

(Sleeve)

GROUP	4	HERBICIDE
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**NUFARM**

**ESTAPROP® XT**  
**Liquid Herbicide**

CONTAINS DICHLORPROP-P AND 2,4-D EMULSIFIABLE CONCENTRATE

For use in wheat, barley, industrial and non-crop land.

**COMMERCIAL**

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

ACTIVE INGREDIENT: Dichlorprop-P... 210 g a.e./L  
2,4-D... 400 g a.e./L  
(Both present as 2-ethylhexyl ester)

REGISTRATION NO. 29660

PEST CONTROL PRODUCTS ACT



WARNING

POISON

(1 to Bulk L)

Nufarm Agriculture Inc.  
5101, 333 - 96th Ave NE  
Calgary, Alberta T3K 0S3  
1-800-868-5444

**24 Hour Emergency Response Number 1-800-424-9300**

ESTAPROP® is a registered trademark of Nufarm Agriculture Inc.

**PRECAUTIONS:**

KEEP OUT OF REACH OF CHILDREN. Harmful or fatal if swallowed. Avoid contact with skin, eyes and clothing. Wash concentrate from skin or eyes IMMEDIATELY. After use, wash hands and other exposed skin. Avoid breathing spray mist.

**PROTECTIVE CLOTHING AND EQUIPMENT:**

**Handling the concentrate (Mixing/Loading) for All scenarios:** Mixers/loaders must wear coveralls over a long-sleeved shirt, long pants and chemical-resistant gloves, socks and shoes and protective eye wear (face shield or safety goggles). Rinse gloves before removal. When handling more than 660 L of this product per day workers must also use a closed system.

**Application using Ground or Aerial Equipment:** Applicators must wear coveralls over a long-sleeved shirt and long pants, socks and shoes. Chemical-resistant gloves must also be worn during clean-up and repair activities. Rinse gloves before removal. Gloves are not required during application when applicator is in an enclosed tractor or an enclosed airplane cockpit.

**Application Using Mechanically-Pressurized Handgun and Manually Pressurized Handwand (Backpack) Sprayers:** Applicators must wear coveralls over a long-sleeved shirt, long pants and chemical-resistant gloves. Mixers/loaders/applicators using mechanically-pressurized handguns or backpack sprayers must wear a respirator if they will be handling more than 12.5 L of this product per day. DO NOT handle more than 20 L of this product per day.

Do not enter or allow worker entry into treated areas during the Restricted Entry Interval (REI) of 12 hours after application for agricultural uses.

Do not enter or allow entry into treated non-crop land/industrial sites until residues have dried.

Apply only when the potential for drift to areas of human habitation or areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

**OPERATOR USE PRECAUTIONS:**

- Wear freshly laundered clothing and clean protective equipment daily.
- Rinse gloves before removal.
- Wash hands before eating, drinking, using tobacco or using the toilet.
- If herbicide penetrates clothing remove immediately; then wash thoroughly and put on clean clothing. Throw away clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate.
- After using this product, remove clothing and launder separately and promptly, and thoroughly wash hands and exposed skin with soap and water. Follow manufacturer's instructions for cleaning personal protective clothing and equipment.

If no such instructions for washables are provided, use detergent and hot water. Keep and wash personal protective equipment separate from household laundry.

- After work, remove all clothing and shower using soap and water.

#### **ENVIRONMENTAL HAZARDS:**

This product contains an active ingredient and aromatic petroleum distillates which are toxic to aquatic organisms. Toxic to small mammals, birds, aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

This product will harm other broadleaved plants in the vicinity of the treatment area. If applying this product using a mechanically pressurized handgun or backpack sprayer, do not directly spray or allow the spray to drift onto ornamentals or gardens.

Do not spray exposed roots of trees and ornamentals.

The use of this chemical may result in contamination of groundwater particularly in areas where soils are permeable (e.g. sandy soil) and/or the depth to the water table is shallow. To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay. Avoid application when heavy rain is forecast. Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body. Do not irrigate within 24 hours after application.

#### **FIRST AID:**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**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.

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

#### **TOXICOLOGICAL INFORMATION:**

No specific antidote. Contains petroleum distillates. Do not induce vomiting. Vomiting may cause aspiration pneumonia.

This product may cause mild irritation to the eyes. Overexposure to 2,4-D may cause coughing, burning, dizziness or temporary loss of muscle coordination. Other possible

effects of overexposure include fatigue, muscle weakness or nausea. Treat symptomatically.

**EMERGENCY TELEPHONE NUMBERS:**

For spills or transportation accidents, Chemtrec, 1-800-424-9300.

For health or environmental emergencies, ProPharma Group, 1-877-325-1840.

For product and use information, Nufarm Agriculture Inc., 1-800-868-5444.

**STORAGE CONDITIONS:**

Store the container tightly closed away from seeds, fertilizer, plants and foodstuffs. May be stored at any temperature. **SHAKE WELL BEFORE USING.**

**DISPOSAL:**

**For 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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For disposal, this container may be returned to the point of purchase (distributor/dealer).

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

**NOTICE TO USER:**

This pest control product is to be used only in accordance with the directions on the label.

It is an offence under the *Pest Control 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

18-1736

(Booklet)

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**NOTICE TO USER:**

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**DIRECTIONS FOR USE:**

**As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.**

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

DO NOT enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

**RESISTANCE-MANAGEMENT RECOMMENDATIONS:**

For resistance management, Nufarm ESTAPROP® XT Liquid Herbicide is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to Nufarm ESTAPROP XT Liquid Herbicide and other Group 4 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 Nufarm ESTAPROP XT Liquid Herbicide or other Group 4 herbicides within a growing season (sequence) or among growing seasons 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. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- Herbicide use should be based on an integrated weed management program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical control methods), cultural (for example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, only one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed production in the affected area if possible by an alternative herbicide from a different group. Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving between fields and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.

- 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 Nufarm Agriculture Inc. at 1-800-868-5444 or at [www.nufarm.ca](http://www.nufarm.ca).

#### **GENERAL USE PRECAUTIONS:**

Nufarm ESTAPROP XT Liquid Herbicide may cause damage to susceptible crop, ornamental, and other plants, even in minute quantities.

Avoid spray drift to any desirable vegetation. Coarse sprays are less likely to drift.

Do not spray during periods of high winds.

Do not graze or cut treated crops for forage until 40 days after application.

Withdraw meat animals from treated fields at least 3 days before slaughter.

Observe a minimum interval to harvest of 60 days after treatment.

Observe a minimum plant-back interval of 30 days.

#### **MIXING:**

Shake well before using. To ensure even mixing, half fill the sprayer tank with clean water, add the required amount of Nufarm ESTAPROP XT Liquid Herbicide and agitate thoroughly. Add the remainder of the water and agitate before spraying. If the spray solution has been left standing, agitate thoroughly before use. Wash sprayer thoroughly after use.

For containers larger than 20L: Use a transfer system that avoids open pouring when transferring the liquid concentrate from such containers into the spray tank.

#### **EQUIPMENT AND SPRAY VOLUME:**

**Field sprayer application:** DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. Boom height must be 60 cm or less above the crop or ground.

Apply in 50 to 200 litres of water per hectare by ground equipment unless otherwise indicated. Higher water volumes will reduce the risk of crop injury.

**Aerial application:** DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) coarse classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distributions along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

Apply in a minimum of 30 litres of water per hectare by aerial equipment.

Use spray nozzles and pressures that deliver a medium to coarse quality spray.

Avoid generating fine, driftable droplets.

## **AGRICULTURAL FIELD CROP USES:**

### **CROPS, TIMING, RATES AND METHODS OF APPLICATION:**

Crops under stress from adverse environmental conditions such as excess moisture, drought, disease, etc. may suffer a further setback when Nufarm ESTAPROP XT Liquid Herbicide is applied; however, the crop injury that may occur is usually offset by the benefits of enhanced weed control.

Apply in warm weather when the crop and weeds are growing well, and the weeds are at a susceptible stage.

Avoid application during drought conditions or during exceptionally hot weather.

#### **CROP:**

Spring Cereals (spring wheat, durum wheat, and barley), not underseeded with legumes

#### **APPLICATION TIME:**

From the 4-leaf expanded to the early flag-leaf (shot blade) stage.

Do not apply more than one treatment per year.

#### **METHOD:**

Ground or Aerial application.

**RECOMMENDED RATE PER HECTARE:** 1.2 L

#### **CROP:**

Winter Wheat

#### **APPLICATION TIME:**

In spring, from full tillering to the shot blade stage.

Do not apply during and after the flag-leaf stage.

Do not apply to seedling winter cereals in the fall.

Do not apply more than one treatment per year.

#### **METHOD:**

Ground or Aerial application.

**RECOMMENDED RATE PER HECTARE:** 1.2 L

## **TANK MIX COMBINATIONS:**

Nufarm ESTAPROP XT Liquid Herbicide may be used in combination with selected grass herbicides in wheat and barley for the convenience of one-pass in-crop weed control.

Consult the label of the tank mix partner product, and follow the most stringent set of precautions, restrictions and directions for use.

Particular attention should be given to appropriate crop and weed growth stage for application, varietal and recropping restrictions, minimum water volumes, and application techniques and conditions.

<b>Partner Product</b>	<b>Crops</b>	<b>Application Technique</b>
Achieve Liquid Herbicide	Wheat (spring, winter, durum) Barley	Ground or aerial
Assert 300 SC Herbicide	Wheat (spring, durum) Barley	Ground only
Avenge 200-C Wild Oat Herbicide	Wheat (spring, winter, durum) Barley	Ground only
Everest Solupak 75 DF Herbicide	Wheat (spring)	Ground only
Horizon Herbicide Tank Mix or Signal Herbicide + Signal Adjuvant	Wheat (spring, durum)	Ground only
Puma <sup>120</sup> Super or Cordon	Wheat (spring, durum) Barley	Ground or aerial

#### TANKMIXTURES FOR BROADLEAF WEED CONTROL

<b>Herbicide Tank-Mix Partner</b>	<b>Crops</b>	<b>Rate (L/ha)</b>	<b>Additional Weeds</b>	<b>Mixing Order</b>
Refine Extra 75DF OR Refine SG	Spring, durum & winter wheat, barley	1.2 L Nufarm Estaprop XT Herbicide + 20 g Refine Extra 75DF OR 30 g Refine SG + 2 L / 1000 L spray solution of surfactant*	Annual broadleaves as on the respective Refine Extra 75DF OR Refine SG labels	Partially fill tank with water, then add Refine Extra 75DF OR Refine SG product. Agitate, add Nufarm Estaprop XT Herbicide. Agitate, add surfactant. Maintain agitation and complete filling**

\*See the Refine Extra 75DF OR Refine SG label for specific surfactant.

\*\* See the Refine Extra 75DF OR Refine SG label for specific mixing instructions.

#### **WEEDS CONTROLLED WITH 1.2 LITRES PER HECTARE:**

Annual sow-thistle	Perennial sow-thistle*
Ball mustard	Prickly lettuce (winter wheat)*****
Bluebur	Ragweeds
Burdock	Redroot pigweed
Canada fleabane (winter wheat)	Round-leaved mallow
Canada thistle*	Russian pigweed
Cocklebur	Russian-thistle**
Curled dock*	Shepherd's-purse

Dandelion season-long control (winter wheat)	Smartweeds***
Dog mustard	Spreading atriplex*****
Flixweed	Stinkweed
Giant ragweed*****	Stork's-bill
Hare's-ear mustard	Tartary buckwheat
Indian mustard	Tumble mustard
Kochia**	Volunteer rapeseed (Canola)
Lady's-thumb***	Volunteer sunflower
Lamb's-quarters	Wild buckwheat
Night-flowering catchfly*****	Wild mustard
Oak-leaved goosefoot	Wormseed mustard

\*Top growth control only

\*\* Spray before plants are 5 cm high

\*\*\* Spray before the 4-leaf stage

\*\*\*\* Spring annuals only

\*\*\*\*\*Post-emergence application, between full tillering and early flag leaf stage of winter wheat, 2 to 12-leaf stage of prickly lettuce; cotyledon to 6 leaf of Giant Ragweed; cotyledon to 10 leaf of Spreading atriplex. Pre-harvest interval (PHI): 40 days

**Toadflax - suppression only** (where suppression is a visual reduction in weed competition, i.e. reduced population and/or vigour). Degree of suppression will vary with the size of the Toadflax and environmental conditions prior and to following treatment. Apply when the majority of the toadflax are no taller than 15 cm. Use of Nufarm ESTAPROP XT Liquid Herbicide for suppression of toadflax in wheat or barley is part of a long-term planned approach for toadflax control, which includes spring and fall tillage, fall patch spraying, summerfallow and/or chemical fallow.

## **INDUSTRIAL AND NON-CROP USES:**

### **GENERAL BROADLEAF WEED CONTROL:**

Most perennial weeds are best controlled by spraying the foliage during the month of May or in early fall. Some species may require a second treatment. Spray weed infested areas with an even spray pattern, making sure weeds shielded by high grass are thoroughly wetted. Spray tall weeds to runoff. Apply 200 to 600 L/ha of spray mixture, the higher volume will assure better coverage, particularly where high grass cover is present. For Poison Ivy control see BRUSH CONTROL.

Nufarm ESTAPROP XT Liquid Herbicide mixes with oil or kerosene and emulsifies in water. To reduce potential drift hazard in non-crop locations, a drift control agent may be added. Follow all directions on the drift control agent label for the correct mixing sequence.

If this material is to be used in straight oil mixture, do not let water get into it or the finished mixture. This material forms an emulsion in water - not a solution. This tends to separate on standing. Provide agitation to prevent such separation and ensure a uniform spray mixture.

**ROADSIDES, UTILITY LINES, RAILWAY RIGHTS-OF-WAY, NON-CROP LAND:**

Apply 2.75 L/ha Nufarm ESTAPROP XT Liquid Herbicide. Some weeds may need a second treatment. If roadsides are cut for hay, the pre-harvest intervals must be observed.

Do not apply by air to roadsides

Do not apply more than two treatments per year.

Mixers/loaders/applicators using mechanically pressurized handguns must wear a respirator if they will be handling more than 12.5 L of this product per day. DO NOT handle more than 20 L of this product per day.

**WEEDS CONTROLLED WITH 2.75 LITRES PER HECTARE:**

Alfalfa	Goat's-Beard	Teasel
Bull Thistle	Goldenrod	Toadflax
Burdock	Hawkweed	Vetch
Buttercup	Horsetail (partial control)	Wild carrot
Canada Thistle	Milkweed (topkill)	Yellow rocket
Chicory	Mullein	
Cinquefoil	Perennial Sow thistle	
Curled dock	Plantain	
Dandelion	Sweet clover	
Dogbane	Tansy	

Also see list of weeds controlled with 1.2 L/ha

**BRUSH CONTROL:**

For best results apply on the foliage and stems just prior to or just after brush is in full leaf in the late spring or early summer. Many species may require re-treatment the following year. Thoroughly wet down all foliage and stems to ground level. Apply 750 to 1500 L of spray mixture per hectare depending on brush density and height.

Use 6.0 L of Nufarm ESTAPROP XT Liquid Herbicide per 1000 L of water to control:

Buckbush	Scotch Pine	Wild Cherry
Hawthorn	Sugar Maple	Wild Plum
Poplar	White Cedar	Wild Raspberry

Use 8.0 L of Nufarm ESTAPROP XT Liquid Herbicide per 1000 L of water to control:

Alder	Ground juniper	Rose (some regrowth)
Aspen	Hardhack	Silver maple
Basswood	Hazel	Sugar maple
Balsam Fir	Hickory	Sumac
Birch	Honeysuckle	Tamarack
Bur oak	Manitoba maple	White oak
Blueberry	Poison ivy	Wild apple
Elderberry	Raspberry	Willow
Elm	Red Pine	

### **1. FOLIAGE METHOD:**

This is the standard method for high volume sprays along fencerows, highways, rights-of way. Use it as a first spray on thick brush composed of mixed species. Apply spray to both foliage and stems of all plants from the time foliage is fully developed in spring until plants begin to go dormant. For effective control, all leaves, stems and suckers must be thoroughly wet to ground line. Some regrowth may be expected on resistant species such as ash, oak and maple. Mix thoroughly before spraying. Apply with power equipment. Cover all foliage and stems to the point of run-off. Brush and trees over 3 metres should be cut close to the ground and sprayed when the regrowth is over 0.6 metres tall.

To control mixed deciduous and coniferous species such as aspen, alder, cherry, balsam, poplar, basswood, birch, elm, bur oak, spruce, pine, fir, tamarack, and white cedar, apply a mixture of 5.7 litres Nufarm ESTAPROP XT Liquid Herbicide plus 6.25 litres Vanquish Herbicide (480 g/L) per 1000 litres of water when leaves of deciduous species are fully expanded.

Mixers/loaders/applicators using mechanically pressurized handguns must wear a respirator if they will be handling more than 12.5 L of this product per day. DO NOT handle more than 20 L of this product per day.

### **2. BASAL TREATMENT:**

Controls hard-to-kill woody plants. The solution can be applied to the basal part of standing brush during any time of the year. This treatment is not effective for Basswood and Ash. Apply thoroughly to cause runoff on all sides of stems from ground line to 1 metre high. Apply with the basal bath method on scattered brush or as a second spray on species resistant to a first foliage spray. Apply with low volume knapsack sprayer or power equipment. Concentration will depend on species present, volume of spray used and season applied.

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### **Rates:**

Susceptible and intermediate species: Mix 1.6 L in 100 L of diesel or fuel oil.



Hard-to-kill species: Mix 2.2 L in 100 L of diesel or fuel oil.

### **3. MODIFIED BASAL TREATMENT:**

Drench the base of plants, then wet remaining stems and leaves to run-off, spraying 4/5 of the plants from bottom up. Treat when brush is in full foliage. This method may be used where susceptible species have been controlled by prior sprays and resistant species, such as maple, oak and ash remain. Drenching the base of the plant and wetting all stems to run-off is essential for complete control.

Mixers/loaders/applicators using mechanically pressurized handguns must wear a respirator if they will be handling more than 12.5 L of this product per day. DO NOT handle more than 20 L of this product per day.

#### **Rates:**

Early season spraying: Add 5.5 – 8.3 L of Nufarm ESTAPROP XT Liquid Herbicide to 100 L of diesel or fuel oil and mix thoroughly. Add this mixture to 890 L of water.

During dry weather, or the latter part of spray season: Add 8.3 L Nufarm ESTAPROP XT Liquid Herbicide to 150 L of diesel or fuel oil and mix thoroughly. Add this mixture to 840 L of water.

Stir thoroughly before spraying, particularly if material is allowed to stand for more than one hour after mixing.

### **4. CUT SURFACE METHOD:**

#### **a. Stump Treatment**

To prevent regrowth treat stumps immediately after cutting by spraying or painting stumps, exposed roots and cut surface. Thorough drenching is essential.

#### **b. Frill Treatment:**

This method is recommended for resistant standing trees of more than 13 to 15 cm in diameter. Make a frill by using an axe to cut overlapping notches in a continuous ring around the trunk near its base. Cut frills with axe (downward) close together around trunk without removing bark. Spray or paint exposed wood until runoff. Pour in as much of this mixture as the frill will hold without wasting chemical. Treat freshly cut frills at anytime of the year.

Mixers/loaders/applicators using mechanically pressurized handguns must wear a respirator if they will be handling more than 12.5 L of this product per day. DO NOT handle more than 20 L of this product per day.

#### **Rates:**

Mix 2.25 L in 100 L of diesel or fuel oil.

### **5. AERIAL APPLICATION METHOD:**

For control of aspen, poplar and white birch, mix 5.8 L of Nufarm ESTAPROP XT Liquid Herbicide plus 5.2 L of Vanquish Herbicide. This tank-mix may be applied

aerially in not less than 85 L of water per hectare. Do not spray when wind velocities are above 8 kph.

### **Generic Aerial Application Label Instructions**

#### **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. No human flaggers are permitted

#### **Use Precautions**

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

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

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that 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 the generic label recommendations on the existing ground boom label.

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

**Product Specific Precautions**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer or obtain technical advice from the distributor or your provincial agricultural representative.

**BUFFER ZONES TO PROTECT SENSITIVE TERRESTRIAL AND AQUATIC HABITATS:**

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

For application to rights-of-way, buffer zones for protection of sensitive terrestrial habitats are not required; however, the best available application strategies which minimize off-site drift, including meteorological conditions (e.g., wind direction, low wind speed) and spray equipment (e.g., coarse droplet sizes, minimizing height above canopy), should be used. Applicators must, however, observe the specified buffer zones for protection of sensitive aquatic habitats.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Seasonal water bodies require buffer zones if there is water in them during application. Water bodies which do not fill on an annual basis need not be buffered.

Method of application	Crop		Buffer Zones (metres) Required for the Protection of:				
			Freshwater Habitat of Depths:		Estuarine/Marine Habitats of Depths:		Terrestrial habitat
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field sprayer*	Wheat and barley		1	0	0	0	1
	Non-cropland (Herbaceous weeds)		1	1	1	1	2**
	Non-cropland, Industrial sites (brush control)		3	1	1	1	5**
Aerial	Wheat and barley	Fixed wing	5	0	0	0	30
		Rotary wing	3	0	0	0	30

	Non-cropland (brush control)	Fixed wing	100	0	1	0	225**
		Rotary wing	50	0	1	0	125**

\*For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labelled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

\*\*Buffer zones for the protection of terrestrial habitats are not required for use on rights-of-way including railroad ballast, rail and hydro rights-of-way, utility easements, roads, and training grounds and firing ranges on military bases.

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

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