - 300  50 - 300	For season long control the following year. Do not till between harvest and application. Allow 5 days or more after application before tillage. Long Term Control: Reduced control may result if rhizomes have become dormant due to poor sod or land has not been tilled for several years. Treatment after a mild frost is possible if 3 to 4 leaves are still green and actively growing but not after a heavy frost. Straw should be removed or evenly spread to allow regrowth and adequate spray coverage.
	Canada thistle	Bud stage or beyond	4.75 - 7	100 - 300	Allow 5 days after application before tillage. Heavy frost prior to application may decrease control.
	Canada thistle	Rosette stage (summer fallow)	2.5	50 - 100	Ensure proper growth stage by performing last summer fallow tillage between July 5 and August 1st. Allow regrowth for a minimum of 5 weeks to reach rosette stage and a minimum of 15 cm in diameter. Allow 10 days after application before tillage. Treatment after a mild frost is possible if leaves are still green and actively growing but not after heavy damaging frost.
	Other perennial weeds	Early heading or early bud stage (See <b>VEGETATION CONTROLLED</b> section)	7 – 12	100 - 300	Use higher rate for weeds beyond 8 cm in height or in heavy weed infestation. Allow 7 days after application before tillage. GLYPHOSATE rate is equivalent to 70 to 120 mL/100 m <sup>2</sup>
	Field bindweed	Full bloom or beyond	7 – 12	100 - 300	Allow 7 days or more after application before tillage.
	Common milkweed	Bud to full bloom for most shoots	12	100 - 300	Spot treatment rate is 120 mL per 5 L water/100 m <sup>2</sup> and spray to wet not runoff. Reduced results may occur if sprayed after full bloom. Repeat treatment may be required. Allow 7 days or more after application before tillage.
	Quackgrass - spring application (no fall tillage)	3-4 green leaves (approx. 20 cm height)	2.5	50 - 300	Season long control. At higher water volumes use approved surfactant at 0.5% v/v (0.5 L per 100 L water) Allow 3 days after application before tillage.

	Quackgrass - spring application (fall-tilled land)	4-5 green leaves (approx. 20 cm height)	2.5	50 - 100	Season long control. Apply in spring prior to seeding. Growth stage usually reached 1 to 4 weeks later on land that has been fall-tilled. Reduced control may result on land tilled deeper than 15 cm.
	Woody brush and trees	Actively growing from June through August	3 – 6	100 - 300	Use higher rate for maple, alder, <i>Rubus</i> species and willow*. Spray to wet.
High volume or knapsack	Woody brush and trees	Actively growing from June through August	1 – 2.0	100	This mixture is a 1 to 2% solution. Use higher rate for maple, alder, <i>Rubus</i> species and willow*. Spray to wet. See <b>APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS</b> section for instructions on high volume or knapsack applications.
Wipers and wicks	Perennial weeds	Weeds to be at least 15 cm above desirable vegetation	1	2	See <b>APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS</b> section for instructions on wiper and wick applications.
Rollers	Annual and perennial weeds	Weeds to be at least 15 cm above desirable vegetation	0.5 - 1.0	10	This mixture is a 5-10% solution. See <b>APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS</b> section for instructions on roller application. This treatment will only <b>suppress</b> perennial weeds contacted. Roller speed 50-150 rpm.
Tree injection	Trees*	During periods of active growth and full leaf expansion except during periods of heavy sap flow.	1 mL per 10 cm of trunk diameter at chest height.	None	Suitable equipment must be used to penetrate to living tissue. Space applications evenly around the circumference of the trunk below major branches. Control of trees with trunk diameters greater than 20 cm may not be acceptable. See <b>APPLICATION EQUIPMENT AND MIXING INSTRUCTIONS</b> section for instructions on <b>TREE INJECTION APPLICATIONS</b> .

\* Suppression only for willow.



[Container/stay-behind label]

GROUP

9

HERBICIDE

# GLYPHOSATE

HERBICIDE – AGRICULTURAL AND INDUSTRIAL

Soluble Concentrate

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

**GUARANTEE:** GLYPHOSATE 360 g/L (acid equivalent) present as the isopropylamine salt

REGISTRATION NO. 26846 PEST CONTROL PRODUCTS ACT

**WARNING: EYE IRRITANT**

**EMERGENCY TELEPHONE NUMBER**

IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT, 1-800-228-5635, EXT 153.

**NET CONTENTS: 10 L**

Interprovincial Cooperative Ltd.  
P.O. Box 1050  
Saskatoon, Saskatchewan  
S7K 3M9

RC000-1005

**READ ENTIRE LABEL CAREFULLY BEFORE USE**

GLYPHOSATE is a non-selective, non-residual herbicide containing 360 g/L GLYPHOSATE as isopropylamine salt, formulated as a water soluble liquid. It is used for the control of most herbaceous weeds in agricultural and industrial sites. The product is absorbed through the foliage and translocated throughout the plant down to the root system. Visible symptoms such as gradual wilting and yellowing are usually obvious within 2 to 4 days of application to annual weeds, but may not be apparent for 7 to 10 days on perennial weeds.

#### **GENERAL PRECAUTIONS**

- KEEP OUT OF REACH OF CHILDREN
- CAUSES EYE IRRITATION
- HARMFUL IF SWALLOWED
- AVOID CONTACT WITH EYES AND SKIN
- WASH HANDS AND EXPOSED SKIN BEFORE EATING, DRINKING, OR SMOKING, AND AFTER WORK

#### **FOR GOOD AGRICULTURAL PRACTICE:**

- DURING MIXING, LOADING, CLEANUP, AND REPAIR PROCEDURES WEAR GLOVES, COVERALLS, AND EYE PROTECTION
- WASH SPLASHES FROM SKIN AND EYES IMMEDIATELY

#### **FIRST AID**

**IN CASE OF CONTACT WITH 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 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 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.

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

**TOXICOLOGY INFORMATION:** Treat symptomatically.

#### **ENVIRONMENTAL HAZARDS**

Avoid direct application to any body of water populated with fish or used for domestic purposes. Do not use in areas where adverse impact on domestic water or aquatic species is likely. Do not contaminate water by disposal of waste or cleaning of equipment. Avoid all drift or contact with vegetation for which treatment is not intended as damage or destruction may occur.

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

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fibreglass, plastic, or plastic-lined 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 the 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**

KEEP AWAY FROM FOOD, DRINK, AND ANIMAL FEEDSTUFFS.  
KEEP ONLY IN ORIGINAL CONTAINER, TIGHTLY CLOSED.

## **DISPOSAL**

### **RECYCLABLE CONTAINERS:**

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

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

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

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

### **RETURNABLE CONTAINERS:**

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

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 spill, and for clean-up of spills.

### **RETURNABLE-REFILLABLE CONTAINERS:**

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose. 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 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. The user assumes the risk to persons or property that arises from any such use of this product.

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This label transcript service is offered by the Pest Management Regulatory Agency to provide efficient searching for label information. This service and this information do not replace the official hard-copy label. The PMRA does not provide any guarantee or assurance that the information obtained through this service is accurate, current or correct, and is therefore not liable for any loss resulting, directly or indirectly, from reliance upon this service.