23-JUN-2004

07-JUN-2007 Notification - Change in Registrant Address.

Roundup Ready Crop Safe [symbol]

GROUP 9	HERBICIDE
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## **DEPUTY®** Liquid Herbicide

# AGRICULTURAL and INDUSTRIAL



# WATER SOLUBLE HERBICIDE FOR NON-SELECTIVE WEED CONTROL

## **REGISTRATION NO. 27772 PEST CONTROL PRODUCTS ACT.**

**GUARANTEE:** Glyphosate, 356 grams acid equivalent per litre present as isopropylamine salt.

# READ THE LABEL AND ATTACHED BROCHURE BEFORE USING.

READ NOTICE BEFORE BUYING OR USING. IF NOTICE TERMS ARE NOT ACCEPTABLE, RETURN AT ONCE UNOPENED.

MONSANTO CANADA, INC. 67 Scurfield Blvd. Winnipeg, Manitoba R3Y 1G4

900 - One Research Road Winnipeg, MB R3T 6E3

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Notification Change

2003

# PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN MAY CAUSE EYE IRRITATION. HARMFUL IF SWALLOWED. Avoid contact with eyes or prolonged contact with skin. For good hygiene practice, wear a long-sleeved shirt, long pants, and chemical resistant gloves during mixing, loading, cleanup or repair activities.

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., contact 1-866-375-4648 or www.cropro.org/.

# FIRST AID

**IF IN EYES**, **IMMEDIATELY** flush with plenty of water for at least 15 minutes. Call a physician or contact a poison control center **IMMEDIATELY**.

**IF ON SKIN**, **IMMEDIATELY** flush with plenty of water. Remove contaminated clothing. Wash clothing before reuse.

**IF SWALLOWED**, this product will cause gastro-intestinal irritation. **IMMEDIATELY** dilute by swallowing water or milk. Call a physician or contact a poison control center **IMMEDIATELY**.

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 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 to or contact with other 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 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.

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

Accidents/Spills/Medical Emergencies.	(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.

# STORAGE

Avoid contamination of seed, feed, and foodstuffs. Soak up small amounts of spill with absorbent clays.

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

# 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.

# **RETURNABLE CONTAINERS:**

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

# **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 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 the clean-up of spills.

**NOTICE TO BUYER**--Seller's guarantee shall be limited to the terms set out on the label and, subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

**NOTICE TO USER--**This control product is to be used only in accordance with the directions on this label. It is an offense under the Pest Control Products Act to use a control product under unsafe conditions.

Deputy is a trademark of Monsanto Technology LLC. Monsanto Canada - Licensee

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GROUP 9 HERBICIDE

**DEPUTY** Liquid Herbicide

AGRICULTURAL and INDUSTRIAL



WATER SOLUBLE HERBICIDE FOR NON-SELECTIVE WEED CONTROL

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#### **DEPUTY LIQUID HERBICIDE**

#### **1.0 PRODUCT DESCRIPTION**

#### Water soluble herbicide for non-selective weed control in CROPLAND SYSTEMS.

#### **CROPLAND USES INCLUDE:**

In cropping systems before planting of all crops; in minimum tillage systems; post emergent in glyphosate tolerant corn, soybean and canola i.e. varieties with the Roundup Ready<sup>™</sup> gene; preharvest applications in wheat, barley, oats, canola (rapeseed), flax (including low linolenic acid varieties), peas, lentils, dry beans, soybeans and forages; in pasture renovation; in forage, legume and grass establishments; in tree crops including apple, pear, cherry, plum, peach, apricot, filbert, hazelnut, walnut, chestnut, Japanese Heartnut; in grapes, cranberries, blueberries and strawberry; in sugar beets; in asparagus; in North American ginseng; in tree plantings; and grasses for seed production.

Not for relabelling or repackaging.

Roundup Ready is a registered trademark, Deputy, Monsanto and the Vine symbol are trademarks of Monsanto Technology LLC., Monsanto Canada Inc. - Licensee

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#### **2.0 EMERGENCY NUMBERS**

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

**Read NOTICE** before buying or using. If notice terms are not acceptable, return at once unopened.

#### **2.1 INFORMATION**

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.

#### MAY CAUSE EYE IRRITATION. HARMFUL IF SWALLOWED.

Avoid contact with eyes or prolonged contact with skin.

For good hygiene practice, wear a long-sleeved shirt, long pants and chemical resistant gloves during mixing, loading, cleanup or repair activities.

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#### 3.1 FIRST AID

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#### **3.2 TOXICOLOGICAL INFORMATION**

Treat symptomatically.

#### 3.3 ENVIRONMENTAL HAZARDS

Avoid direct applications to any body of water. 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 to or contact with other vegetation for which treatment is not intended as damage or destruction may occur.

#### 3.4 PHYSICAL OR CHEMICAL HAZARDS

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**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. Soak up small amounts of spill with absorbent clays.

# 3.6 DISPOSAL

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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

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**NOTICE TO USER** -- This control product is to be used only in accordance with the directions on this label. It is an offense under the *Pest Control Products Act* to use a control product under unsafe

conditions.

#### **DIRECTIONS FOR USE**

#### **4.0 GENERAL INFORMATION**

Do not apply this product using aerial spray equipment except under conditions as specified within this label.

This product is highly toxic to aquatic and terrestrial plants. Overspray or drift to sensitive habitats should be avoided. A buffer zone of 15 metres is required between the downwind point of direct application and the closest edge of sensitive terrestrial habitats included forested areas, shelter belts, woodlots, hedgerows, pastures, rangelands, and shrublands. A buffer zone of 15 metres is required between the downwind point of direct application and the closest edge of sensitive terrestrial habitats included forested areas, shelter belts, woodlots, hedgerows, pastures, rangelands, and shrublands. A buffer zone of 15 metres is required between the downwind point of direct application and the closest edge of sensitive aquatic habitats including sloughs, coulees, ponds, prairie potholes, lakes, rivers, streams, reservoirs and wetlands, and wildlife habitat at the edge of these bodies of water. Do not contaminate these habitats when cleaning and rinsing spray equipment or containers.

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixtures.

Deputy Liquid Herbicide, a water soluble liquid, mixes readily with water for application as a foliage spray for the control or destruction 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.

This herbicide moves through the plant from the point of foliage contact to and 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 activity of this product and delay visual 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.

Delay application until vegetation has emerged to the stages described for control of such vegetation under the annual and perennial weed control sections (7.0 and 8.0) 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 treatment is made at late growth stages approaching maturity.

Always use the higher rate of this product per hectare within the recommended range when weed growth is heavy or dense, or weeds are growing in an undisturbed (non-cultivated) area.

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.

This product does not provide residual weed control. For subsequent residual weed control follow a label approved herbicide program. Read and carefully observe the 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.

Do not mix with any surfactant, pesticide, herbicide oils or any other material other than water unless specified in this booklet. 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, Deputy Liquid Herbicide is a Group 9 herbicide. Any weed population may contain or develop plants naturally resistant to Deputy Liquid 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 Deputy Liquid 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 <u>www.farmcentral.com</u>.

#### **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. Do not apply when winds are gusty or in excess of 8 kilometres per hour or when other 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 (mist) 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 MIXING AND APPLICATION EQUIPMENT INFORMATION**

#### MIXING

For ground or industrial type sprayers, fill the spray tank with one-half the required amount of water. Add the proper amount of herbicide see "**Weed Control**" sections of this booklet (7, 8) and mix well before adding the remaining portion of water. 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 this product 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 (7,8) for rates to control specific weeds.

**For control of annual weeds listed on this booklet using conventional boom equipment--**Apply this product in 50 to 100 litres of clean water per hectare as a broadcast spray, except as otherwise stated on this label using no more than 275 kPa pressure. See "**Weed Control**" sections of this booklet (7,8) 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 "Weed 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 1percent solution of this product in water (1 litre of this product in 100 litres of water) and apply to foliage of vegetation to be controlled. For best results, use a 2 percent solution (2 litres of this product in 100 litres of water) on harder to control perennials such as field bindweed, hemp dog-bane, milkweed and Canada thistle.

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 soy and dry beans, orchards, vineyards, cranberries, strawberries and non-crop areas. For information regarding use of this product with selective equipment, refer to "Selective Equipment" section of this label (9.12).

#### 6.0 WEEDS CONTROLLED

This product controls many annual and 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 the "Annual Weed Control" and "Perennial Weed Control" sections of this label (7.1, 8.1, respectively). The following is a partial list of weeds controlled:

#### 6.1 ANNUAL WEEDS

#### **Annual Grasses**

**Barnyard Grass** Echinochloa crusgalli Blue Grass (annual) Poa annua **Crab Grass (large)** Digitaria sanguinalis **Crab Grass (smooth)** Digitaria ischaemum **Downy Brome** Bromus tectorum **Fall Panicum** Panicum dichotomiflorum **Giant Foxtail** Setaria faberii **Green Foxtail** Setaria viridis **Persian Darnel** Lolium persicum **Volunteer Barley** Hordeum spp. **Volunteer Corn** Zea Mays **Volunteer Wheat** Triticum spp. Wild Oats Avena fatua Wild Proso Millet Panicum miliaceum **Yellow Foxtail** Setaria glauca

#### <u>Other</u>

Dodder

Cuscuta spp.

#### **Annual Broadleaf Weeds**

Chickweed Stellaria media Cleavers *Galium aparine* Cocklebur Xanthium strumarium **Corn Spurry** Spergula arvensis **Cow Cockle** Saponaria vaccaria **Eastern Black Flowering Nightshade** Solanum ptycanthum Fleabane (Canada) Erigeron canadensis Flixweed Descurania sophia **Green Smartweed** Polygonum scabrum Hempnettle Galeopsis tetrahit Kochia Kochia scoparia Lady's-Thumb Polygonum persicaria Lamb's-Quarters (common) Chenopodium album Narrow-leaved Hawk's Beard Crepis tectorum **Narrow-leaved Vetch** Vicia angustifolia Night-flowering Catchfly Silene noctiflora Pennsylvania Smartweed Polygonum pensylvanicum **Prickly Lettuce** Lactuca scariola **Ragweed** (common) Ambrosia artemisiifolia

**Redroot Pigweed** Amaranthus retroflexus **Round-leaved Mallow** Malva pusilla **Russian Thistle** Salsola pestifer **Shepherd's Purse** Capsella bursa-pastoris **Smooth Pigweed** Amaranthus hybridus Sowthistle (annual) Sonchus oleraceus Stinkweed Thlaspi arvense Storksbill Erodium cicutarium Velvetleaf Abutilon theofrasti **Volunteer Canola** Brassica spp **Volunteer Flax** Linaria spp Wild Buckwheat *Polygonum convolvulus* Wild Mustard Sinapsis arvensis Wild Tomato Solanum triflorum

# 6.2 PERENNIAL WEEDS

#### 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 Wire-Stemmed Muhly Muhlenbergia frondosa Yellow Nutsedge Cyperus esculentus

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#### **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 Ivv** Rhus radicans **Purple Loosestrife** Lythrum salicaria Sow Thistle (perennial) Sonchus arvensis Thistle (Canada) Cirsium arvense **Toad Flax** Linaria vulgaris Wormwood (Absinth) Artemisia absinthium

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 Lornica 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

6.3 Woody Brush and Trees

#### **CROPLAND 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.

#### 7.0 ANNUAL WEED CONTROL

The following tables provide rates and specific application instructions for control of the annual weeds listed.

RATE (L/ha)	GROWTH STAGE	WEEDS CONTROLLED	COMMENTS (Apply in 50 - 100 L/ha water)
0.75	weeds up to 8 cm in height	<ul> <li>wild oats, green foxtail, volunteer barley, volunteer</li> <li>wheat</li> <li>non-glyphosate tolerant</li> <li>volunteer canola (rapeseed),</li> <li>wild mustard, lady's-thumb,</li> <li>stinkweed</li> </ul>	for wild oats apply at 1 - 3 leaf stage add 350 mL of a surfactant registered for use such as Agral®90, Ag Surf®, or Companion <sup>™</sup> . for heavy wild oat infestations use 1.0 L/ha rate.
1.0	weeds 8 cm to 15 cm in height	all annual grasses listed above all annual broad leaved weeds listed above plus flixweed* and kochia*	<ul> <li>add 350 mL of surfactant registered for use as listed above.</li> <li>* suppression only. Refer to higher rates of this table or tank mix table (section 7.2) for control options.</li> </ul>
1.25-1.9	weeds up to 15 cm in height	all annual grasses listed above plus downy brome, giant foxtail, and persian darnel all annual broadleaved weeds listed above plus cleavers, lamb's quarters, redroot pigweed, hempnettle, flixweed, russian thistle, volunteer	no surfactant required for tankmix weed control options see section 7.2 * DO NOT use these rates on plants greater than 8 cm in height ** for 3 - 4 leaf stage use 1.9 L/ha rate

# 7.1 ANNUAL WEED CONTROL WITH DEPUTY LIQUID HERBICIDE

RATE	GROWTH	WEEDS CONTROLLED	COMMENTS
(L/ha)	STAGE		(Apply in 50 - 100 L/ha water)
		flax, common ragweed*, canada fleabane*, wild buckwheat**, narrow- leaved hawk's beard***,	*** for weeds 8 cm to 15 cm in height use 1.9 L/ha rate
2.25	weeds up to 15 cm in height	all annual grasses listed above plus crab grass and annual blue grass. all annual broadleaved weeds listed above plus kochia, prickly lettuce, shepherd's purse,annual sow thistle, and narrow-leaved vetch	for additional annual broadleaved weed control options, refer to tank mix table (section 7.2).
3.5	weeds over	all annual grasses and	for additional annual broadleaved
	15 cm in	broadleaved weeds listed	weed control options refer to tank
	height	above	mix table (section 7.2).

Agral® is a registered trademark of Syngenta Limited, England. Ag Surf® is a registered trademark of Interprovincial Co-operatives Ltd. Companion© is a trademark of Dow AgroSciences LLC.

**NOTE:** For spot treatment, 0.75 - 3.5 L/ha is approximately equivalent to 8 - 35 mL/100  $m^2$ , respectively.

# 7.2 ANNUAL WEED CONTROL WITH DEPUTY LIQUID HERBICIDE TANK MIXTURES

TANK MIXTURES	RATE (L/ha)	WEEDS CONTROLLED ♦	COMMENTS (Apply in 50-100 L/ha water; add 350 mL/ha of surfactant – see list in section 7.3)
Deputy Liquid Herbicide + Banvel® Herbicide	0.75 – 1.0 + 0.29	Volunteer cereals, wild oats, green foxtail Non-glyphosate tolerant volunteer canola (rapeseed), wild mustard, flixweed*, lamb's- quarters, lady's-thumb, stinkweed, kochia, Russian thistle, cow cockle, redroot pigweed**, wild	This tank mix is registered for <b>summerfallow use only</b> . Weeds should be less than 15 cm tall and actively growing for best results. Use higher rate if weeds are beyond 8 cm in height. * Deputy Liquid Herbicide applied at 1.0 L/ha rate only. ** Suppression only. See other
Deputy Liquid Herbicide + Pardner®	0.75 – 1.0 + 1.25	buckwheat** Volunteer cereals, green foxtail, volunteer canola (rapeseed), wild mustard, lady's-thumb, stinkweed, wild buckwheat* Redroot pigweed**, kochia**, wild oats**	<ul> <li>tank mixtures for control options.</li> <li>This tank mix is registered only for use in summerfallow, and prior to wheat, oats and barley in minimum tillage systems.</li> <li>Weeds should be less than 15 cm tall and actively growing for best results.</li> <li>Use higher rate if weeds are beyond 8 cm in height.</li> <li>* Use Deputy Liquid Herbicide at 1.0 L/ha rate only for wild buckwheat control.</li> <li>** 1.0 L/ha rate, suppression only. See other tank mixtures for control options.</li> </ul>
Deputy Liquid Herbicide +	1.25 – 1.9	Volunteer cereals, wild oats, green foxtail, downy brome, giant foxtail, and Persian darnel.	Weeds should be less than 15 cm tall and actively growing for best results. Use higher rate if weeds are

# FOR SUMMERFALLOW & MINIMUM TILLAGE SYSTEMS

TANK	RATE	WEEDS	COMMENTS
MIXTURES	(L/ha)	<b>CONTROLLED</b> ♦	(Apply in 50-100 L/ha water; add 350 mL/ha of surfactant – see list in section 7.3)
	+	Volunteer canola,	beyond 8 cm in height.
2,4-D##	$0.6 - 0.9^4$	(rapeseed) (non-Roundup Ready), wild mustard,	No surfactant required.
		flixweed, redroot	* DO NOT use these rotes on
	or 1.2 – 1.5 <sup>5</sup>	pigweed, lady's-thumb, stinkweed, kochia, lamb's-quarters,	* DO NOT use these rates on plants greater than 8 cm in height.
		hempnettle, Russian thistle, volunteer flax, common ragweed*,	** For 3-4 leaf stage use 1.9 L/ha rate.
		Canada fleabane, wild buckwheat**, narrow-	*** For weeds 8 cm to 15 cm in height use 1.9 L/ha rate.
		leaved hawk's beard*** Volunteer Roundup Ready	<sup>4</sup> 2,4-D at 0.6 – 0.9 L/ha (280 – 420 g ai/ha).
		canola (1-4 leaf stage) <sup>4</sup> , bluebur <sup>4</sup> , burdock <sup>4</sup> , cocklebur <sup>4</sup> , common	<sup>5</sup> 2,4-D at 1.2 – 1.5 L/ha (560 – 700 g ai/ha).
		plantain <sup>4</sup> , daisy fleabane <sup>4</sup> , false flax <sup>4</sup> , false ragweed <sup>4</sup> ,	Use this tank mix prior to seeding
		goat's beard <sup>4</sup> , mustards <sup>4</sup> (except dog and tansy), prickly lettuce <sup>4</sup> ,	or after seeding but before crop emergence in <b>wheat</b> , <b>winter</b> <b>wheat</b> , <b>barley and rye</b> .
		ragweeds <sup>4</sup> , Russian pigweed <sup>4</sup> , shepherd's	wheat, barrey and fyc.
		purse <sup>4</sup> , stinging nettle <sup>4</sup> , sweet clover <sup>4</sup> , thyme- leaved spurge <sup>4</sup> , wild	
		radish <sup>4</sup> , wild sunflower <sup>4</sup>	
		Volunteer Roundup Ready canola (4-6 leaf stage) <sup>5</sup> ,	
		annual sow thistle <sup>5</sup> , common chickweed <sup>5</sup> , common purslane <sup>5</sup> , dog	
		and tansy mustard <sup>5</sup> , oak- leaved goosefoot <sup>5</sup> ,	
		groundsel <sup>5</sup> , hairy galinsoga <sup>5</sup> , hawkweed <sup>5</sup> , heal-all <sup>5</sup> , knotweed <sup>5</sup> ,	
		peppergrass <sup>5</sup> , pineapple weed <sup>5</sup> , prostrate pigweed <sup>5</sup> ,	

TANK MIXTURES	RATE (L/ha)	WEEDS CONTROLLED ♦	COMMENTS (Apply in 50-100 L/ha water; add 350 mL/ha of surfactant – see list in section 7.3)
		purslane <sup>5</sup> , sheep sorrel <sup>5</sup> , smartweed <sup>5</sup> , tumble pigweed <sup>5</sup> , velvetleaf <sup>5</sup> , volunteer canola <sup>5</sup>	
Deputy Liquid Herbicide +	0.75 - 1.0 + 1.2	Volunteer cereals, wild oats* and green foxtail* Volunteer canola (rapeseed), wild mustard, flixweed, redroot	This tank mix is registered for summerfallow use only. Weeds should be less than 15 cm tall and actively growing for best results. Use higher rate if weeds are
2,4-D#	1.2	pigweed, lady's-thumb, stinkweed, kochia Lamb's-quarters**, Russian thistle**	<ul> <li>beyond 8 cm in height.</li> <li>* Use Deputy Liquid Herbicide at 1.0 L/ha rate only for wild oat and green foxtail control.</li> <li>** Suppression only. See other</li> </ul>
Deputy Liquid Herbicide	1.25 – 1.9	Volunteer cereals, wild oats, green foxtail, downy brome, giant foxtail, and Persian darnel.	tank mixtures for control options. Weeds should be less than 15 cm tall and actively growing for best results.
+ MCPA### 500 g/L	+ 0.5 -	Volunteer canola (rapeseed) (non-Roundup Ready), wild mustard,	Use higher rate if weeds are beyond 8 cm in height. No surfactant required.
formulation, if another formulation is used,	0.7 <sup>1</sup> OR 0.5 –	flixweed, redroot pigweed, lady's thumb, stinkweed, kochia, lamb's quarters, hempnettle,	* DO NOT use these rates on plants greater than 8 cm in height.
adjust rate accordingly	$1.0^2$	Russian thistle, volunteer flax, common ragweed*, Canada fleabane, wild buckwheat**, narrow- leaved hawk's beard***	<ul> <li>** For 3-4 leaf stage use 1.9 L/ha rate.</li> <li>*** For weeds 8 cm to 15 cm in height use 1.9 L/ha rate.</li> </ul>
		Volunteer Roundup Ready canola (1-4 leaf stage) <sup>1,2</sup> , bluebur <sup>3</sup> , burdock <sup>3</sup> (before 4 leaf stage), false flax <sup>3</sup> , flixweed <sup>3</sup> , lamb's	<ul> <li><sup>1</sup> MCPA amine at 0.5 – 0.7 L/ha (250-350 g ai/ha) prior to peas.</li> <li><sup>2</sup> MCPA at 0.5 – 1.0 L/ha (250-500 g ai/ha) prior to wheat,</li> </ul>
		quarters <sup>3</sup> , mustards <sup>3</sup>	barley, oats, corn (field and

TANK MIXTURES	RATE (L/ha)	WEEDS CONTROLLED ♦	COMMENTS (Apply in 50-100 L/ha water; add 350 mL/ha of surfactant – see list in section 7.3)
		(except dog and tansy), prickly lettuce <sup>3</sup> , ragweeds <sup>3</sup> , redroot pigweed <sup>3</sup> , Russian pigweed <sup>3</sup> , shepherd's purse <sup>3</sup> , stinkweed (field pennycress) <sup>3</sup> , vetch <sup>3</sup> , wild radish <sup>3</sup> , wild sunflower <sup>3</sup>	<ul> <li>sweet)###, rye and flax.</li> <li><sup>3</sup> MCPA at 0.7 – 1.0 L/ha (350 – 500 g ai/ha) only.</li> <li>Use this tank mix prior to seeding in wheat, barley, rye, oats, corn (field and sweet)###, flax, and field peas###.</li> </ul>
Deputy Liquid Herbicide	1.25 – 1.9	Volunteer cereals, wild oats, green foxtail, downy brome, giant foxtail and Persian darnel.	Weeds should be less than 15 cm tall and actively growing for best results.
+ Buctril M Herbicide	+ 0.5 - 1.0 <sup>1</sup>	Volunteer canola (rapeseed) (non-Roundup Ready), wild mustard, flixweed, redroot pigweed, lady's-thumb, stinkweed, kochia, lamb's-quarters, hempnettle, Russian thistle, volunteer flax, common ragweed*, Canada fleabane, wild buckwheat**, narrow- leaved hawk's beard*** Volunteer Roundup Ready Canola (1-4 leaf stage) <sup>1,2</sup> Seedlings up to the 4-leaf stage <sup>2</sup> : green smartweed, pale smartweed, lady's- thumb, cow cockle, redroot pigweed, flixweed, bluebur, shepherd's purse, kochia <sup>3</sup> , Russian thistle <sup>3</sup> , scentless chamomile <sup>4</sup> , volunteer	Use higher rate if weeds are beyond 8 cm in height. No 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 rate. <sup>1</sup> Buctril M at 0.5 – 1.0 L/ha (280- 560 g ai/ha) for all crops listed. <sup>2</sup> Buctril M at 1.0 L/ha (560 g ai/ha only). <sup>3</sup> Spray before plants are 5 cm high. <sup>4</sup> Spring annuals only. <sup>5</sup> Spray before plants are 8 cm high.

TANK MIXTURES	RATE (L/ha)	WEEDS CONTROLLED	COMMENTS (Apply in 50-100 L/ha water; add 350 mL/ha of surfactant – see list in section 7.3)
		catchfly, cocklebur, velvetleaf <sup>5</sup> , ball mustard, American nightshade Seedlings up to the 6-leaf stage <sup>2</sup> : wild tomato Seedlings up to the 8-leaf stage <sup>2</sup> : wild buckwheat, tartary buckwheat, common buckwheat, stinkweed, wild mustard, wormseed mustard, lamb's-quarters, common ragweed, common groundsel Perennials (top growth) <sup>2</sup> : Canada thistle, perennial sow thistle	Use this tank mix prior to seeding in wheat, barley, rye, oats, corn, flax, canary seed and seedling grasses (including brome grass, crested wheatgrass, intermediate wheat grass, slender wheatgrass, tall wheatgrass, Russian wild rye, Timothy, orchard grass, creeping red fescue, meadow fescue, meadow foxtail, seedling tall fescue, seedling meadow bromegrass, seedling streambank wheatgrass and reed canary grass).
Deputy Liquid Herbicide + MCPA amine (500 g/L formulation; if another formulation is used, adjust rate accordingly)	1.25 – 1.9 + 0.5 – 0.7	Volunteer cereals, wild oats, green foxtail, downy brome, giant foxtail, and Persian darnel. Volunteer canola (rapeseed) (non-Roundup Ready), wild mustard, flixweed, redroot pigweed, lady's-thumb, stinkweed, kochia, lamb's-quarters, hempnettle, Russian thistle, volunteer flax, common ragweed*, Canada fleabane, wild buckwheat**, narrow- leaved hawk's beard*** Volunteer Roundup Ready canola (1-4 leaf stage) <sup>3</sup> ,	<ul> <li>Weeds should be less than 15 cm tall and actively growing for best results.</li> <li>Use higher rate if weeds are beyond 8 cm in height.</li> <li>No surfactant required.</li> <li>* DO NOT use these rates on plants greater than 8 cm in height.</li> <li>** For 3-4 leaf stage use 1.9 L/ha rate.</li> <li>*** For weeds 8 cm to 15 cm in height use 1.9 L/ha rate.</li> <li><sup>3</sup> MCPA amine at 0.5 – 0.7 L/ha (250 – 350 g ai/ha) prior to lentils and chickpeas.</li> </ul>

TANK MIXTURES	RATE (L/ha)	WEEDS CONTROLLED ♦	COMMENTS (Apply in 50-100 L/ha water; add 350 mL/ha of surfactant – see list in section 7.3)
		bluebur <sup>4</sup> , burdock <sup>4</sup> (before 4 leaf stage), false flax <sup>4</sup> , flixweed <sup>4</sup> , lamb's- quarters <sup>4</sup> , mustards <sup>4</sup> (except dog and tansy), prickly lettuce <sup>4</sup> , ragweeds <sup>4</sup> , redroot pigweed <sup>4</sup> , Russian pigweed <sup>4</sup> , shepherd's purse <sup>4</sup> , stinkweed <sup>4</sup> (field pennycress), vetch <sup>4</sup> , wild radish <sup>4</sup> , wild sunflower <sup>4</sup>	<sup>4</sup> MCPA amine at 0.7 L/ha (350 g ai/ha) only. Use this tank mix prior to seeding in <b>lentil and chickpea.</b>

♦ For foxtail barley, refer to "**Perennial Weed Control**" table (section 8.1).

# 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.

### Use only amine formulations of MCPA prior to seeding in corn and field peas.

Banvel is a registered trademark of BASF Corporation. Pardner is a registered trademark of Aventis CropScience SA. Buctril is a registered trademark of Aventis CropScience SA.

# 7.3 SURFACTANT INFORMATION

# NOTE:

**Addition of Surfactant** - All Deputy Liquid Herbicide tank mixtures for annual weed control require the addition of a surfactant registered for use such as Agral 90, Ag Surf, or Companion. Surfactant should be added at a rate of 350 mL per hectare, in 50-100 L of clean water.

# 7.4 ADDITIONAL IMPORTANT INFORMATION FOR ANNUAL WEED CONTROL

Deputy Liquid Herbicide, applied by itself, will not control volunteers from crops containing the Roundup Ready Gene.

Allow at least 1 day after treatment before tillage

Annual weeds generally will continue to germinate from seed throughout the growing season. Repeat treatments may be necessary to control later germinating weeds, in some situations.

For additional information and precautions, refer to the "**General Information**" and "**Mixing and Application**" sections of this label (4.0 and 5.0, respectively).

# 7.5 WEED CONTROL IN GLYPHOSATE TOLERANT CANOLA (I.E. VARIETIES WITH THE ROUNDUP READY GENE)

### WARNING: APPLY DEPUTY LIQUID HERBICIDE ON GLYPHOSATE TOLERANT CANOLA VARIETIES ONLY I.E VARIETIES WITH THE ROUNDUP READY GENE.

### NOTE: ALWAYS USE PEDIGREED (I.E. CERTIFIED) GLYPHOSATE TOLERANT CANOLA SEED. CANOLA WHICH IS NOT DESIGNATED AS GLYPHOSATE TOLERANT WILL BE DAMAGED OR DESTROYED BY THIS TREATMENT.

For additional information and precautions refer to the "General Information" and "Mixing and Application" sections of the Deputy Liquid Herbicide label (4.0 and 5.0, respectively).

Apply Deputy Liquid Herbicide in glyphosate tolerant canola only as directed in the following weed control table.

Some short-term, visual yellowing may occur when Deputy Liquid Herbicide is applied at the late application 4 to 6 leaf stage of the crop. This effect is temporary and will not influence crop growth, maturity or yield.

#### DO NOT APPLY BY AIR

The following table describes the rate and specific application instructions for control of annual and perennial weeds in glyphosate tolerant canola varieties.

Rate	Growth	Weeds	Comments
(L/ha)	Stage of Crop	Controlled	(Apply in 50 - 100 L/ha water)
0.825 - 1.875	0 to 6 leaf	Annual Grasses wild oats, green foxtail, volunteer barley, volunteer wheat, barnyard grass	Repeat applications may be required if a second flush of weeds germinates prior to canopy closure.
		Annual Broadleaves stinkweed, redroot pigweed, wild mustard, Russian thistle,	Ensure the crop has not advanced beyond the recommended growth stage.
		lambs-quarters, non-glyphosate tolerant volunteer canola (rapeseed), hempnettle, ladys	* Use the 1.25 L/ha rate for control of these weeds at all crop growth stages. The lower rate can

#### WEED CONTROL IN CANOLA WITH THE ROUNDUP READY GENE

Rate	Growth Stage of	Weeds Controlled	Comments (Apply in 50 - 100 L/ha water)
(L/ha)	Crop		(- <b>FF</b> - <b>y</b>
	_	thumb, kochia, chickweed, corn	be used for control of shepherd's
		spurry, wild tomato, cleavers*,	purse, cow cockle and night-
		wild buckwheat*, shepherds	flowering catchfly at the 1-3 leaf
		purse*, cow cockle*, night-	stage of the crop or for control of
		flowering catchfly*, smartweed*, storksbill*,	smartweed at the 4-6 leaf stage.
		flixweed*, narrow-leaved	**A single application at the 1.25
		hawksbeard*, round-leaved mallow***	L/ha rate is required
			***Sequential applications at the
		Perennials (suppression)**	1.25 L/ha rate are required.
		Canada thistle, Perennial sow	
		thistle, Dandelion	**** Sequential applications at the
			1.25 L/ha rate are required or a
		Perennials (season long control) Quackgrass**, foxtail barley***,	single application of 1.875 L/ha.
		Canada thistle****, Perennial	For sequential applications, ensure
		sow thistle****	the crop has not advanced beyond
			the recommended growth stage.
			Maximum 2.5 L/ha is allowed for the postemergence use.

# 7.5.1 TANK MIXTURES

For season long control of top growth of Canada thistle and control of wild buckwheat in glyphosate tolerant canola (i.e., varieties with the Roundup Ready Gene), apply a tank mixture of 0.28 L/ha of Lontrel 360 with 1.25 L/ha of Deputy Liquid Herbicide, in 100 litres of water per hectare. Apply when canola is in the 2-6 leaf stage. Refer to the Lontrel 360 and to the Deputy Liquid Herbicide label for list of other weeds controlled, timing of application, water volumes and use precautions.

# 7.6 WEED CONTROL IN GLYPHOSATE TOLERANT SOYBEAN (I.E. VARIETIES WITH THE ROUNDUP READY GENE)

WARNING: Apply Deputy Liquid Herbicide on glyphosate tolerant soybean varieties only; i.e. varieties with the Roundup Ready gene.

**NOTE:** ALWAYS USE PEDIGREED (CERTIFIED) SOYBEAN SEED DESIGNATED AS GLYPHOSATE TOLERANT. SOYBEANS WHICH ARE NOT DESIGNATED AS

# GLYPHOSATE TOLERANT WILL BE DAMAGED OR DESTROYED BY THIS TREATMENT.

# DO NOT APPLY BY AIR

RATE (L/ha)	GROWTH STAGE OF CROP	WEEDS CONTROLLED↓	COMMENTS (Use 100 – 200 L/ha water volumes)
2.5	First trifoliate leaf stage through flowering	Velvetleaf, common ragweed, common lamb's quarters, redroot pigweed, smooth pigweed, cocklebur, green smartweed, lady's-thumb, Pennsylvania smartweed, Eastern black flowering nightshade, wild mustard, wild buckwheat, foxtail (green, yellow, giant), barnyard grass, crabgrass (smooth, large), quackgrass, fall panicum, wild proso millet	A second 2.5 L/ha application may be used for late weed flushes emerging after the initial treatment. This second application must be made no later than the flowering stage of the soybean.
2.5 - 5.0	First trifoliate leaf stage through to flowering	Perennial sow thistle, Canada thistle, wire- stemmed muhly	A single application at the higher rate or a second (sequential) application of 2.5 L/ha will improve control in heavy weed infestations. If sequential applications of 2.5 L/ha are used they should be at least 2 weeks apart for best results on perennial weeds. This second application must be made no later than the flowering stage of the soybean. Perennial sow thistle and Canada thistle should be from the rosette stage to 50 cm in height and actively growing. Wire-stemmed muhly should be 10-20 cm in height and actively growing.

RATE (L/ha)	GROWTH STAGE OF CROP	WEEDS CONTROLLED ♦	COMMENTS (Use 100 – 200 L/ha water volumes)
			Plants not fully emerged at the time of application will escape the treatment.
5.0	First trifoliate leaf stage through flowering	All weeds listed above, plus milkweed**, yellow nutsedge**, field bindweed**	Only one application per season at 5.0 L/ha. ** Will also be controlled by sequential applications of 2.5 L/ha. Applications should be at least 2 weeks apart for optimum control. This second application must be made no later than the flowering stage of the soybean. Milkweed should be 15-60 cm in height and actively growing; nutsedge should be 5-15 cm in height and actively growing. Plants not fully emerged at time of treatment will not be controlled.

\* Weeds will be more easily controlled and early crop competition avoided with applications made when the weeds are small. Control of weeds greater than 25 cm in height will be inconsistent, although some weeds may be controlled.

# 7.6.1 TANK MIXTURES

# Deputy Liquid Herbicide plus Pursuit Herbicide

For added residual control of late germinating eastern black nightshade, common lamb's quarters, redroot pigweed, velvetleaf, fall panicum and wild proso millet, Pursuit herbicide may be tank mixed with Deputy Liquid Herbicide at a rate of 2.5 litres per hectare. Use 0.16 to 0.21 litres per hectare of Pursuit and apply up to and including the 3<sup>rd</sup> trifoliate leaf stage of the Roundup Ready soybeans in 100-200 litres per hectare of clean water. The higher rate is recommended for heavier infestations. This tank mix is recommended primarily for soybean systems with row spacings of 50 centimetres (20 inches) or more where a single application timing is desired.

Mixing: Add and mix Pursuit as per instructions on the Pursuit label and then add Deputy Liquid Herbicide as per instructions on this label.

A PHI of 100 days is required for the tank mix of Deputy Liquid Herbicide and Pursuit herbicide on glyphosate tolerant soybeans.

Only one application per season of Deputy Liquid Herbicide at 2.5 litres per hectare tank mixed with Pursuit herbicide at 0.16 to 0.21 litres per hectare is permitted.

Refer to the Pursuit herbicide label for further safety precautions and handling instructions.

# Deputy Liquid Herbicide plus Assure II Herbicide

RATE (L/ha)	GROWTH STAGE OF THE CROP	WEEDS CONTROLLED	COMMENTS
2.5-5.0 L/ha Deputy Liquid Herbicide + 0.38 L/ha Assure II Herbicide	First trifoliate leaf stage through flowering.	Volunteer Roundup Ready Corn. Apply at the 2-6 leaf stage of the weed.	See additional information following this table.

• Weeds will be more easily controlled and early crop competition avoided with applications made when the weeds are small. Control of annual weeds greater than 25 cm in height will be inconsistent, although some weeds may be controlled.

# **Volunteer Roundup Ready Corn Control**

For control of volunteer Roundup Ready Corn, Assure II Herbicide may be tank mixed with Deputy Liquid Herbicide. Use 2.5-5.0 litres per hectare Deputy Liquid Herbicide and 0.38 litre per hectare of Assure II Herbicide.

Apply in 100-300 litres per hectare of clean water.

Mixing: Add and mix Assure II as per instructions on the Assure II label and then add Deputy Liquid Herbicide as per instructions on this label.

This tank mix is to be applied when the crop is from the first trifoliate leaf stage through flowering and when the volunteer Roundup Ready Corn is at the 2-6 leaft stage.

A PHI (preharvest interval) of 80 days is required for a tank mix of Deputy Liquid Herbicide and Assure II Herbicide on Roundup Ready (glyphosate tolerant) soybeans.

Refer to the Assure II Herbicide label for further safety precautions and handling instructions.

# 7.7 WEED CONTROL IN GLYPHOSATE TOLERANT CORN I.E., VARIETIES WITH THE ROUNDUP READY GENE

WARNING: Apply Deputy Liquid Herbicide on glyphosate tolerant corn varieties only; i.e., varieties with the Roundup Ready gene.

NOTE: ALWAYS USE PEDIGREED (CERTIFIED) CORN SEED DESIGNATED AS GLYPHOSATE TOLERANT. CORN WHICH IS NOT DESIGNATED AS GLYPHOSATE TOLERANT WILL BE DAMAGED OR DESTROYED BY THIS TREATMENT.

RATE (L/ha)	GROWTH STAGE OF CROP	WEEDS CONTROLLED ♦	COMMENTS (use 100-200 L/ha water volumes)
2.5	Up to and including 8 leaf stage	Velvetleaf, common ragweed, common lamb's- quarters, redroot pigweed, smooth pigweed, cocklebur, green smartweed, lady's-thumb, Pennsylvania smartweed, Eastern black flowering nightshade, wild mustard, wild buckwheat, foxtail (green, yellow, giant), barnyard grass, crabgrass (smooth, large), quackgrass, fall panicum, wild proso millet, Wild oats, volunteer barley, volunteer wheat, stinkweed, wild mustard, Russian thistle, non- glyphosate tolerant volunteer canola (rapeseed), hemp-nettle, kochia, chickweed, corn spurry, wild tomato, cleavers, shepherd's purse, cow cockle, night- flowering catchfly, stork's-bill, flixweed, narrow-leaved hawk's-	A second application may be used for late weed flushes emerging after the initial treatment. This second application must be made no later than the 8-leaf stage of the corn.

DO NOT APPLY BY AIR

RATE (L/ha)	GROWTH STAGE OF CROP	WEEDS CONTROLLED ♦	COMMENTS (use 100-200 L/ha water volumes)
		beard	
2.5	Up to and including 8 leaf stage	Common milkweed, yellow nutsedge, round- leaved mallow, field bindweed	For control of common milkweed, yellow nutsedge, round-leaved mallow and field bindweed use two applications of 2.5 L/ha. This second application must be made no later than the 8-leaf stage of the corn.
			Milkweed should be 15-60 cm in height and actively growing.
			Yellow nutsedge should be 5-15 cm in height and actively growing.
2.5	Up to and including 8 leaf stage	Perennial sow thistle, Canada thistle, wire- stemmed muhly	A second (sequential) application of 2.5 L/ha will improve control in heavy weed infestations.
			If sequential applications are used they should be at least 2 weeks apart for best results on perennial weeds.
			This second application must be made no later than the 8-leaf stage of the corn.
			Perennial sow thistle and Canada thistle should be from the rosette stage to 50 cm in height and actively growing.
			Wire-stemmed muhly should be 10-20 cm in height and actively growing.
			Plants not fully emerged at the time of application will escape treatment.

♦ Weeds will be more easily controlled and early crop competition avoided with applications made when the weeds are small. Control of weeds greater than 25cm in height will be inconsistent, although some weeds may be controlled.

### 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:

WEED	APP	LICATION		COMMENTS
	GROWTH STAGE	RATE (L/ha)	WATER VOLUME (L/ha)	
Quackgrass (control, light to moderate infestations)	3 to 4 green leaves or more	2.5	50 - 300	Apply in clean water using flat fan nozzles. Allow 3 or more days after treatment before tillage. Refer to "Quackgrass" notes in section 8.2.1 for more information. For higher water volumes (i.e. 150 - 300 L/ha) an approved surfactant must be added at 0.5 litres per 100 litres of clean water (0.5% v/v). Refer to list in section 8.2.2. See also below.
Quackgrass (long term control, heavy infestations, high water volumes)	3 to 4 green leaves or more	2.5 - 7.0	50 - 300	Allow 3 or more days after treatment before tillage. Rates higher than 2.5

# 8.1 PERENNIAL WEED CONTROL WITH DEPUTY LIQUID HERBICIDE

WEED	APP	LICATION		COMMENTS
	GROWTH STAGE	RATE (L/ha)	WATER VOLUME (L/ha)	
				L/ha will provide more consistent, longer term control, especially with heavier infestations and/or higher water volumes (ie 150-300 L/ha)
				Refer to " <b>Quackgrass</b> " notes in section 8.2.1 for more information.
Canada Thistle	rosette stage (summer- fallow)	2.5	50 - 100	Apply in clean water using flat fan nozzles.
				Allow 10 or more days after treatment before tillage.
				Refer to " <b>Canada</b> <b>Thistle</b> " notes in section 8.2.3 for more information.
Canada Thistle	bud stage or beyond	4.75 - 7	100 - 300	Allow 5 or more days after treatment before tillage.
Field Bindweed	full bloom or beyond	7 - 12	100 - 300	Allow 7 or more days after treatment before tillage
Common Milkweed*	bud to full bloom (preharvest)	2.5	50 - 100	See preharvest application section, 9.9.0
	bud to full bloom	12	100 - 300	Allow 7 or more days after treatment before tillage.
				Reduced control may

WEED	APPLICATION			COMMENTS
	GROWTH STAGE	RATE (L/ha)	WATER VOLUME (L/ha)	
				occur after full bloom. Milkweed may not all be in the correct stage, therefore, repeat treatments may be required.
Toadflax	Vegetative Stage (summerfallow) Bud to Full Bloom (preharvest)	2.5	50-100	Apply in clean water using flat fan nozzles. Allow 7 or more days after treatment before tillage in summerfallow. For more information, see <b>Summerfallow</b> <b>control</b> (section 8.2.4), or <b>Preharvest</b> <b>control</b> (section 9.9).
Alfalfa	Early bud to full bloom stage. Fall applications only	3.7 - 5.0	50 - 300	Allow 5 or more days after treatment before tillage. Use the higher rates when alfalfa populations are high or when heavy grass infestations are also present. For spring applications and control in minimum tillage systems using a 2,4-D tank mix, see Section 8.2.6
Dandelion	< 15 cm > 15 cm	2.5 3.7 - 5.0	50 - 100 50 - 300	Allow 3 or more days after treatment before tillage for all rates.

WEED	APP	COMMENTS		
	GROWTH STAGE	RATE	WATER	
		(L/ha)	VOLUME	
			(L/ha)	
	Rosette to full bloom (preharvest)	2.5	50 - 100	Use the higher rate when infestations are heavy.
				Refer to <b>Dandelion</b> notes in Section 8.2.5 for more information.
				Allow 7 or more days after treatment before tillage. For more information, see preharvest control section (9.9)
Foxtail barley	Seedling to heading	2.5-5.0	50 -100	Allow a minimum of 1 day after treatment before tillage or seeding.
				Use higher rates for larger, more established plants, heavy infestations or if plants are stressed
Other Perennials (see listing section 6.2).	early heading or early bud stage	7 - 12	100 - 300	Allow 7 or more days after application before tillage.

**\*NOTE:** For spot treatment, mix 120 mL of product in 5L clean water per 100 m<sup>2</sup>. (2.5 - 12 L/ha is approximately equivalent to 25 - 120 mL/100 m<sup>2</sup>, respectively).

#### 8.2 SPECIAL NOTES FOR PERENNIAL WEED CONTROL

#### 8.2.1 QUACKGRASS

For season-long control on fall tilled ground: Apply 2.5L/ha of this product in spring prior to

seeding. Apply in 50 to 100 L/ha of clean water as described in the preceding table. Delay application until the majority of quackgrass plants have 4-5 green leaves. This stage usually occurs 1 to 4 weeks later on fall tilled ground than on undisturbed ground. Reduced control may result on ground tilled deeper than 15 cm.

#### NOTE:

This treatment will provide season-long control of quackgrass on fall tilled ground. Reduced control will be experienced versus this product on non-fall tilled ground. Repeat treatments may be necessary.

**Applications on forages** should be followed by tillage 3 days or later and should be made when good growing conditions exist.

**If a frost has occurred**, wait several days to determine if the quackgrass has recovered. Quackgrass can be treated after a mild frost provided there are 3 to 4 green leaves actively growing at the time of application. Do not apply after the first damaging frost in the fall.

#### 8.2.2 Surfactants:

The following is a list of approved surfactants for use with Deputy Liquid Herbicide for control of quackgrass:

Agral 90Ag SurfFrigate®Companion

#### Always refer to surfactant label for specific instructions regarding use of that product.

Frigate® is a registered trademark of Syngenta Canada Inc.

#### 8.2.3 CANADA THISTLE\_

**Control of Canada Thistle at the rosette stage**: To ensure the proper timing of application the following steps must be followed:

1.Conduct summerfallow tillage as usual and perform the last tillage operation between July 15th and August 1.

2.Allow the thistles to regrow for a minimum of 5 weeks until they are a minimum of 15cm in diameter and in the rosette stage of growth.

**NOTE: Canada thistle can be treated after a mild frost** provided the leaves are still green and actively growing at the time of application. Do not apply after the first damaging frost in the fall.

#### **Deputy Liquid Herbicide plus Banvel Tank Mixtures**

For control of Canada thistle (and perennial sow thistle) in summerfallow or in post-harvest stubble, apply 1.7 L/ha Deputy Liquid Herbicide plus 1.25 L/ha Banvel in 100-200 L/ha of clean water. In addition, add 350 mL/ha of a non-ionic surfactant registered for use with this product, such as Agral 90, Ag Surf, or Companion.

For best results in summerfallow, cultivate in the spring and apply when the majority of thistles are 15 cm to 25 cm tall and before the bud stage. Cultivate 3 weeks after application.

In post harvest stubble, apply this tank mixture to actively growing thistles at least 2 weeks prior to a killing frost.

#### NOTE:

Grow only cereals, canola (including rapeseed), soybeans, field corn, sweet corn, or white beans after application of this tank mixture.

If application is made after September 1st, or if soil moisture levels are extremely low after application, crop injury may occur in the spring following application.

#### 8.2.4 TOADFLAX

#### **Control of Toadflax in a Summerfallow Vegetative Stage**

To ensure the proper timing of application, the following steps must be followed:

1.Conduct summerfallow tillage as usual and perform the last tillage operation between July 10-21.

2.Allow toadflax to regrow for a minimum of 4-5 weeks until they are minimum of 15 cm tall and at a lush green vegetative stage.

Note: Toadflax can be treated after a mild frost provided the leaves are still green and actively growing at the time of application. Do not apply after the first damaging frost.

#### **8.2.5 DANDELION**

Applications should be made up to and including bloom for best results. Follow-up control measures should be used to manage new dandelions germinating from seed to maintain control throughout the season.

#### 8.2.6 ALFALFA CONTROL WITH 2,4-D TANK MIX:

The addition of 2,4-D may improve alfalfa control in situations where control may be more difficult to obtain, such as in minimum tillage systems where populations are heavy, and with

spring applications.

For fall control of established stands of alfalfa, apply 2.5 - 5.0 L/ha Roundup and 1.2 - 2.4 L/ha of any 500 g/L 2,4-D amine or low volatile ester formulation in 100-200 L water/ha. (Adjust product rates accordingly for other 2,4-D formulations).

For spring applications, use only the low rate of 2,4-D (i.e. 1.2 L/ha) and 2.5 - 5.0 L/ha Deputy Liquid Herbicide. Only cereal crops not underseeded to legumes may be planted following spring applications of this tank mix, and a 14 day interval between application and planting is required.

Use the higher Deputy Liquid Herbicide rates when perennial grasses are prevalent.

#### 8.2.7 ALL PERENNIAL WEEDS

**Weed Stages**: Weeds must be at the proper stage for effective control. Refer to "**Perennial Weed Control with Deputy Liquid Herbicide**" (section 8.1).

**Nozzle Type:** For best results with conventional boom equipment apply this product with 50 to 300 L/ha 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.

**Mowing Effects:** Mowing prior to application will reduce effectiveness unless weeds are allowed to regrow to the proper stage before application.

**Tillage Effects:** Fall or spring tillage prior to spring applications and tillage between harvesting and fall applications will reduce the effectiveness on perennial weeds. Follow-up tillage after application should be delayed 5-7 days for best results (see Weed Control Tables, section 7.1 and 8.1, for specific tillage interval for each weed).

**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:** Heavy frosts prior to application may reduce control. Do not apply after the first damaging frost in the fall.

#### 9.0 CROPLAND SITUATIONS

#### 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 or spot treatment prior to planting all crops, post harvest to annual crops, preharvest in wheat, barley, oats, canola (rapeseed), flax (including low linolenic acid varieties), lentils, peas, soybeans, dry beans and forages, and in summerfallow. It may also be applied as a broadcast spray in glyphosate tolerant corn, soybean or canola i.e. varieties with the Roundup Ready gene (see Sections 7.5, 7.6, 7.7). It may also be applied as a directed spray in orchards, vineyards, blueberries and strawberry, and using selective equipment in soy and dry beans, orchards, vineyards, cranberries and strawberry (refer to specific sections below for more information). For specific instructions on weed control in the following cropping situations, always refer to the Annual and Perennial Weed Control sections (7.0 and 8.0) for more information.

#### 9.1 PRIOR TO PLANTING - ALL CROPS

This product may be applied prior to planting all crops for control of emerged weeds listed on this label. Ensure weeds are at the desired stage at the time of application. This product does not provide pre-emergent weed control and newly germinating weeds may be a problem in the crop. APPLY BEFORE SEEDING OR TRANSPLANTING.

#### 9.2 POST HARVEST STUBBLE TREATMENT

This product may be applied in the fall as a postharvest stubble treatment for control of perennial weeds such as quackgrass and Canada thistle. Allow weeds to regrow to the desired stage (20-25 cm tall for quackgrass and Canada thistle) before application and ensure they have a high proportion of green coloration. Straw should be removed or evenly spread to allow for proper regrowth and spray coverage. Heavy frosts prior to application may decrease control.

#### 9.3 SPOT TREATMENT (IN-CROP)

This product can be applied as an in-crop spot treatment in barley, corn, oats, soybeans, wheat, strawberry, blueberry, forage grasses and legumes including seed production. 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 1 percent solution for annual weeds and quackgrass and a 2 percent solution for other perennial weeds (a 1percent solution equals 1 litre Deputy Liquid Herbicide in 100 litres of spray solution). One or two per cent solutions should be applied to wet, but not run-off. Applications can be made using a boom sprayer, hose and handgun, or hand sprayer in accordance with instructions in the "**Application Equipment**" section (5.2).

9.3.1 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 DEPUTY TO TRANSLOCATE INTO ALL PLANT PARTS BEFORE GRAZING OR HARVESTING TREATED AREAS IN FORAGES.

#### 9.4 SUMMERFALLOW TREATMENT

This product, or labelled tank mixtures, may be applied in summerfallow to control weeds listed on this label. Ensure weeds are at the desired growth stage and actively growing at application for best results. Reduced control may result if weeds are drought stressed. Weeds will continue to germinate from seed throughout the growing season. Repeat treatments may be necessary to control later germinating weeds.

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

This product may be applied prior to seeding or after seeding, but before crop emergence for control of emerged weeds in minimum and zero tillage cropping systems for all field crops. Applications made too far in advance of seeding may allow weeds to emerge between application and crop emergence, as this product does not provide residual weed control.

#### Minimum and Zero Tillage Tank Mixtures

**9.5.1 Deputy Liquid Herbicide plus 2,4-D amine or ester** can be applied prior to seeding or after seeding, but before crop emergence **in wheat, winter wheat, barley, and rye**. Refer to "Annual **Weed Control with Deputy Liquid Herbicide Tank Mixtures**" table for information (section 7.2).

**9.5.2 Deputy Liquid Herbicide plus bromoxynil (Pardner)** can be applied prior to seeding or after seeding, but before crop emergence in wheat, barley and oats. Refer to "Annual Weed Control with Deputy Liquid Herbicide Tank Mixtures" table for information (section 7.2).

**9.5.3 Deputy Liquid Herbicide plus Pursuit** can be applied prior to, or after, seeding, but before crop emergence in soybeans. Deputy Liquid Herbicide will control emerged weeds listed on this label when applied as directed (refer to "Annual and Perennial Weed Control" sections, 7.0 and 8.0). Pursuit will control weeds germinating from seed. Add the recommended rates of both products in 100 litres of water/ha, following the instructions on the Pursuit herbicide label.

ALWAYS 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

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**9.5.4 Deputy Liquid Herbicide plus MCPA** can be applied prior to seeding or after seeding, but before crop emergence **in wheat, rye, barley, oats, corn (field and sweet; MCPA amine only), flax and field peas (MCPA amine only).** Refer to "Annual Weed Control with Deputy Liquid Herbicide Tank Mixtures" table for information (section 7.2).

**9.5.5 Deputy Liquid Herbicide plus Buctril M**<sup>®</sup> can be applied prior to seeding **in** wheat, rye, corn, barley, oats, flax, canary seed and seedling grasses (including brome grass, crested wheatgrass, Intermediate wheat grass, slender wheatgrass, tall wheatgrass, Russian wild rye, Timothy, Orchard grass, Creeping red fescue, Meadow fescue, Meadow foxtail, Seedling tall fescue, Seedling meadow bromegrass, Seedling streambank wheatgrass and Reed canary grass). Refer to "Annual Weed Control with Deputy Liquid Herbicide Tank Mixtures" table for information (section 7.2).

**9.5.6 Deputy Liquid Herbicide plus MCPA amine** can be applied prior to seeding in **lentil** and chickpea. Refer to "Annual Weed Control with Deputy Liquid Herbicide Tank Mixtures" table for information (section 7.2).

#### 9.6 FORAGE LEGUMES AND GRASSES

This product may be applied for control of emerged weeds prior to emergence of forage legumes and grasses. If the forages are to be under-seeded with a cover crop, this product must be applied prior to planting the cover crop.

#### 9.7 PASTURE RENOVATION

Use this product to control or suppress existing vegetation for zero-tillage seeding of legumes into established sod for pasture renovation. Delay spraying until weed growth is at least 20 cm 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.

#### 9.8 FORAGE SEED PRODUCTION

For spot treatment control of perennial weed problems such as quackgrass and Canada thistle in

seed fields, apply as directed to vegetation that is at least 20 to 25 cm in height but before emergence of seed head. The crop in the treated areas will be killed. Take care to avoid drift outside target area for the same reason.

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

For control of quackgrass, Canada thistle, common milkweed, toadflax and dandelion; and season-long control of perennial sow thistle, Deputy Liquid Herbicide can be applied prior to harvest of wheat, barley (including malting barley), oats, canola (rapeseed) (including glyphosate tolerant varieties), flax (including low linolenic acid varieties), lentils, peas, dry beans, soybeans (including glyphosate tolerant varieties) and forages. 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.

Deputy Liquid Herbicide should be applied pre-harvest at 2.5 L/ha in 50 to 100 L/ha 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. For forage crops, apply this product at 2.5 - 5.0 L/ha 3-7 days prior to the last cut before rotation or forage renovation. Consult the table **"Guidelines for Timing of Preharvest Applications**" (section 9.9.1) 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. 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 (or 3-7 days for forage applications) 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 (e.g. sloughs), shelterbelts, woodlots and other cover on the edges of fields frequented by wildlife, should be avoided. Leave a 15 meter 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

#### 9.9.1 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 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.
FORAGES	Not applicable	Normal stage for forage harvesting.

#### 9.10 TREE PLANTINGS

#### Shelterbelts and Nursery Stock (Woody Ornamentals)

This product may be used to control listed annual or perennial weeds prior to planting, or as a post directed spray in established nurseries or shelterbelts of the following species:

#### Deciduous

#### Coniferous

Ash - Fraxinus spp. Caragana - Caragan spp. Cherry - Prunus spp. Elm - Ulmus spp. Lilac - Syringa spp. Maple - Acer spp. Mountain Ash - Sorbus spp. Poplar - Populus spp. Russian Olive - Elaeagnus spp. Willow - Salix spp. Fir - Abies spp. Juniper - Junipus spp. Pine - Pinus spp. Spruce - Picea spp. Yew - Taxus spp.

**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.

#### 9.11 TREE, VINE, BERRY AND OTHER CROPS

This product is recommended for annual and perennial weed control in established vineyards or orchards, in blueberry, cranberry and strawberry, or for site preparation prior to transplanting tree and vine crops. Applications may be made with boom equipment, shielded sprayers, hand-held and high volume orchards guns, or with wiper applicator equipment (orchards, vineyards, cranberry and strawberry only). See "**Mixing and Application Equipment Information**" (section 5.2) and the following table for specific information on the use of equipment.

Repeat treatments may be necessary to control weeds originating from underground parts of untreated weeds or from seeds. This product does not provide residual or pre-emergent weed control. For subsequent weed control, follow a program using residual herbicides or use repeated applications of this product. Do not apply more than 35 litres of this product per hectare per year.

#### EXTREME CARE MUST BE EXERCISED TO AVOID CONTACT OF 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 MATURED BROWN BARK CAN RESULT IN SERIOUS CROP DAMAGE.

Reduced control may result when applications are made to annual or perennial weeds that have been mowed, grazed or cut and have not been allowed to regrow to the recommended stage for treatment.

Сгор	Rate (L/ha)	Pre- Harvest Interval (days)	Max. Appl. per Yr.	Weeds Controlled	Comments (Refer to sections 7.1 and 8.1 for specific rates for weed control)
Apples Apricot Cherry (Sweet/ sour) Peaches Pears Plums	2.25-12	30	3	Annual and perennial weeds	
Apples Grapes	Tank Mix 2.25-12 + Simazine 2.0- 4.5 kg ai/ha	_	1	Annual and perennial weeds	<ul> <li>Will provide season-long pre-emergent control.</li> <li>Do not apply to coarse, sandy or gravelly soil.</li> <li>Use according to the more restrictive label direction for each product in the mix.</li> <li>DO NOT apply to orchards or vineyards that have been established less than 1 or 3 years, respectively.</li> <li>Simazine rate is equivalent to 2.25-5.0 kg/ha Princep® Nine-T®, or 4.0-9.0 kg/ha Simadex®.</li> </ul>
Grapes	2.25-12	14	3	Annual and perennial weeds	Remove all sucker growth from the spray zone before spraying, except for the Concord variety of grape.

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

Сгор	Rate (L/ha)	Pre- Harvest Interval (days)	Max. Appl. per Yr.	Weeds Controlled	Comments (Refer to sections 7.1 and 8.1 for specific rates for weed control)
					Suckering should be conducted within 2 weeks prior to application. Do not apply to vines which have been established less
					than 3 years.
Highbush (cultivated) blueberry	2.8-5.6	30	1	Quackgrass	Use as a directed spray, with no more than 275 kPa pressure.
Lowbush blueberry	1-2% solution (spot application)	Apply in non- bearing year only	1	Woody brush (section 6.3)	Apply as a directed spray in mid-summer of the vegetative (non-bearing) year.
					See section 9.3 for instructions on spot treatments.
Filberts Hazelnut (established plantations)	2.25-3.5	14	-	Annual weeds	Use as a directed spray, with no more than 275 kPa pressure.
Walnut Chestnut Japanese	2.25-12	-	2	Annual and perennial weeds	Apply late spring and fall, post-harvest but prior to a killing frost.
heartnut					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 Wiper Applications, section 9.12).
Cranberry	20% Solution (1L Deputy + 4L water)	30	1	Annual and perennial weeds	Apply using wick or wiper applicators (section 9.12).
Strawberry	1-2% solution	30	1	Emerged	Apply when weeds are at a

	(spot application) 33% solution (wiper application)			perennial weeds	susceptible growth stage (see sections 8.1, 2). See section 9.3 for instructions on spot treatments. See section 9.12 for instructions on wiper
Sugar beets	1-2% solution (spot application)	Treated crop MUST NOT be harvested	1	Dodder species	<ul> <li>applications.</li> <li>Apply when dodder is vigorously growing but before flowering.</li> <li>See section 9.3 for instructions on spot treatments.</li> </ul>
Asparagus	1.25 - 2.5	7	1	Fall seeded rye grass	apply in spring before emergence of crop shoots.

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## NOTE TO BUYER/USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR SPECIAL USE APPLICATIONS: (NORTH AMERICAN GINSENG)

The DIRECTIONS FOR USE for this product described on the Label were developed by persons other than Monsanto Canada and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Monsanto Canada itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop listed on this label.

Accordingly, the Buyer and User assume all liability arising, and agree to hold Monsanto Canada harmless from any claims based on efficacy and/or phytotoxicity in connection with the uses described on this Label.

#### **DIRECTIONS FOR USE**

## ALWAYS REFER TO THE PRODUCT LABEL FOR FURTHER INFORMATION ON WEEDS CONTROLLED, APPLICATION DIRECTIONS, AND USE PRECAUTIONS.

#### NORTH AMERICAN GINSENG

**New Gardens (British Columbia only):** Apply this product in the fall after seeding but before freeze-up in new gardens only to control volunteer cereals. Apply when weeds are at the growth stages listed on the product label. Use a single application of 2.5 L/ha in 50 to 100 L water/ha. DO NOT USE A FALL APPLICATION IN ESTABLISHED/EXISTING GARDENS.

**Existing/Established Gardens:** Apply this product in the spring before the crop has emerged above the soil. Apply when weeds are at the growth stages described in the product label. A maximum of two 2.5 L/ha applications in 50 to 100 L water/ha may be made in a season. DO NOT USE A FALL APPLICATION IN ESTABLISHED/EXISTING GARDENS.

#### 9.12 SELECTIVE EQUIPMENT

#### WIPER APPLICATORS

This product may be applied with a wiper applicator, after dilution and thorough mixing with water, to listed weeds in soy and dry beans, grapes, orchards, cranberries and strawberry. Applications must be made before initial pod set in soy and dry beans. (It may also be used in any industrial, tree planting and non-crop site specified on this label. See sections 9.10, 10.1.)

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 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 cm 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 cm 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.

## With all equipment, drain and clean wiper parts immediately after using this product, by thoroughly flushing with water.

**For Roller Applicators--**Mix 0.5 to 1.0 litres of this product in 10 litres water to prepare a 5 to 10 percent solution. Roller speed should be maintained at 50 to 150 rpm.

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**For Wick or other Wiper Applicators--**Mix 1 litre of this product in 2 litres of water to prepare a 33 percent solution.

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