

VISION

Silviculture herbicide

COMMERCIAL

CAUTION



IRRITANT

Water soluble herbicide for silvicultural sites

REGISTRATION NO. 19899 PEST CONTROL PRODUCTS ACT

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

READ THE LABEL BEFORE USING.

MONSANTO CANADA, INC.
Box 667
Mississauga, Ontario L5M 2C2

Table of Contents

1.0 PRECAUTIONARY STATEMENTS

- 1.1 *First Aid*
- 1.2 *Toxicological Information*
- 1.3 *Notice*
- 1.4 *Physical or Chemical Hazards*
- 1.5 *Storage*
- 1.6 *Spills*
- 1.7 *Environmental Hazards*
- 1.8 *Disposal*
- 1.9 *Emergency Numbers*

2.0 GENERAL INFORMATION

3.0 MIXING & APPLICATION INSTRUCTIONS

- 3.1 *Mixing*
- 3.2 *Application Instructions*
 - 3.2.1 *Application Rates*
 - 3.2.2 *Aerial Equipment*
 - 3.2.3 *Boom Equipment*
 - 3.2.4 *Boomless Equipment*
 - 3.2.5 *Hand Held and High Volume Equipment*
 - 3.2.6 *Mist Blower Equipment*

4.0 VEGETATION CONTROLLED

- 4.1 *Perennial Grasses/Sedges*
- 4.2 *Perennial Broadleaved Weeds*
- 4.3 *Woody Brush and Trees*

5.0 DIRECTIONS FOR USE

- 5.1 *Restricted Uses - Forest and Woodlands Management*
 - 5.1.1 *Site Preparation*
 - 5.1.2 *Conifer Release*
- 5.2 *Woodland Management*
 - 5.2.1 *Conifer Release (Ground Only)*
 - 5.2.2 *Conifer Release by Directed Spraying*
 - 5.2.3 *Deciduous Release (Ground Only)*
 - 5.2.4 *Injection Applications*
 - 5.2.5 *Cut Stump Application*
 - 5.2.6 *Forest Tree Planting Nurseries (Ground Only)*
 - 5.2.7 *Selective Equipment - Wiper Applicators*

1.0 PRECAUTIONARY STATEMENTS

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, clean-up or repair activities.

1.1 FIRST AID

IF IN EYES, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician or contact a poison control centre.

IF ON SKIN, immediately flush with plenty of water. Remove contaminated clothing. Wash clothing before re-use.

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

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

1.2 TOXICOLOGICAL INFORMATION

Treat symptomatically.

1.3 NOTICE

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

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 offence under the Pest Control Products Act to use a control product under unsafe conditions.

Not for reformulation or repackaging

1.4 PHYSICAL OR CHEMICAL HAZARDS

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fiberglass, plastic and plastic-lined steel containers.

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

1.5 STORAGE

Store product in original container only.

Avoid contamination of seed, feed and foodstuffs.

1.6 SPILLS

Soak up small amounts with absorbent clays.

Sweep or scoop up spilled materials and dispose of in an approved landfill.

Wash down surfaces (floors, truckbeds, streets, etc.) with detergent and water solution.

1.7 ENVIRONMENTAL HAZARDS

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

1.8 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 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, or for the clean-up of spills.

1.9 EMERGENCY NUMBERS

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

Accidents/Spills/MedicalEmergency..(314) 694-4000

or.....1-800-332-3111

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

Vision is a registered trademark, Monsanto and the vine symbol are trademarks of Monsanto Company, U.S.A.

Monsanto Canada Inc. - Licensee.

© 2001 MONSANTO COMPANY

2.0 GENERAL INFORMATION

When applied as directed under conditions described, this product controls undesirable vegetation listed on this label. This product also suppresses or controls undesirable vegetation listed on this label, when applied at recommended rates for release of established coniferous or deciduous species listed in the "**Conifer Release**" and "**Deciduous Release**" sections of this label.

This product may be applied using aerial and ground spray or wiper equipment for silvicultural site preparation, rights of ways, and conifer release, and ground spray or wiper equipment for deciduous release, forest road-side vegetation management and forest tree planting nurseries. Woody vegetation may be controlled by injection application of this product. See the "**Mixing**", "**Application Instructions**" and "**Selective Equipment**" sections of this label for information on how to properly apply this product.

For herbaceous weeds, woody brush, and trees controlled, see the "**Vegetation Controlled**" section of this label.

For specific site preparation instructions, see the "**Site Preparation, Forest Roadside and Rights of Way Vegetation Management**" section of the label.

For specific conifer or deciduous release instructions see the "Conifer Release" or "**Deciduous Release**" sections of this label.

Treatments should not be made to trees or brush after fall leaf drop has begun.

For specific forest tree planting nursery instructions, see the "**Forest Tree Planting Nurseries**" section of this label.

For specific injection application instructions, see the "**Injection Applications**" section of this label.

For specific instructions on use of wick or wiper applicators for vegetation control, see the "**Selective Equipment**" section of this label.

This product 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 susceptible perennial weeds, trees and woody brush, may not occur until 7 to 14 days. Extremely cool or cloudy weather at treatment time may slow down activity of this product and delay visual effects or control. Visible effects are a gradual wilting and yellowing of the plant which advance 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 "**Vegetation Controlled**" section of this label 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 herbaceous vegetation 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 on hard to control species or when vegetation growth is heavy or dense.

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

Rainfall occurring soon after application may reduce effectiveness. Heavy rainfall within 2 hours after application may wash the product off the foliage and a repeat treatment may be required.

Do not mix with any surfactant, pesticide, herbicide oils or any other material other than water unless specified in this label.

For best results spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

ATTENTION

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURING DESIRABLE PLANTS AND CROPS. Do not allow spray mist to drift, since even minute quantities of spray can cause severe damage or destruction to nearby crops, plants or other areas on which treatment is not intended, or may cause other unintended consequences. Apply only in wind conditions in compliance with local and/or provincial regulations. Do not apply when other climatic conditions, including lesser wind velocities, will allow significant 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.

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

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

3.0 MIXING & APPLICATION INSTRUCTIONS

3.1 MIXING

This product mixes readily with water.

For ground, aerial or industrial type sprayers, fill the spray tank with one half the required amount of water. Add the proper amount of herbicide (see "**Application Instructions**" section of the label) 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 to water source. Use of mechanical agitators may cause excessive foaming. By-pass 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.

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

3.2 APPLICATION INSTRUCTIONS

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

HAND GUN APPLICATIONS SHOULD BE PROPERLY DIRECTED TO AVOID SPRAYING DESIRABLE PLANTS.

AVOID DRIFT--Drift may cause damage to any vegetation contacted for which treatment is not intended. Applications in wind conditions in excess of local and/or provincial aerial spray regulations are not recommended.

To prevent injury to adjacent vegetation, appropriate buffer zones must be maintained.

Do not apply directly to any body of water populated with fish or used for domestic purposes. Do not use in areas where adverse impact on domestic water or aquatic species is likely.

3.2.1 APPLICATION RATES

To control or suppress herbaceous weeds, woody brush and trees, apply 3 to 6 litres of this product per hectare using aerial, ground boom or boomless, or mist blower equipment, or apply as a 1 to 2 percent solution using hand-held high volume equipment. Use the 6 litres rate for control of maple, alder or willow species. For control of perennial herbaceous weeds in site preparation applications using aerial, ground boom or boomless, or mist blower equipment, apply 7 to 12 litres of this product per hectare as directed in the recommended volume of clean water to the foliage of actively growing vegetation.

For specific rates for wick or wiper applicators, see the "Selective Equipment" section of this label.

3.2.2 AERIAL EQUIPMENT

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(s) recommended for aerial application on this label in 20 to 100 litres of water per hectare. For control of perennial weeds in site preparation applications using 7 to 12 litres of this product, use 50 to 100 litres of water per hectare. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. As density of vegetation increases, spray volume should be increased within the recommended range to ensure complete coverage.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices, or equivalent electronic positioning systems (GPS).

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.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. 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 the production of fine particles (mist). Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. Do not spray 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 a shelter belt)

Applicator 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 mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job must wash hands and face thoroughly before eating or drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

3.2.3 BOOM EQUIPMENT

For control of herbaceous weeds and woody brush and trees listed in the "Vegetation Controlled" section of this label using conventional boom equipment--Apply this product in 100 to 300 litres of clean water per hectare as a broadcast spray using no more pressure than 275 kPa.

3.2.4 BOOMLESS EQUIPMENT

For control of herbaceous weeds, woody brush and trees listed in the "Vegetation Controlled" section of this label using boomless equipment such as cluster nozzles--Apply this product in 100-350 litres of clean water per hectare as a broadcast spray using no more pressure than 275 kPa.

3.2.5 HAND HELD AND HIGH VOLUME EQUIPMENT (USE COARSE SPRAYS ONLY)

For control of herbaceous weeds, woody brush and trees listed in the "Vegetation Controlled" section of this label using knapsack sprayers or high volume spraying equipment utilizing handguns or other suitable nozzle arrangements.

Applications should be made on a spray-to-wet basis. Spray coverage should be uniform and complete. Do not spray to point of runoff.

3.2.6 MIST BLOWER EQUIPMENT

For control of herbaceous weeds, woody brush and trees listed in the "Vegetation Controlled" section of this label--Use the recommended rate of this product in at least 200 litres of water per hectare.

4.0 VEGETATION CONTROLLED

AVOID CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF NON-TARGET CROPS, SINCE DAMAGE TO THESE PLANTS MAY RESULT.

A PARTIAL LIST OF PERENNIAL HERBACEOUS WEEDS, WOODY BRUSH AND TREE SPECIES CONTROLLED INCLUDES:

4.1 PERENNIAL GRASSES / SEDGES

Blue Grass (Canada) <i>Poa compressa</i>	Foxtail Barley <i>Hordeum jubatum</i>
Blue Grass (Kentucky) <i>Poa pratensis</i>	Quackgrass <i>Agropyron repens</i>
Brome Grass (smooth) <i>Bromus inermis</i>	Yellow Nutsedge <i>Cyperus esculentus</i>
Cattail (common) <i>Typha latifolia</i>	

4.2 PERENNIAL BROADLEAVED WEEDS

Alfalfa <i>Medicago spp.</i>	Milkweed (common) <i>Asclepias syriaca</i>
Cottontop <i>Eriophorum chamissionis</i>	Poison Ivy <i>Rhus radicans</i>
Curled Dock <i>Rumex crispus</i>	Purple Loosestrife <i>Lythrum salicaria</i>
Dandelion <i>Taraxacum officinale</i>	SowThistle (peren.) <i>Sonchus arvensis</i>
Field Bindweed <i>Convolvulus arvensis</i>	Thistle (Canada) <i>Cirsium arvense</i>
Hemp Dogbane	Toad Flax

Apocynum cannabinum *Linaria vulgaris*
Hoary Cress **Wormwood (Absin.)**
Cardaria draba *Artemisia absinthium*
Knotweed (Japanese)
Polygonum cuspidatum

4.3 WOODY BRUSH AND TREES

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

* Apply as a 1-2 percent solution.

** Suppression only.

*** Used in conjunction with an additional silicon-based surfactant (such as Sylgard 309®)

Sylgard 309 is a registered trademark of Dow AgriSciences.

See "**Mixing & Application Instructions**" and "**Forest-**" or "**Woodland- Management**" sections of this label for additional information.

For perennial broadleaf weeds, apply when most weeds have reached early head or early bud stage of growth. For annual and perennial grasses, apply when most weeds are at least 20 cm in height (the 3-4 leaf stage of growth).

If herbaceous weeds have been mowed, tilled, or scarified, do not treat until regrowth has reached the recommended stages, as reduced effectiveness will result. Most herbaceous weeds 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. Allow 7 or more days after application before tillage or other soil disturbance. Repeat treatments may be necessary to control weeds regenerating from underground parts or seed.

5.0 DIRECTIONS FOR USE

Spray coverage should be uniform and complete. Do not spray to the point of runoff. Do not allow spray drift to contact non-target desirable vegetation as severe damage may occur.

5.1 RESTRICTED USES - FOREST AND WOODLANDS MANAGEMENT

Ground/Aerial Application for Sites greater than 500 hectares (Forestry Use)

Aerial Application for Sites 500 hectares or less (Woodlands Use)

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.

NATURE OF RESTRICTION: This product is to be used only in the manner authorized; consult local pesticide regulatory authorities about use permits which may be required.

Do not apply to any body of water populated with fish or used for domestic purposes. Do not use in areas where adverse impact on domestic water or aquatic species is likely.

In order to reduce the drift hazard to non-target plants and aquatic species when aerially treating silvicultural sites, ensure that appropriate buffer zones are maintained.

5.1.1 SITE PREPARATION

Use this product as broadcast treatment at recommended rates, as listed in the "**Application Rates**" section, to control herbaceous weeds, woody brush and tree species listed in the "**Vegetation Controlled**" section. Apply when brush and tree species are actively growing and when foliage is full and well-developed. For best results apply in late summer or early fall. Some autumn colours on undesirable deciduous species are acceptable provided no major leaf fall has occurred. Following site preparation application of this product, any silvicultural species may be planted.

For control of vegetation on sites with infestations of ericaceous species (eg. *Kalmia* spp - sheep laurel, lamb kill), use 6 litres per hectare Vision and an additional silicon-based surfactant (such as Sylgard 309) as per label instructions. Apply between mid-August and mid-September for maximum performance.

5.1.2 CONIFER RELEASE

Use this product as a broadcast spray at recommended rates, as listed in the "**Application Rates**" section, to control herbaceous weeds, woody brush and tree species, as listed in "**Vegetation Controlled**" section of this label, to release from competition the coniferous species listed below:

Douglas Fir	Pine
<i>Pseudotsuga</i> spp.	<i>Pinus</i> spp.
Fir	Spruce
<i>Abies</i> spp.	<i>Picea</i> spp.
Hemlock	
<i>Tsuga</i> spp.	

For conifer release of spruce seedlings in the year of transplanting, apply 2 to 6 litres of this product per hectare in plantations of summer planted spruce species (*Picea glauca*, *P. engelmannii* and their hybrids). Conifers must be planted in the same year as treatment and in the field for at least 18 days prior to treatment. Seedlings to be treated must clearly show bud set and bud hardening following a dormancy induction regime in the nursery. The need for such early release treatments is expected on sites which are subject to the rapid development of herbaceous and shrub communities.

Most annual and perennial weeds will be controlled or suppressed. Applications must be made after formation of final conifer resting buds. Applications made during period of active conifer growth may result in conifer injury. Avoid application during Lammas or late season conifer growth. Some autumn colors are acceptable provided no major leaf fall has occurred on undesirable brush and tree species.

For conifer release, apply where conifers have been established for more than a year. Vegetation should not be disturbed immediately prior to treatment or until visual signs appear after treatment. Symptoms of treatment are slow to appear, especially in woody species treated in late fall. Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied or when applications are made during periods of active conifer growth.

NOTE : This product is not recommended for use as an over-the-top broadcast spray in forest tree nurseries or in Christmas tree plantations. Applications in such sites should be limited to directed sprays (see section 5.2.2, "**Conifer Release by Directed Spraying**"). DO NOT TREAT Christmas tree plantations in the year of anticipated harvest.

5.2 WOODLAND MANAGEMENT

Treatment of 500 hectares or less

SITE PREPARATION (Ground Only), FOREST ROADSIDE (Ground Only) and RIGHTS-OF-WAY VEGETATION MANAGEMENT (Ground or Aerial)

Use this product as a broadcast treatment at recommended rates, as listed in the "**Application Rates**" section, to control herbaceous weeds, woody brush and tree species listed in the "**Vegetation Controlled**" section. For control of herbaceous weeds, apply when most perennial broadleaf weeds have reached the early head or early bud stage of growth. For perennial grasses, apply when most weeds are 20 centimetres in height. Apply when brush and tree species are actively growing and when foliage is full and well-developed. For best results apply in late summer or early fall. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf fall has occurred. Following site preparation application of this product, any silvicultural species may be planted.

For control of vegetation on sites with infestations of ericaceous species (eg. *Kalmia* spp - sheep laurel, lamb kill), use 6 litres per hectare. Vision in the recommended water volume and an additional silicon-based surfactant (such as Sylgard 309) as per label instructions. Apply between mid-August and mid-September for maximum performance.

5.2.1 CONIFER RELEASE (Ground Only)

Use this product as a broadcast spray at recommended rates, as listed in the "**Application Rates**" section, to control herbaceous weeds, woody brush and tree species, as listed in "**Vegetation Controlled**" section of this label, to release from competition the coniferous species listed below:

Douglas Fir	Pine
<i>Pseudotsuga</i> spp.	<i>Pinus</i> spp.
Fir	Spruce
<i>Abies</i> spp.	<i>Picea</i> spp.
Hemlock	
<i>Tsuga</i> spp.	

For conifer release of spruce seedlings in the year of transplanting, apply 2 to 6 litres of this product per hectare in plantations of summer planted spruce species (*Picea glauca*, *P. engelmannii* and their hybrids). Conifers must be planted in the same year as treatment and in the field for at least 18 days prior to treatment. Seedlings to be treated must clearly show bud set and bud hardening following a dormancy induction regime in the nursery. The need for such early release treatments is expected on sites which are subject to the rapid development of herbaceous and shrub communities.

Most annual and perennial weeds will be controlled or suppressed. Applications must be made after formation of final conifer resting buds. Applications made during period of active conifer growth may result in conifer injury. Avoid application during Lammas or late season conifer growth. Some autumn colors are acceptable provided no major leaf fall has occurred on undesirable brush and tree species.

For conifer release, apply where conifers have been established for more than a year. Vegetation should not be disturbed immediately prior to treatment or until visual signs appear after treatment. Symptoms of treatment are slow to appear, especially in woody species treated in late fall. Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied or when applications are made during periods of active conifer growth.

NOTE : This product is not recommended for use as an over-the-top broadcast spray in forest tree nurseries or in Christmas tree plantations. Applications in such sites should be limited to directed sprays (see "**Conifer Release by Directed Spraying**" section). DO NOT TREAT Christmas tree plantations in the year of anticipated harvest.

5.2.2 CONIFER RELEASE BY DIRECTED SPRAYING

Use this product to control herbaceous and woody species as listed in the "**Vegetation Controlled**" section of the label.

Apply when the undesirable species are actively growing and the foliage is full and well-developed. This product does not provide pre-emergent weed control. Repeat treatments may be necessary to control weeds that generate from underground parts or seed.

Undesirable deciduous species may be treated when they already have autumn colours, provided there has been no major leaf fall. For perennial broadleaf species, apply when most weeds have reached early head or early bud stage of growth. For annual and perennial grasses, apply when most weeds are 20 centimetres in height (3-4 leaf stage of growth).

Direct spray so that the foliage of undesired vegetation is thoroughly wetted. Do not spray foliage to the point of run-off. Applying the product to conifers during their period of active growth (before lignification) may cause tree injury. Under such conditions, take the necessary precautions to ensure that spray, mist or spray drift does not come into contact with the foliage or green bark of conifers being cultivated.

The product may be applied on sites regenerated by the following species (partial list): SPRUCE (*Picea spp.*), PINE (*Pinus spp.*), HEMLOCK (*Tsuga spp.*), DOUGLAS FIR (*Pseudotsuga spp.*). No time interval is required between tree planting and application of the product. For specific rates and application instructions, see the "**Mixing Instructions**", "**Application Instructions**" and "**Vegetation Controlled**" sections of the product label.

Do not allow spray to come in contact with foliage, green stems or fruit of non-target crops, since they may be killed or severely damaged.

5.2.3 DECIDUOUS RELEASE (Ground Only)

Use this product to control herbaceous weeds and woody brush mentioned in the "**Vegetation Controlled**" section of the label.

Apply when the undesirable species are actively growing, and the foliage is well developed. This product has no pre-emergent activity. Repeat treatments may be required for species which regenerate from underground stems or from seeds. Applications may be made to undesirable deciduous species with some autumn colours, provided that major leaf fall has not yet occurred.

Use a directed spray to thoroughly cover the foliage of the undesirable vegetation. Take all necessary precautions to prevent contact of the spray, spray mist or spray drift with the foliage or green bark of desirable species.

A partial list of species for use with this product on regenerated sites includes: ASH (*Fraxinus spp.*); WALNUT (*Juglans spp.*); LINDEN or BASSWOOD (*Tilia spp.*); CHERRY (*Prunus spp.*); OAK (*Quercus spp.*); ELM (*Ulmus spp.*) and POPLAR (*Populus spp.*). Product may be applied immediately after transplanting.

For use rates and application instructions, refer to the "**Application Rates**" and "**Application Instructions**" sections of this label.

5.2.4 INJECTION APPLICATIONS

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 0.5 millilitres (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.

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

A partial list of species controlled includes:

Alder <i>Alnus spp.</i>	Maple* <i>Acer spp.</i>
Birch <i>Betula spp.</i>	Pine <i>Pinus spp.</i>
Cedar <i>Thuja spp.</i>	Poplar <i>Populus spp.</i>
Cherry <i>Prunus spp.</i>	Willow <i>Salix spp.</i>

Douglas-fir
Pseudotsuga spp.

Hemlock
Tsuga spp.

* This treatment may only provide suppression of Big-Leaf Maple. Late fall applications will provide optimum suppression of Big-Leaf Maple

5.2.5 CUT STUMP APPLICATION

Woody vegetation may be controlled by the application of this product to freshly cut stumps to prevent regrowth. 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 0.5 mL Vision herbicide for every 5cm of 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 of this label for a partial list of species controlled.

5.2.6 FOREST TREE PLANTING NURSERIES (GROUND ONLY)

This product may be used to control most annual and perennial weeds for site preparation prior to establishing plantations, or as a post directed spray in established plantations. Application may be made to established deciduous plantings of 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.*; and WILLOW, *Salix spp.*. Applications may be made prior to or in established conifer plantings of FIR, *Abies spp.*; JUNIPER, *Juniperus spp.*; PINE, *Pinus spp.*; SPRUCE, *Picea spp.*; and YEW, *Taxus spp.*. SPRAY MAY CONTACT MATURE BARK ONLY. AVOID SPRAY CONTACT WITH FOLIAGE OR GREEN BARK OF ESTABLISHED PLANTINGS IN POST DIRECTED APPLICATIONS.

For specific rates and applications instructions, see "Application Rates" and "Application Instructions" section of this booklet. DO NOT APPLY UNDER WIND OR OTHER CONDITIONS WHICH ALLOW DRIFT TO OCCUR. If weeds have been mowed or tilled do not treat until regrowth has reached the recommended stages.

This product does not provide pre-emergence weed control. Repeat treatments may be necessary to control weeds generating from underground parts or seed.

NOTE : This product is not recommended for use as an over-the-top broadcast spray in forest tree nurseries or in Christmas tree plantations. Applications in such sites should be limited to directed sprays (see "Conifer Release by Directed Spraying" section). DO NOT TREAT Christmas tree plantations in the year of anticipated harvest.

5.2.7 SELECTIVE EQUIPMENT - WIPER APPLICATORS

This product may be applied with a wiper applicator, after dilution and thorough mixing water, to listed weeds in the "Vegetation Controlled" section of this label. It may be used in any forestry site specified in this label.

A wiper applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation, except in cases of conifer release operations where conifers are well hardened off (see "Conifer Release" Section); in these cases, a slight contact between the wiper and the conifer may be acceptable. Performance may be improved by reducing speed in areas of heavy 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.

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.
- 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 kilometres per hour. 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 Wick or other Wiper Applicators—Mix 1 litre of this product in 2 litres of water to prepare a 33 percent solution.