# MANAGE 780**Ò**

# Water Soluble Herbicide

# AGRICULTURAL AND INDUSTRIAL

# **REGISTRATION NO. 22412 PEST CONTROL PRODUCTS ACT**

**GUARANTEE:** Glyphosate, 480 grams acid equivalent per litre, present as

isopropylamine salt

# READ THE LABEL AND ATTACHED BROCHURE BEFORE USING

MONSANTO CANADA INC. 900 - One Research Road Winnipeg, MB R3T 6E3

**NET CONTENTS**: 8.5 litres

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

2002

GROUP 9 HERBICIDE

[[CONTAINER LABEL]]

#### **PRECAUTIONS**

# KEEP OUT OF REACH OF CHILDREN

MAY CAUSE EYE IRRITATION

Avoid swallowing, 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., visit CropLife Canada's web site at: www.croplife.ca.

#### **FIRST AID**

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

**IF ON SKIN OR CLOTHING,** take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

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

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

#### TOXICOLOGICAL INFORMATION

Treat symptomatically.

# **ENVIRONMENTAL HAZARDS**

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

#### PHYSICAL OR CHEMICAL HAZARDS

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

# **STORAGE**

Store above  $-12^{\circ}$ C to keep from crystallizing. Crystals will settle to the bottom. If allowed to crystallize, place in a warm room (20oC) for several days to redissolve and mix well before using.

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

#### 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.

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# **RETURNABLE CONTAINERS**

Do not reuse container for any 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, or for the 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.

Not for relabelling or repackaging.

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

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

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

- ® Manage 780 is a registered trademark of Monsanto Company U.S.A. Monsanto Canada Inc. licensee.
- © MONSANTO COMPANY 2002

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MANAGE 780®

Water Soluble Herbicide

**AGRICULTURAL and INDUSTRIAL** 

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GROUP	9	HERBICIDE

2002

**CONTENTS** 

	Page (s)
1.0 PRODUCT DESCRIPTION	
2.0 EMERGENCY NUMBERS	
3.0 PRECAUTIONS	
DIRECTIONS FOR USE 4.0 GENERAL INFORMATION	
5.0 MIXING AND APPLICATION 5.1 Precautions 5.2 Surfactant Information 5.3 Equipment Information	
6.0 WEEDS CONTROLLED 6.1 Annuals	
CROPLAND USES	
<ul> <li>7.0 ANNUAL WEED CONTROL</li> <li>7.1 Annual Weed Control with Manage 780 Herbicide</li> <li>7.2 Annual Weed Control with Manage 780 Herbicide Tan</li> <li>7.3 Surfactant Information</li> <li>7.4 Additional Important Information For Annual Weed Control</li> </ul>	

8.0 PERENNIAL WEED CONTROL8.1 Perennial Weed Control With Manage 780 Herbicide.....8.2 Special Notes For Perennial Weed Control:

8.2.1 Quackgrass
8.2.2 Canada Thistle
8.2.3 Toadflax
8.2.4 Dandelion
8.2.5 Alfalfa Control With 2,4-D Tankmixture
8.2.6 All Perrenial Weeds
9.0 CROPLAND SITUATIONS
9.1 Prior to Planting - All Crops
9.2 Post-Harvest Stubble Treatment
9.3 Spot treatment
9.3.1 Grazing Restrictions
9.4 Summerfallow Treatment
9.5 Minimum and Zero Tillage Applications
9.5.1 Manage 780 Herbicide plus 2,4-D Amine or Ester
9.5.2 Manage 780 Herbicide plus Pardner®
9.5.3 Manage 780 Herbicide plus Pursuit®
9.6 Forage Legumes and Grasses
9.7 Pasture Renovation
9.8 Forage Seed Production
9.9 Preharvest Treatment
9.9.1 Timing of Preharvest Applications
9.10 Tree Plantings
9.11 Tree, Vine, Berry and Other Crops
9.12 Selective Equipment
10.0 NON-CROPLAND USES: INDUSTRIAL, RIGHTS OF WAY, RECREATIONAL
AND PUBLIC AREAS
10.1 Weed Control In Non-Cropland Areas
10.2 Application Information for Non-Cropland Uses
10.2.1 Ground Applications
10.2.2 Aerial application (Industrial Rights-of-Way only)
10.2.3 Purple Loosestrife Control
10.3 Selective Equipment for Non-Cropland Uses
10.4 Turfgrass
10.5 Injection Applications
10.6 Cut Stump Application

#### MANAGE 780® HERBICIDE

# 1.0 PRODUCT DESCRIPTION

Water soluble herbicide for non-selective weed control in CROPLAND SYSTEMS AND IN NON-CROPLAND AREAS.

#### CROPLAND USES INCLUDE:

In cropping systems before planting of all crops; in minimum tillage systems, 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.

# NON-CROPLAND USES INCLUDE:

Industrial; recreational, rights-of-way, and public areas; turf grass renovation.

No licence implied or granted under any non-Canada patent. Not for relabelling or repackaging.

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- © MONSANTO COMPANY 2001

# 2.0 EMERGENCY NUMBERS

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

Accident/Spills/Medical Emergence	;y(314) 694-4000
or	1-800-332-3111
	(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.

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#### 3.1 FIRST AID

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

#### 3.2 TOXICOLOGICAL INFORMATION

Treat symptomatically.

# 3.3 ENVIRONMENTAL HAZARDS

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

# 3.4 PHYSICAL OR CHEMICAL HAZARDS

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APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

#### 3.5 STORAGE

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#### NOTICE

**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.

# **DIRECTIONS FOR USE**

# 4.0 GENERAL INFORMATION

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

Manage 780 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 precautionary 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, Manage 780 is a Group 9 herbicide. Any weed population may contain or develop plants naturally resistant to Manage 780 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 Manage 780 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 Monsanto Canada at 1-800-667-4944 or at www.farmcentral.com.

# 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 km/h 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 SURFACTANT INFORMATION

WHEN USING THIS PRODUCT, ALWAYS MIX 0.5 LITRES OF ONE OF THE FOLLOWING SURFACTANTS PER 100 LITRES OF SPRAY SOLUTION (0.5% v/v surfactant by total volume).

Agral®90 Frigate® Companion™

AgSurf® Manage Charge®

Always read and follow the manufacturer's surfactant label recommendations for best results.

These surfactants should not be used in excess of 2.5 litres per hectare when making broadcast applications.

Agral® is a registered trademark of Syngenta AgSurf® is a registered trademark of Interprovincial Cooperatives Ltd.

Frigate® is a registered trademark of Fermenta ASC Corp.

Companion™ is a trademark of Rohm and Haas Canada Inc.

Manage Charge® is a registered trademark of Monsanto Company USA, Monsanto Canada licensee.

#### 5.3 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 and recommended surfactant (see "Weed Control" sections of this booklet - 7, 8 and surfactant information, 5.2) 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 and recommended surfactant 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 and an approved surfactant 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 and an approved surfactant 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 0.75% solution of this product in water (0.75 litre of this product plus 0.5 litre of an approved surfactant in 100 litres of water) and apply to foliage of vegetation to be controlled. For best results, use a 1.5% solution (1.5 litres of this product plus 0.5 litres of an approved surfactant 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).

# **AERIAL EQUIPMENT (NON-CROPLAND USE ONLY)**

Aerial application can only be used for weed control in industrial rights-of-way. Refer to section 10.2.2 for more information.

#### **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 (7.0, 8.0, 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)

**Other** 

**Dodder** *Cuscuta spp*  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

# **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 pensulvanicum

**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 theophrasti

Volunteer Canola

Brassica spp

Volunteer Flax

Linaria spp

Wild Buckwheat

Polygonum convolvulus

Wild Mustard

Sinapsis arvensis

Wild Tomato

Solanum triflorum

6.2/6.3 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

Perennial Broadleaved Weeds

Alfalfa

Medicago spp.

Cottontop

Eriophorum chamissionis

**Curled Dock** 

Rumex crispus

**Dandelion** 

Taraxacum officinale

Field Bindweed

Convolvulus arvensis

**Hemp Dogbane** 

Apocynum cannabinum

**Hoary Cress** 

Cardaria draba

**Knotweed (Japanese)** 

Polygonum cuspidatum

Milkweed (common)

Asclepias syriaca

**Poison Ivy** 

Rhus radicans

Sow Thistle (perennial)

Sonchus arvensis

Thistle (Canada)

Cirsium arvense

Toad Flax

Linaria vulgaris

Wormwood (Absinth)

Artemisia absinthium

**Woody Brush and Trees** 

**Alder** 

Alnus spp.

Birch

Betula spp.

Broadleaved meadowsweet

Spiraea latifolia

Canadian rhododendron

Rhododendron

canadenses

Cedar

Thuja spp.

Cherry

Prunus spp.

Douglas Éir

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

Viburnum cassinoides

# **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.

# 7.1 ANNUAL WEED CONTROL WITH MANAGE 780 HERBICIDE

RATE L/ha	GROWTH STAGE	WEEDS CONTROLLED	COMMENTS (Apply in 50 - 100 L/ha water. Always add 0.5% of an approved surfactant)
0.56	weeds up to 8 cm in height	wild oats, green foxtail, volunteer barley, volunteer wheat  Non-glyphosate tolerant volunteer canola (rapeseed), wild mustard, lady's-thumb, stinkweed	. for wild oats apply at 1 - 3 leaf stage . for heavy wild oat infestations use 0.74 L/ha rate.
0.74	weeds 8 cm to 15 cm in height	all annual grasses listed above  all annual broad leaved weeds listed above plus flixweed* and kochia*	*suppression only. Refer to higher rates of this table or tank mix table (section 7.2) for control options.
0.9-1.4	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 lamb's quarters, redroot pigweed, hempnettle, flixweed, russian thistle, volunteer flax, common ragweed*, canada fleabane*, wild buckwheat**, narrowleaved hawk's beard***,	.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 1.4 L/ha rate  *** for weeds 8 cm to 15 cm in height use 1.4 L/ha rate

RATE L/ha	GROWTH STAGE	WEEDS CONTROLLED	COMMENTS (Apply in 50 - 100 L/ha water. Always add 0.5% of an approved surfactant)
1.7	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 narrowleaved vetch	.for additional annual broadleaved weed control options, refer to tank mix table (section 7.2).
2.6	weeds over 15 cm in height	all annual grasses and broadleaved weeds listed above	

**NOTE:** For spot treatment, 0.56 - 2.6 litres per hectare is approximately equivalent to 6 -26 mL/100 m<sup>2</sup>, respectively.

Ammonium Sulfate: The addition of ammonium sulfate may increase performance on weeds where environmental stress (ie., cold, drought) is a concern. Ammonium sulfate may be added to the spray tank at a rate of 2-3% (v/v) (eg 2-3 kilograms of ammonium sulfate per 100 litres of spray solution; 2.7 - 4.0 litres of a 75% liquid solution of ammonium sulfate plus enough water to give 100 litres of spray solution). Use only high quality ammonium sulfate in order to avoid contaminants. Do not use in conjunction with other tank mixes for annual weed control (Table 7.2). If using a granular source of ammonium sulfate, dissolve the ammonium sulfate in a small barrel or tank before adding to the spray tank. Dissolving the ammonium sulfate prior to adding it to the spray tank and pouring this solution through a screen reduces the chance of nozzle plugging, minimizes tank and line corrosion, and reduces the chance of impurities entering the spray tank. Rinse the tank and lines immediately after spraying.

# 7.2 ANNUAL WEED CONTROL WITH MANAGE 780 HERBICIDE TANK MIXTURES

FOR SUMMERFALLOW & MINIMUM TILLAGE SYSTEMS

TANK RATE (L/ha)	WEEDS CONTROLLED	COMMENTS (Apply in 50-100L/ha water; add 350mL/ha of surfactant - see list in section 7.3)
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TANK MIXTURES	RATE (L/ha)	WEEDS CONTROLLED	COMMENTS (Apply in 50-100L/ha water; add 350mL/ha of surfactant - see list in section 7.3)
Manage 780 herbicide  +  Banvel® herbicide	0.56 – 0.74 + 0.29	Volunteer cereal, 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 buckwheat**.	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 beyond 8 cm in height  *Manage 780 herbicide applied at 0.74 L/ha rate only.  **Suppression only. See other tank mixtures for control options.
Manage 780 herbicide  +  Pardner® herbicide	0.56 - 0.74 + 1.25	Volunteer cereals, green foxtail, volunteer canola (rapeseed), wild mustard, lady's thumb, stinkweed, wild buckwheat*  Redroot pigweed**, kochia**, wild oats**	This tank mix is registered only for use in summerfallow, and prior to wheat, oats and barley in minimum tillage systems. 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
Manage 780 herbicide	0.93 – 1.41	Volunteer cereals, wild oats, green foxtail, downey brome,	* use Manage 780 herbicide at 0.74 L/ha rate only for wild buckwheat control.  **0.74 L rate, suppression only. See other tank mixtures for control options.  Weeds should be less than 15 cm tall and actively

TANK MIXTURES	RATE (L/ha)	WEEDS CONTROLLED	COMMENTS (Apply in 50-100L/ha water; add 350mL/ha of surfactant - see list in section 7.3)
+ 2,4-D## herbicide	+ 0.6 - 0.9 <sup>4</sup> or 1.2 - 1.5 <sup>5</sup>	Non-glyphosate tolerant volunteer canola (rapeseed), 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) 4, bluebur4, burdock4, cocklebur4, common plantain4, daisy fleabane4, false flax4, false ragweed4, goat's beard4, mustards4 (except dog and tansy), prickly lettuce4, ragweeds4, Russian pigweed4, shepherd's purse4, stinging nettle4, sweet clover4, thymeleaved spurge4, wild radish4, wild sunflower4	Use higher rate if weeds are beyond 8 cm in height.  *DO NOT use these rates on plants greater than 8 cm in height  **for 3 - 4 leaf stage use 1.41 L/ha rate  ***for weeds 8 cm to 15 cm in height use 1.41 L/ha rate  4 2,4-D herbicide at 0.6-0.9 L/ha (280-420 g ai/ha)
		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> .	<sup>5</sup> 2,4-D herbicide at 1.2-1.5 L/ha (560-700 g ai/ha).  Use this tankmix prior to seeding or after seeding but before crop emergence in wheat, winter wheat, barley and rye.

TANK MIXTURES	RATE (L/ha)	WEEDS CONTROLLED	COMMENTS (Apply in 50-100L/ha water; add 350mL/ha of surfactant - see list in section 7.3)
		purslane <sup>5</sup> , sheep sorel <sup>5</sup> , smartweed <sup>5</sup> , tumble pigweed <sup>5</sup> , velvetleaf <sup>5</sup> , volunteer canola <sup>5</sup>	
Manage 780 herbicide + 2,4-D * herbicide	0.56 – 0.74 +	Volunteer cereals, wild oats* and green foxtail* volunteer canola (rapeseed), wild mustard, flixweed, redroot pigweed, lady's thumb, stinkweed, kochia.	This tank mix is registered for summerfallow use only. Weeds should be less than 15 cm tall and actively growing for best results.
	1.2	Lamb's quarters**, Russian thistle**	Use higher rate if weeds are beyond 8 cm in height  *use Manage 780 herbicide at 0.74 L/ha rate only for wild oat and green foxtail control.  **suppression only. See other tank mixtures for control options.

<sup>&</sup>quot;For foxtail barley, refer to "Perennial Weed Control" table (Section 8.1)

# 7.3 ADDITION OF SURFACTANT

All Manage 780 herbicide tank mixtures for annual weed control require the addition of an approved surfactant at a rate of 0.5% v/v (See section 5.2 for mixing instructions and a list of approved surfactants).

# 7.4 ADDITIONAL IMPORTANT INFORMATION FOR ANNUAL WEED CONTROL

Allow at least 3 days 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

<sup># 0.56</sup> kg ai/ha of 2,4-D. ##Adjust rates accordingly for other 2,4-D formulations.

<sup>®</sup> Banvel is a registered trademark of BASF Ltd

<sup>®</sup> Pardner is a registered trademark of Aventis

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).

# 8.0 PERENNIAL WEED CONTROL

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

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

# 8.1 PERENNIAL WEED CONTROL WITH MANAGE 780 HERBICIDE

	A	PPLICATION	ON	
WEED	GROWTH STAGE	RATE L/ha	WATER VOLUME L/ha	COMMENTS (always add 0.5% of an approved surfactant
Quackgrass (control, light to moderate infestations	3 to 4 green leaves or more	1.9	50 - 300	<ul> <li>Apply in clean water using flat fan nozzles.</li> <li>Allow 3 or more days after treatment before tillage.</li> <li>Refer to "Quackgrass" notes in Section 8.2.1 for more information.</li> </ul>
Quackgrass (long term control, heavy infestations, high water volumes)	3 to 4 green leaves or more	1.9 – 5.2	50 - 300	. Allow 3 ore more days after treatment before tillage Rates higher than 1.9 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 "Quackgrass" notes in Section 8.2.1 for more information.
Canada Thistle	Rosette stage (summer- fallow)	1.9	50 - 100	Apply in clean water using flat fan nozzles.     Allow 10 or more days after treatment before tillage.     Refer to "Canada Thistle" notes in Section 8.2.3 for more information.
Canada Thistle	Bud stage or beyond	3.5 - 5.2	100 - 300	. Allow 5 or more days after treatment before tillage.
Field Bindweed	Full bloom or beyond	5.2 – 8.9	100 - 300	. Allow 7 or more days after treatment before tillage.
Common Milkweed*	Bud to full bloom (preharvest) Bud to full	1.9 8.9	50 – 100	<ul> <li>. See "Pre-Harvest Application" section (9.9) for more information.</li> <li>. Allow 7 or more days after treatment before tillage.</li> <li>. Reduced control may occur after full bloom.</li> </ul>
	bloom	0.7	100 - 300	. Milkweed may not all be in the correct stage,

	APPLICATION				
WEED	GROWTH STAGE	RATE L/ha	WATER VOLUME L/ha	COMMENTS (always add 0.5% of an approved surfactant	
				therefore, repeat treatments may be required.	
Toadflax	Vegetative stage (summerfallow)  Bud to full bloom	1.9	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 "Summerfallow Control" (Section 8.2.4) or "Preharvest Control" (Section 9.9).	
	(preharvest)				
Alfalfa	Early bud to full bloom stage. Fall applications only.	2.8 – 3.7	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	1.9	50 – 100	. Allow 3 or more days after treatment before tillage for all rates.	
	> 15 cm rosette to full bloom (preharvest)	2.8 – 3.7 1.9	50 – 300 50 - 100	. Use the higher rate when infestations are heavy Refer to "Dandelion" 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	1.9 – 3.7	50 - 100	<ul> <li>. Allow a minimum of 1 day after treatment before tillage or seeding.</li> <li>. Use higher rates for larger, more established plants, heavy infestations or if plants are stressed.</li> </ul>	
Other Perennials (see listing section 6.2)	Early heading or early bud stage	5.2 – 8.9	100 - 300	. allow 7 or more days after treatment before tillage.	

**\*NOTE:** For spot treatment, mix 90 mL of product plus 25 mL of an approved surfactant in 5 litres clean water per 100 m<sup>2</sup>. (1.9 - 8.9 L/ha) is approximately equivalent to  $20 - 90 \text{ mL/}100\text{m}^2$ , respectively).

# 8.2 SPECIAL NOTES FOR PERENNIAL WEED CONTROL

# 8.2.1 QUACKGRASS

For season-long control on fall tilled ground: Apply 1.9 litres per hectare of this

product in spring prior to seeding. Apply with 0.5% v/v of an approved surfactant in 50 to 100 litres per hectare 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 centimetres.

#### 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 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 Usual 15th and August 1.
- 2. Allow the thistles to regrow for a minimum of 5 weeks until they are a minimum of 15 centimetres 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.

# 8.1 Manage 780 herbicide plus Banvel Tank Mixtures

For control of Canada thistle (and perennial sow thistle) in summerfallow or in post-harvest stubble, apply 1.3 litres per hectare Manage 780 herbicide with 0.5% v/v of an approved surfactant plus 1.25 litres per hectare Banvel in 100-200 litres per hectare of clean water.

For best results in summerfallow, cultivate in the spring and apply when the majority of thistles are 15 centimetres to 25 centimetres 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.

# 8.2.3 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.

#### 8.2.4 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.

# 8.2.5 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 1.9 - 3.7 litres per hectare Manage 780 herbicide and 1.2 - 2.4 litres per hectare of any 500 grams per litre 2,4-D amine or low volatile ester formulation in 100-200 litres water per hectare. (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 litres per hectare) and 1.9 – 3.7 litres per hectare Manage 780 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 Manage 780 herbicide rates when perennial grasses are prevalent.

# 8.2.6 ALL PERENNIAL WEEDS

**Weed Stages**: Weeds must be at the proper stage for effective control. Refer to "Perennial Weed Control with Manage 780 Herbicide" (8.1).

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

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

**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 Table 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 can 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 centimetres 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 0.75% solution for annual weeds and quackgrass and a 1.5% solution for other perennial weeds (a 0.75% solution equals 0.75 litre Manage 780 herbicide plus 0.5 litre of an approved surfactant in 100 litres of spray solution). These 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 (5.3).

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. DO NOT GRAZE OR HARVEST TREATED AREAS IN FORAGES UNTIL TREATED PLANTS HAVE TURNED BROWN AND STARTED TO DETERIORATE.

# 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 Manage 780 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 Manage 780 Herbicide Tank Mixtures table for information (section 7.2).

- **9.5.2 Manage 780 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 Manage 780 Herbicide Tank Mixtures" table for information (section 7.2).
- **9.5.3 Manage 780 Herbicide plus Pursuit**® can be applied prior to, or after, seeding, but before crop emergence in soybeans. Manage 780 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 and an approved surfactant in 100 L 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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# 9.6 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 centimetres 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, Manage 780 herbicide can be applied prior to harvest of wheat, barley (including malting barley), oats, canola (rapeseed), flax (including low linolenic acid varieties), lentils, peas, dry beans, soybeans 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.

Manage 780 herbicide should be applied pre-harvest at 1.9 litres per hectare plus 0.5% v/v of an approved surfactant in 50 to 100 litres per hectare of clean water, by ground application only. Apply only when the crop has 30% or less grain moisture content. This stage typically occurs 7 to 14 days before harvest. For forage crops, apply this product at 1.9 - 3.7 litres per hectare 3-7 days prior to the last cut before rotation or forage renovation. Consult the table "Guidelines for Timing of Preharvest Applications" for visual indicators of this stage in each crop. For the best weed control results quackgrass should be actively growing and have at least 4 to 5 green leaves. Canada thistle and perennial sow thistle should be actively growing and at or beyond the bud stage for best results. Common milkweed should be at the bud to bloom stage and actively growing for best results. Applications for weed control (not for harvest management) must be made at the correct stage of both weed and crop growth.

Apply only during the period 7-14 days (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	Less than 30	Majority (75%-80%) of pods are brown.
varieties)		
PEAS	Less than 30	Majority (75%-80%) of pods are brown.
LENTILS	Less than 30	Lowermost pods (bottom 15%) are brown and seeds rattle.
DRY BEANS	Less than 30	Stems are green to brown in color; pods are mature (yellow to brown in color); 80%-90% leaf drop (original leaves).
SOYBEANS	Less than 30	Stems are green to brown in color; pod tissue is dry and brown in appearance; 80%-90% leaf drop.
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.

Fir - Abies spp. Juniper - Junipus spp. Pine - Pinus spp. Spruce - Picea spp. Yew - Taxus spp. Mountain Ash - Sorbus spp. Poplar - Populus spp. Russian Olive - Elaeagnus spp. Willow - Salix 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 the "Mixing and Application Equipment Information" section of this label (5.3) 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 26 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.

WEED CONTROL IN TREE, VINE, BERRY AND OTHER CROPS

Crop	Rate (L/ha)	Pre- Harvest Interval (days)	Max. Appl. per Yr.	Weeds Controlled	Comments Always add 0.5% v/v of an approved surfactant - see section 5.2 (Refer to sections 7.1 and 8.1 for specific rates for weed control)
Apples Apricot Cherry (Sweet/ sour) Peaches Pears Plums	1.7-8.9	30	3	Annual and perennial weeds	
Apples Grapes	Tank Mix 1.7-8.9  + 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 according to the more restrictive label direction for each product in the mix - DO NOT apply to orchards or vineyards that have been established less than 1 or 3 years, respectively - Simazine rate is equivalent to 2.25-5.0 kg/ha Princep® Nine-T®, or 4.0-9.0 kg/ha Simadex®
Grapes	1.7-8.9	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

Сгор	Rate (L/ha)	Pre- Harvest Interval (days)	Max. Appl. per Yr.	Weeds Controlled	Comments Always add 0.5% v/v of an approved surfactant - see section 5.2 (Refer to sections 7.1 and 8.1 for specific rates for weed control)
					weeks prior to application - Do not apply to vines which have been established less than 3 years
Highbush (cultivated) blueberry	2.1-4.2	30	1	Quack- grass	- Use as a directed spray, with no more than 275 kPa pressure
Lowbush	0.75-1.5% 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)	1.7-2.6	14	-	Annual weeds	- Use as a directed spray, with no more than 275 kPa pressure
Walnut Chestnut Japanese heartnut	1.7-8.9	-	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 1.5% wiper solution (see "Wiper Applications".

Сгор	Rate (L/ha)	Pre- Harvest Interval (days)	Max. Appl. per Yr.	Weeds Controlled	Comments Always add 0.5% v/v of an approved surfactant - see section 5.2 (Refer to sections 7.1 and 8.1 for specific rates for weed control)
					section 9.12)
Cranberry	15% Solution (0.75L Manage 780 + 0.15 L surfactant + 4L water)	30	1	Annual and perennial weeds	- Apply using wick or wiper applicators (section 9.12)
Strawberry	0.75 - 1.5% solution (spot application) 26% solution (wiper application)	30	1	Emerged perennial weeds	- Apply when weeds are at a 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 applications
Sugar beets	0.75-1.5% solution (spot application )	Treated crop MUST NOT be harvested	1	Dodder species	- Apply when dodder is vigorously growing but before flowering See section 9.3 for instructions on spot treatments
Asparagus	0.93 – 1.85	7	1	Fall seeded ryegrass	- Apply in spring before emergence of crop shoots

<sup>®</sup> Princep and Nine-T are registered trademarks of Syngenta Canada Ltd.

® Simadex is a registered trademark of Aventis CropScience.

# 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 1.9 litres per hectare in 50 to 100 litres water per hectare. DO NOT USE A FALL APPLICATION IN ESTABLISHED/EXISTING GARDENS.

**Existing/Established Gardens**: Apply this product in the spring before the crop has emerged from the soil. Apply when weeds are at the growth stages described in the product label. A maximum of two 1.9 litres per hectare applications in 50 to 100 litres water per hectare 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 and surfactant, 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 centimetres above the desirable vegetation. Droplets or foam of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

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

# **NOTES**

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

#### weed.

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

**For Roller Applicators--**Mix 0.4 to 0.75 litre of this product in 10 litres water to prepare a 4 to 7.5% solution. Add 0.15 litre of an approved surfactant per 10 litres of water volume (1.5% surfactant by volume). Roller speed should be maintained at 50 to 150 rpm.

**For Wick or other Wiper Applicators**--Mix 0.75 litre of this product in 2 litres of water plus 0.15 litre of an approved surfactant to prepare a 26% solution.

# 10.0 NON-CROPLAND USES

INDUSTRIAL, RIGHTS-OF-WAY, RECREATIONAL, AND PUBLIC AREAS

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 used to control annual and perennial weeds and woody brush and trees listed on this label in non-crop areas such as railroad, pipeline, highway, power and telephone rights-of-way; petroleum tank farms and pumping installations; roadsides; storage areas; lumberyards; fence rows; industrial plant sites; parking areas; school yards, parks, golf courses, other public areas; airports and similar industrial or non-crop areas.

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

When applied as recommended under the conditions described, this product will control

weeds in non-cropland areas as listed in the following table.

# 10.1 WEED CONTROL IN NON-CROPLAND AREAS WITH MANAGE 780 HERBICIDE

HERBICIDE				
	GROUND A	PPLICATION**		
	BOOM APP	LICATION	Hand-Held High- Volume Application	
WEEDS	Rate* (L/ha)	Water Volume* (L/ha)	% Solution	COMMENTS (Always add 0.5% v/v of an approved surfactant - see section 5.2)
Annual grasses and broadleaves	1.7 - 2.6	50 - 100	0.75	.Actively growing weeds
Perennial Weeds				
Quackgrass	1.9	50 - 300	0.75	. Actively growing weeds
	3.5 - 5.2	50 - 300	1.5	. Higher rate for long term control and for heavy infestations
Canada Thistle (Bud Stage)	3.5 - 5.2	100 - 300	1.5	. Higher rate for long term control and for heavy infestations
Purple loosestrife	4.5	300-600	0.75 - 1.5 (or 26% for wiper application)	. See section 10.2.3 for instructions on purple loosestrife applications
Other Perennials	5.2 - 8.9	100 -300	1.5	. Summer through fall is optimum
Brush and Trees				
Birch, Cherry, Poplar, Western Snowberry, Willow	2.2 - 4.5	100 - 300	0.75 - 1.5	<ul><li>Summer through early fall (see section 10.2)</li><li>Late Summer through fall</li></ul>
Maple, Raspberry/ Salmonberry, Alder	4.5	100 - 300	1.5	. Fall is optimum

	GROUND AI	PPLICATION**		
	BOOM APPL	LICATION	Hand-Held High- Volume Application	
WEEDS	Rate* (L/ha)	Water Volume* (L/ha)	% Solution	COMMENTS (Always add 0.5% v/v of an approved surfactant - see section 5.2)
Turf Renovation  Annual and Perennial Weeds	1.9 - 8. 9	100 - 300	0.75 - 1.5	. Use higher end of the rate range for perennials
Roadside Vegetation  (1-2 m wide along shoulders) Annual Weeds (refer to Tank-Mix sections on product labels for specific weeds controlled)	1) 0.6-0.75 + 1.25-2.5L DyCleer®480 or 2) 0.6-0.75 + 0.30 L DyCleer 480 + 1.2L 2,4-D amine 500	25-150	-	Refer to annual weed control table in this label (section 7.1) for appropriate product rate for specific weeds     For 2,4-D amine formulations with a different guarantee, adjust the rate accordingly     No application to standing water.
Residual Control  Annual and Perennial Weeds (the simazine component of this tank mixture will provide season long control of most germinating broadleaf weeds and grasses. It may also provide post-emergent activity on certain annual weeds)	1.9 - 8.9 + a) 2.5-5.6 kg Simazine 80W or + b) 4.0-9.0 L Simadex® Flowable	200-400	-	Do not apply to coarse, sandy or gravelly soil. One application per year.  Use according to the most restrictive label directions for each product in the mixture.  For other simazine formulations registered for industrial/ noncropland areas, use equivalent rates: i.e.

	GROUND	APPLICATION*		
	BOOM APPLICATION		Hand-Held High- Volume Application	
WEEDS	Rate* (L/ha)	Water Volume* (L/ha)	% Solution	COMMENTS (Always add 0.5% v/v of an approved surfactant - see section 5.2)
				2.0-4.5 kg simazine/ha

<sup>\*</sup> For more information on rates, water volumes and application, refer to the "Annual and Perennial Weed Control" sections of this booklet (7.1 and 8.1 respectively).

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# 10.2 APPLICATION INFORMATION FOR NON-CROPLAND USES

# **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 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.

This product does not provide residual weed control. For subsequent weed control, follow a label approved herbicide program. Read and carefully observe the precautionary statements and all other information appearing on the labels of all herbicides used.

# 10.2.1 GROUND APPLICATIONS: For all non-cropland uses

For woody brush and trees, apply 2.3 to 4.5 litres of this product (plus an approved surfactant) per hectare. Use ground boom or boomless, or mist blower equipment, or apply as a 0.75 to 1.5% solution using hand-held high volume equipment. Apply as directed in the recommended volume of clean water to foliage of actively growing vegetation. Use the 4.5 litres per hectare rate for Maple, Alder and Willow species, as well as for hard to

<sup>\*\*</sup> Aerial application may be used for brush and tree control in Industrial rights-of-way only. See aerial application section (10.2.2).

control perennial weed species. (\* Suppression only)

Spray coverage should be uniform and complete. Do not spray to the point of runoff. Do not allow spray drift to contact desirable vegetation as severe injury or destruction may occur. If weeds have been mowed or tilled, do not treat until regrowth has reached the recommended stages.

# 10.2.2 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, or equivalent electronic positioning systems (GPS). The use of a spotter plane is recommended.

For woody brush and trees, apply 2.3 to 4.5 litres of this product per hectare. Use the 4.5 litres per hectare rate for Maple, Alder and Willow species, as well as 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 recommended range to ensure complete coverage. (\* Suppression only)

# **Use Precautions**

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 Basic Knowledge Requirements for Pesticide Education in Canada: Applicator Core* and *Aerial Module*, developed by CAPCO.

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 will 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 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 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 Monsanto Canada Custom Care Line at 1-800-667-4944 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this product must meet an/or conform to the following:

Volume: Apply the recommended rate in a spray volume of 30 to 100 litres per hectare.

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 this product 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.

# **10.2.3 PURPLE LOOSESTRIFE CONTROL**

- DO NOT TREAT PLANTS OVER OPEN WATER. Manage 780 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 handheld equipment, spray-to-wet.
- For wiper applications, see section 9.12
- Where feasible, remove flower heads before treatment to ensure prevention of seed set.
- For large (>1.6 hectares) 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.

# 10.3 SELECTIVE APPLICATION FOR ALL NON-CROPLAND USES

Selective equipment such as **WIPER** and **ROLLER** applicators can be used to control emerged weeds in non-crop areas and tree plantings. See **"Selective Equipment"** (section 9.12) for more information.

#### 10.4 TURFGRASS

When applied as directed, under conditions described, this product controls most existing vegetation. Apply this product at rates specified in the "Weed Control in Non-Cropland Areas" section (10.1).

# DO NOT DISTURB SOIL OR UNDERGROUND PLANT PARTS BEFORE TREATMENT.

Where existing vegetation is growing in a field or unmowed situation, apply this product to actively growing weeds at the stages of growth given in the "Weeds Controlled" section of this booklet. Where existing vegetation is growing under mowed turfgrass management, apply this product after omitting at least one regular mowing to allow sufficient growth for good interception of the spray and proper 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 underground plant parts. For maximum control of existing vegetation, delay establishment to determine if regrowth from escaped underground plant parts occurs. When repeat treatments are necessary, sufficient regrowth must be attained prior to application. Desirable turfgrasses may be established following the above procedures.

# 10.5 INJECTION APPLICATIONS - FOR ALL NON-CROPLAND USES

Woody vegetation may be controlled by injection application of this product. Apply using suitable equipment, which must penetrate into living tissue, at a rate of at least 0.4 millilitres of product (either undiluted or 1:1 with water) per 5 centimetres tree diameter at breast height (DBH). The cuts should be spaced evenly around the tree and below all major branches. Application may be made at any time of year, except when cold temperatures prevent adequate penetration of injection equipment, or in the spring during periods of heavy sap flow. Control of tree species with tree diameters greater than 20 centimetres may not be acceptable at this rate. Do not add surfactant.

This treatment is also effective when this product is used to prepare a carbopaste solution. This solution consists of herbicide, 5-10% carboxymethyl cellulose and 0.5% TiO<sub>2</sub> (opaquing agent) diluted with water. It should be formulated to deliver 0.18 g glyphosate active ingredient (0.4 millilitres of this product) per 5 centimetres DBH. A water soluble colourant may be added to the solution as a means of identifying treated trees.

Total control may not be evident for 1-2 years following treatment.

A partial list of species controlled includes:

ALDER HEMLOCK
Alnus spp Tsuga spp.

BIRCH MAPLE\*
Betula spp. Acer spp.

CEDAR PINE

Thuja spp. Pinus spp.

CHERRY POPLAR
Prunus spp. Populus spp.

DOUGLAS FIR WILLOW Pseudotsuga spp. Salix spp

# 10.6 CUT STUMP APPLICATION

Woody vegetation may be controlled by the application of this product to freshly cut stumps to prevent regrowth. The cut surface treatment uses a carbopaste application containing an equivalent amount of herbicide. (See Injection Applications section (10.5) for details of carbopaste preparation).

Because the treatment uses a concentrated solution, application must be made using low-pressure equipment e.g. squirt bottle or similar device. This product must be applied immediately to the surface of the freshly cut stump i.e. within 5 minutes for optimum control at the prescribed rates. Only the cambial tissues of the cut surface should be treated. Apply the herbicide solution at a rate equivalent to at least 0.4 millilitres product for every 5 centimetres DBH. Do not cover the remaining area nor any exposed roots, as this product does not penetrate bark well. This treatment may be used at any time of year, except during periods of heavy sap flow or when low temperatures prevent solution application due to freezing. A water soluble colourant may be added to the solution as a means of indicating which surfaces have been treated. Total control may not be evident until 1-2 years after treatment.

See the "Injection Applications" section (10.5) of this label for a partial list of species controlled.

<sup>\*</sup> This treatment may only provide suppression of Big-Leaf Maple. Late fall applications will provide optimum suppression of Big-Leaf Maple

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