



## **PRECAUTIONS**

### **KEEP OUT OF REACH OF CHILDREN.**

Severely irritating to the eye. DO NOT get in eyes. May irritate the skin. Avoid contact with skin. Wash concentrate from skin or eyes immediately. Do not inhale fumes. Avoid breathing spray mist.

## **PROTECTIVE CLOTHING AND EQUIPMENT**

### **All Application Equipment**

- When mixing/loading, wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, shoes, protective eye wear (face shield or safety glasses) and rubber boots. Rinse gloves before removal.
- When handling more than 663 L of Restore II Herbicide per day workers must also use a closed system.

### **Application Using Handheld Equipment**

- Applicators must wear coveralls over a long-sleeved shirt, long pants and chemical-resistant gloves.
- Mixers/loaders/applicators using handheld equipment must wear a respirator if they will be handling more than 12.5 L Restore II Herbicide per day (equivalent to 5 kg a.e. of 2,4-D).
- DO NOT handle more than 20 L Restore II Herbicide per day (equivalent to 8 kg a.e. of 2,4-D).

### **Application Using Aerial Equipment**

- Applicators must wear coveralls over a long-sleeved shirt and long pants. Chemical-resistant gloves must also be worn during clean-up and repair activities.
- No human flaggers are permitted.

### **Application Using Groundboom Equipment**

- Applicators must wear coveralls over a long-sleeved shirt and long pants. Chemical-resistant gloves must also be worn during clean-up and repair activities

**Worker reentry** - Do not enter or allow worker entry to treated area for 12 hours following application.

Refer to Directions for Use section for any additional requirements.

## **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.
- Remove clothing and personal protective equipment immediately after handling this product. As soon as possible, wash hands and exposed skin thoroughly with soap and water and change into clean clothing. 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 clothing and personal protective equipment separate from household laundry.
- After work, remove all clothing and shower using soap and water.
- Applicators using handheld equipment must wear a respirator if they are going to be handling more than 12.5 L Restore II Herbicide per day (equivalent to 5 kg a.e. of 2,4-D). Under no circumstance should applicators handle more than 20 L of Restore II Herbicide per day (equivalent to 8 kg a.e. of 2,4-D).

## **TRANSFER SYSTEM**

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.

## **SPRAY DRIFT PRECAUTIONS**

Apply only when the potential for drift to areas of human habitation and 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.

## **FIRST AID**

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

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

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

**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.

## **TOXICOLOGICAL INFORMATION**

No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient. 2,4-D may cause severe 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.

## **ENVIRONMENTAL PRECAUTIONS**

- Toxic to small wild mammals, birds, aquatic organisms and non-target terrestrial plants.
- Observe spray 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 handheld sprayer, do not directly spray or allow the spray to drift onto ornamentals or gardens.
- Do not spray exposed roots of trees and ornamentals.

## **LEACHING**

This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

## **RUNOFF**

- To reduce runoff from treated areas into aquatic habitats avoid application to areas with 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 filter strip between the treated area and the edge of the water body.

## **STORAGE**

Store this product away from food or feed.

## **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/territorial requirements.

#### **Returnable containers**

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

#### **Refillable containers**

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

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

#### **DIRECTIONS FOR USE**

READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING. FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC WEED CONTROL OR CROP DAMAGE.

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/drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

#### **GENERAL USE PRECAUTIONS**

Avoid spray drift to any desirable vegetation as damage may occur. Avoid contamination of ponds, streams, rivers and other water sources. Do not spray during periods of high winds when spray is likely to drift. Coarse sprays are less likely to drift. Do not spray during periods of high temperatures when desirable vegetation may be under stress as damage to the desirable vegetation may occur. Applications should be avoided under conditions of drought or other environmental stresses.

For best results, apply Restore II Herbicide to young weeds that are actively growing at time of application.

Restore II Herbicide is highly active against broadleaf plants. This product is recommended for use on areas where loss of broadleaf forage plants, including legumes, can be tolerated.

#### **Sensitive Plants**

Restore II Herbicide works primarily through uptake by plant foliage and translocation throughout the plant. However, secondary herbicide activity may occur through soil uptake of the aminopyralid component of Restore II Herbicide. Very small amounts of aminopyralid can kill or damage sensitive broadleaf plants. Only spray pastures if injury to existing forage legumes can be tolerated. Care should be taken to avoid spraying desirable broadleaved plants during both growing and dormant periods.

Avoid application within the dripline (outermost edge of the tree canopy) of desirable coniferous and deciduous trees unless injury can be tolerated. Use special caution when using aminopyralid-based products around species with extensive lateral root systems, shallow rooting species and those that propagate vegetatively through layering.

Clippings or hay from vegetation which has been treated with aminopyralid should not be used for composting or mulching. Aminopyralid residues pass through animals unchanged and are still herbicidally active. The manure from animals grazing treated areas or fed treated hay should not be used around susceptible plants. Do not transfer livestock from treated grazing areas onto broadleaf crop areas without first allowing 3 days of grazing on untreated grass pasture.

Do not apply more than 2.4 L/ha of Restore II Herbicide per annual growing season to rangeland and pasture.

Only one application per growing season is permitted.

Restore II Herbicide cannot be applied on domestic or commercial turf grass.

### **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 S572.1) coarse classification. Boom height must be 60 cm or less above the crop or ground.

### **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 S572.1) coarse classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

### **Spray Equipment Precautions**

Clean all spray equipment thoroughly before use. Select nozzle tips to apply the recommended volume per hectare. Higher water volumes will reduce the risk of crop injury. Calibrate the sprayer and adjust the boom height to ensure uniform coverage.

Nozzles must be in good condition and spraying the same volume. Flat fan nozzle tips are recommended.

### **Equipment Clean-Up**

Thoroughly clean the herbicide sprayer before applying any other chemical on crops that may be damaged (see GENERAL USE PRECAUTIONS). Wash the outside of the sprayer and drain the tank completely. Remove and clean filters, screens and nozzle tips separately. Fill the sprayer tank with clean water. With the agitator running flush out the lines and boom, then drain. Fill the sprayer with clean water and for each 100L add 1 L household ammonia. Operate the pump and agitator for 15 minutes. If possible, let the solution remain in the tank and hoses overnight; recirculate and flush out the lines and boom, then drain. Rinse out twice with clean water, recirculating and draining each time. DO NOT contaminate irrigation or drinking water when cleaning the sprayer.

### **Tank Mixtures**

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Corteva Agriscience Canada Company at 1-800-667-3852 or [www.corteva.ca](http://www.corteva.ca) for information before applying any tank mix that is not specifically recommended on this label.

## APPLICATION DIRECTIONS

### Mixing

Half fill the spray tank with clean water. Add the required amount of product and agitate thoroughly. Fill the tank with clean water and agitate well before use.

**NOTE:** If spray solution has been left standing, agitate thoroughly before use.

### Application Rates and Weeds Controlled or Suppressed

Rate of Restore II Herbicide	Weeds
1.4 L/ha	<p><b>Weeds Controlled</b> Annual sow thistle, bluebur, bull thistle, burdock (&lt;4 leaf), Canada fleabane, Canada thistle, cocklebur, common broomweed, common plantain, common ragweed, daisy fleabane, false flax, flixweed, goat's beard, hairy buttercup, horsenettle, kochia, lamb's-quarters, musk or nodding thistle, mustards (except Dog and tansy), oxeye daisy, perennial sow-thistle, plumeless thistle, prickly lettuce, redroot pigweed, Russian pigweed, Russian thistle, shepherd's purse, spotted knapweed, stinging nettle, stinkweed, sweet clover, tall buttercup, tropic croton, tropical soda apple, volunteer canola, wild radish, wild sunflower, yellow star thistle</p>
2.12 L/ha	<p><b>Weeds Controlled</b> Bitter sneezeweed, common chickweed, common purslane, cudweed, curled dock (&lt; 4 leaf), dog mustard, oak-leaved goosefoot, groundsel, hairy fleabane, hawkweed, heal-all, knotweed (&lt;4 leaf), narrow-leaved hawk's-beard, peppergrass, pineappleweed, prostrate pigweed, scentless chamomile, sheep sorrel, smartweed (Pennsylvania and Green), tansy ragwort, velvetleaf, western ragweed, yellow rocket (&lt; 4 leaf)</p> <p>Plus season long control of Canada goldenrod, sulphur cinquefoil</p> <p>Plus all weeds controlled at 1.4 L/ha</p>
2.4 L/ha	<p><b>Weeds Controlled</b> Absinth (wormwood), Fuller's teasel, tall ironweed</p> <p>Plus season long control of biennial wormwood, blue lettuce, burdock, dandelion, field bindweed, gumweed, hedge bindweed, hoary cress, leafy spurge, mouse-eared chickweed, tartary buckwheat, yellow rocket</p> <p>Plus all weeds controlled at 1.4 and 2.12 L/ha</p> <p><b>Weeds Suppressed</b> Russian knapweed, common yarrow, common tansy, diffuse knapweed</p>

## INVASIVE PLANT MANAGEMENT

### Invasive Plant Management Practices

Restore II Herbicide can be applied postemergence as a broadcast spray or as a spot/strip application to control invasive plants. Post emergence applications should be made before bud stage or early flowering, unless otherwise specified. Best results are obtained when the spray volume is sufficient to provide uniform coverage of treated plants. For optimum uptake and translocation of the herbicide, avoid mowing, haying, shredding or disturbing treated areas for at least 7 days following application.

Restore II Herbicide can be an important component of integrated vegetation management programs designed to restore desired plant communities. To maximize and extend the benefits of weed control provided by Restore II Herbicide, it is important that other vegetation management practices, including proper grazing management, fertilization, prescribed fire, mechanical mowing, hand-pulling, biocontrol and other methods, be used in appropriate sequences and combinations to further alleviate the adverse effects of invasive plants on desirable plant species and to promote development of desired plant

communities. Consult local agriculture and land management resource specialists and/or invasive plant councils. These organizations can provide guidance on best management practices and the development of integrated vegetation management programs. Rapid response to the early detection of new invasive plants is a key invasive plant management strategy. Containment, eradication and control are essential for the management of spreading and established invasive plants.

### **Rangeland and pasture areas**

Make only one application per year for control of invasive plants. For best results, invasive plants should be treated when they are actively growing and under conditions favourable for growth. Restore II Herbicide also provides preemergence control of germinating seeds and control of emerged seedlings of susceptible plants following application.

To reduce the spread of invasive plants, it is important to treat identified invasive plants in the target area while observing required spray buffer zones for broadcast applications. Return, when the wind is blowing from the opposite direction, to complete spraying the targeted plant population.

### **Individual Plant or Spot/Strip Applications**

An important component of Invasive Plant Management programs is early detection and eradication. The instructions for individual plant or spot or strip applications can be used to stop the spread of invasive plants. This is particularly important in riparian areas, where spot application is preferable to broadcast treatment. Use the mixing charts and directions listed under the "APPLICATION METHODS" section below to mix Restore II Herbicide with enough water to make the correct amount of spray solution. Use equipment designed for individual plant or spot/strip application, such as a backpack sprayer or hose and handgun, to spray susceptible invasive plants. Thoroughly and uniformly wet the foliage of all target plants but not to the point of runoff. Direct spray away from aquatic habitats and non-target terrestrial plants.

### **Preharvest/Grazing Intervals**

- There is no restriction on livestock (except lactating dairy animals) grazing in treated areas.
- Do not permit lactating dairy animals to graze fields within 7 days after application.
- Allow 3 days of grazing on an untreated pasture (or feed untreated hay) before transferring livestock to areas where sensitive broadleaf crops may be grown. Withdraw meat animals from treated fields at least 3 days before slaughter. Do not harvest forage or cut for hay within 30 days after application.

## **APPLICATION METHODS**

### **Individual Plant or Spot/Strip Applications**

Use the following mixing chart to mix Restore II Herbicide with enough water to make the correct amount of spray solution. Use equipment designed for individual plant or spot/strip application, such as a backpack sprayer or hose and handgun, to spray weeds. Thoroughly and uniformly wet the foliage of all target plants but not to the point of runoff. Direct spray away from aquatic habitats and non-target terrestrial plants.

### **Mixing Chart**

<b>Spray Solution (water and herbicide)</b>	<b>Restore II Herbicide</b>
10 L	14 – 24 mL
100 L	140 – 240 mL
1000 L	1400 - 2400 mL

Use the higher rates when growing conditions are less than favourable or when the plant foliage is tall and dense.

**READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING. FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC WEED CONTROL.**

## **Broadcast Treatment (Ground and Aerial Applications)**

Applications of Restore II Herbicide may be made once grasses are well-established (have developed a good secondary root system and show good vigor).

### **(1) Ground Application**

Using ground equipment, apply Restore II Herbicide as a broadcast treatment to control listed broadleaf weeds and woody plants. Apply Restore II Herbicide at the recommended rates in a minimum spray volume of 100 L/ha.

### **(2) Aerial Application**

Use Restore II Herbicide as a broadcast treatment by air to control listed broadleaf weeds and woody plants. Apply Restore II Herbicide at the recommended rates in a minimum spray volume of 19 L/ha by air.

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.

### **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".

### **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 mixer/loaders must wear coveralls, chemical resistant gloves 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, drinking, using tobacco or the toilet. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

### **Product Specific Precautions**

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-800-667-3852 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

- Avoid spray drift at the application site. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. Users are responsible for considering all these factors when making decisions.



## SPRAYER CLEAN-OUT INSTRUCTIONS

Do not use spray equipment used to apply Restore II Herbicide for other applications to land planted to, or to be planted to susceptible crops or desirable sensitive plants, unless it has been determined that all residue of this herbicide has been removed by thorough cleaning of equipment. Do not contaminate water through cleaning of equipment or disposal of wastes.

Equipment used to apply Restore II Herbicide should be thoroughly cleaned before reusing to apply any other chemicals.

1. Rinse and flush application equipment thoroughly after use. Dispose of rinse water in non-cropland area away from water supplies.
2. Rinse a second time, adding 1 litre of household ammonia or tank cleaning agent for every 1000 L of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 minutes). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Nozzles and screens should be removed and cleaned separately.

## SPRAY BUFFER ZONES

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

A spray buffer zone is NOT required for:

- uses with hand-held application equipment permitted on this label

The spray 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.

**Spray Buffer Zone Table**

Method of Application	Crop		Spray Buffer Zones (metres) Required for the Protection of Terrestrial and Aquatic Habitat:			
Field sprayer	Pastures, rangelands		10			
	Aerial	Pastures, rangelands	Spray Quality	ASAE Coarse (VMD = 385.22 µm)	ASAE Coarse-Very Coarse (VMD = 439.39 µm)	ASAE Very Coarse (VMD = 477.94 µm)
Fixed wing			175	125	100	80
Rotary wing			150	100	90	70

When a tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray 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.

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

## RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, Restore II Herbicide is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to Restore II 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 Restore II 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 Corteva Agriscience Canada Company at 1-800-667-3852 or at [www.corteva.ca](http://www.corteva.ca).

**NOTICE TO USER:** This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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Specimen Label Notes

Update to tank mix statements and address