

2023-6504
2023-12-18

(Container)



GROUP	4	HERBICIDE
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- Contains Picloram and 2,4-D
- Ram Herbicide is for use on rights-of-way only to control unwanted brush and broadleaf weeds.

COMMERCIAL

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING
KEEP OUT OF REACH OF CHILDREN

GUARANTEE: picloram 65 g/L
2,4-D 240 g a.e./L
(both present as triisopropanolamine salt)

Solution

REGISTRATION NO. 26649 PEST CONTROL PRODUCTS ACT

CAUTION  **POISON**

**MAY CAUSE SKIN AND EYE IRRITATION
HARMFUL IF SWALLOWED
MAY BE HARMFUL IF ABSORBED THROUGH SKIN
DO NOT GET IN EYES. AVOID CONTACT WITH EYES, SKIN AND CLOTHING
AVOID BREATHING SPRAY MIST
DO NOT INHALE FUMES**

NET CONTENTS 10 L

Corteva Agriscience Canada Company
Suite 240, 115 Quarry Park Rd. SE
Calgary, AB
T2C 5G91-800-667-3852

™Trademark of Corteva Agriscience and its affiliated companies.

PRECAUTIONS

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DO NOT INHALE FUMES

PROTECTIVE CLOTHING AND EQUIPMENT

Do not apply this product in a way that this product will contact workers or other persons, either directly or through drift. Only handlers (mixers, loaders and applicators) wearing personal protective equipment may be in the area being treated during application. See **DIRECTIONS FOR USE** for crop specific REIs.

Ground and Aerial

Closed mixing/loading systems are required.

- When mixing/loading, wear coveralls over a long-sleeved shirt, long pants, chemical-resistant gloves, socks, shoes and protective eye wear (face shield or safety glasses). Rinse gloves before removal.
- When applying or during clean-up and repair, wear coveralls over a long sleeved shirt, long pants, chemical resistant gloves, socks and shoes. Rinse gloves before removal.
- Gloves are not required during application when the applicator is in an enclosed tractor or in an enclosed airplane cockpit.

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.
- When handling more than 708 L per day workers must also use a closed cab

Liquid Formulation -- Handheld Equipment

- Applicators must wear coveralls over a long-sleeved shirt, long pants, respirator and chemical-resistant gloves.
- Solutions for annual and broadleaf plant control must have a minimum dilution volume of 100L/ha.

MIXING

Mechanical Transfer System

10 & 20 L containers: Manufacturers are required to incorporate a built-in plastic spout on the containers, to minimize spillage and exposure.

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

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.

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- 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.

PHYSICAL OR CHEMICAL HAZARDS

COMBUSTIBLE. Keep away from heat and open flame.

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

If burn is present, treat as any thermal burn, after decontamination. 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.

AGRICULTURAL CHEMICAL

Do not ship or store with food, feeds, drugs or clothing.

ENVIRONMENTAL HAZARDS

- Picloram is persistent and will carryover. It is recommended that any products containing picloram not be used in areas treated with this product during the previous season.
- 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 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

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.

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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 of this product when heavy rain is forecast.
- Contamination of aquatic areas as a result of runoff may be reduced by including a strip of untreated vegetation between the treated area and the edge of the water body.

STORAGE

Do not store Ram near food, feedstuffs, fertilizers, seeds, insecticides, fungicides or other pesticides or herbicides intended to be used on picloram sensitive crops.

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.

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.

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(Booklet)



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NET CONTENTS 10 L, 110 L

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Ground and Aerial

Closed mixing/loading systems are required.

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ENVIRONMENTAL HAZARDS

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- 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 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

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RUNOFF

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1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

Returnable Containers:

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

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.

DIRECTIONS FOR USE

Many methods of application are possible. The method chosen should be appropriate to the environmental, vegetative and other site conditions. **Read all precaution statements before using this product.** For more information or help, contact your local Corteva Agriscience Canada representative.

GENERAL USE PRECAUTIONS

Certain environmental conditions may increase the potential for herbicides to move in water, through the soil and enter an underlying aquifer¹. These environmental conditions include:

- Soils that are very permeable (textures of sandy loam to sand) throughout the entire profile and which also have an underlying shallow aquifer.
- Soils containing sinkholes over limestone bedrock.
- Surfaces composed of severely fractured rock or unconsolidated gravels and underlaid with an aquifer.

The above conditions may permit direct movement of herbicides, including those containing picloram, to underlying aquifers.

Where any of the above environmental conditions exist, users are advised not to use either directed or broadcast foliage or aerial foliar application methods. Alternative cut surface methods of application should be chosen. These methods include tree injection, frill or girdle and cut stump treatments.

To help identify areas of concern, a Corteva Agriscience Canada representative can be contacted for additional information and assistance towards doing site inspections.

- Do not apply more than once per year.
- DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, ditches and wetlands), estuaries or marine habitats. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

Restricted Entry Interval (REI)

- For non-crop uses: Do not enter or allow entry into treated areas during the restricted-entry interval (REI) of 12 hours or until sprays have dried.
- For the use as a direct injection into treated plants: Restricted-entry interval is not required when picloram is directly injected into treated plants.

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.

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 distribution along the spray boom length MUST NOT exceed 65% of the wing- or rotorspan.

Sensitive Plants

Most broadleaved plants are very sensitive to picloram. Care should be taken to avoid spraying desirable broadleaved plants during both growing and dormant periods. Ram, without a drift control additive or approved application system, should not be applied to the foliage of target vegetation near areas planted to crops such as beans (including soybeans), potatoes, tobacco, grapes, tomatoes, flowers, ornamental shrubs and trees or other desirable broadleaved crops. In addition, care should be taken to avoid contaminating soil in which sensitive crops will be grown. Clippings from vegetation which has been treated with Ram should not be used for composting or mulching, nor should the manure from animals grazing treated areas be used around susceptible plants, because picloram residues pass through the animal unchanged and are still herbicidally active.

PREHARVEST/GRAZING INTERVALS

When a right-of-way is to be grazed by animals do not apply herbicide at rates exceeding 17.3 L/ha and follow the following grazing withholds:

- Do not allow lactating dairy animals to graze the treated areas within 7 days after application.
- Do not harvest forage or cut hay within 30 days after application.
- Withdraw meat animals from treated fields at least 3 days before slaughter.

BROADCAST GROUND APPLICATION

Directions for Use

When applying Ram with ground application equipment, the spray pressure at the nozzle should be no higher than is required for penetration of the target vegetation. The spray should always be directed toward the target, away from non-target, susceptible plants and no higher than the tops of the target plants. To aid in reducing spray drift, a nozzle and pressure should be selected which produces coarse spray droplets and minimizes production of fine droplets. Do not use high spray pressures in order to reach distant vegetation.

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Foliar Application

Broadleaved Weed Control: Apply 3.7 L/ha of Ram to control Canada thistle, dandelion and common yarrow. Apply 7 L/ha of Ram in 200 L of total spray volume to control broadleaved weeds such as sweet and red clover, wild carrot, common ragweed, goldenrod, dock, plantain, prickly lettuce, burdock, fleabane and vetch. Apply in the spring or early summer after growth appears. Maximum 1 application per year.

Woody Plant Control: Apply 17.3 L/ha of Ram in 200 L of total spray to control brush such as alder, birch, cedar, maple, pine, poplar, spruce and other species. Maximum 1 application per year.

For **broadcast** foliar applications, USE AN APPROVED DRIFT CONTROL ADDITIVE OR SYSTEM. Spray drift could cause injury to trees and other desirable broadleaved plants outside the desired treatment area and may render soil unproductive for broadleaved plants.

With ground broadcast methods of application, use no more than 207 kPa as the spraying pressure, and nozzle tips that produce large droplets. Maximum amount of product applied/day/person with handheld equipment: 11.2 L.

CUT SURFACE METHODS

Maximum Amount of Product Applied/day/person with Handheld Equipment: 11.2 L.

To control certain unwanted trees such as elm, oak, maple, hickory, beech, cherry and basswood, and conifers such as pine, cedar, hemlock, Douglas fir and Sitka spruce, apply RAM Herbicide diluted in a **1:13** ratio with water or with ethylene glycol, to depress the freezing point as directed below.

Use Precautions

When mixing RAM Herbicide with either water or ethylene glycol, take special precautions not to spill this mixture onto the soil. When applying the **1:13** dilution, direct the herbicide mixture only to the cut surface area to be treated. Do not use excessive amounts of herbicide solution which would result in run-off from the cambial region onto the soil surface.

Tree Injection Treatment

Inject 1 millilitre of the dilute solution through the bark at intervals of 75 mm between edges of the injector wound. The injections should be made completely around the tree at any convenient height with appropriate equipment.

Frill or Girdle Treatment (Hack and Squirt)

Make a single girdle or series of overlapping cuts (frills) through the bark completely around the tree at a convenient height. Thoroughly wet the cut surface with the **1:13** diluted solution applied with a squeeze bottle or similar equipment.

Cut Stump Treatment

Paint or spray the **1:13** diluted solution onto the exposed freshly cut stump. Care should be taken to ensure that the entire circumference or cambial layer of the outside of the stump is treated.

All of the above cut surface methods may be used successfully at any season except during periods of heavy sap flow of certain species such as red maple. For this species, injections or wounds should overlap, and applications should be timed to avoid sap flow periods.

BROADCAST AERIAL APPLICATION

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.

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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.

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 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.

Volume

To control unwanted brush apply 17.3 L of Ram per hectare in a total spray volume of 150 to 200 L/ha. Sprays should be applied following full leaf development and during periods of active growth for best results. Maximum 1 application per year. Late summer application or application during dry weather when the plants are not actively growing may result in unsatisfactory control.

Apply Ram at the 17.3 L/ha rate to control highly susceptible brush species such as willow, locust, sumac, poplar, aspen and cherry growing on sandy or sandy loam soil.

Apply Ram at the 17.3 L/ha rate to more-difficult-to-control brush species such as maple, pine, spruce, red cedar, oak and where brush is growing on heavy clay soils.

- Avoid direct applications to any body of water. Do not contaminate water through spray drift or by cleaning of equipment or disposal of wastes.
- With the aerial broadcast method of application, a minimum volume of 150 L/ha should be used and no more than 207 kPa as the spraying pressure. Avoid placing nozzles where spray will enter wing tip vortices.
- Do not apply this product directly to, or otherwise permit it to come into direct contact with desirable crops or other desirable broadleaved plants or non-target species and do not permit spray mists to drift onto them.
- Coarse sprays are less likely to drift, use only nozzles or nozzle configuration which minimize the production of fine spray drops. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. When spraying, avoid combination of pressure and nozzle type that will result in fine particles (mist) which are more likely to drift. A spray thickening agent or drift retardant may be used with this product to aid in reducing spray drift.
- Do not use human flaggers.
- Avoid Spray Drift: Apply only when there is little or no hazard from spray drift. Small quantities of the spray, which may not be visible, may seriously injure susceptible crops and damage sensitive non-target habitat. A method must be used to detect air movement, lapse conditions or temperature inversions (stable air) such as the use of balloons or a continuous smoke column at or near the spray site or a smoke generator on the spray equipment. If the smoke develops into layers or indicates a potential for hazardous spray drift, do not spray.
- Buffer Zones: Appropriate buffer zones should be established between treatment areas and aquatic systems and treatment areas and significant wildlife habitat.
- USE AN APPROVED DRIFT CONTROL ADDITIVE OR SYSTEM. Spray drift could cause injury to trees and other desirable broadleaved plants outside the desired treatment area and may render soil unproductive for broadleaved plants.
- To prevent contamination of adjacent surface water including lakes, ponds and streams, strict adherence to provincial setbacks from water is essential.

BUFFER ZONES TO PROTECT SENSITIVE 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 that 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.

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.

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

Method of Application	Target/Rate (L/ha)	Aquatic habitat of depth:	
		< 1 m	> 1 m
Field sprayer*	Rights-of-way (3.7 L/ha)	1	1
	Rights-of-way (7/L/ha)	2	1
	Rights-of-way (17.3 L/ha)	4	2

For Coarse Spray (ASAE)

Method of Application	Target/Rate (L/ha)		Aquatic habitat of depth:	
			< 1 m	> 1 m
Aerial	Rights-of-way (3.7 L/ha)	Fixed wing	85	50
		Rotary wing	40	30
	Rights-of-way (7 L/ha)	Fixed wing	125	70
		Rotary wing	60	35
	Rights-of-way (17.3 L/ha)	Fixed wing	300	150
		Rotary wing	125	60

For Very Coarse Spray (ASAE)

Method of Application	Target/Rate (L/ha)		Aquatic habitat of depth:	
			< 1 m	> 1 m
Aerial	Rights-of-way (3.7 L/ha)	Fixed wing	60	35
		Rotary wing	35	25
	Rights-of-way (7 L/ha)	Fixed wing	95	50
		Rotary wing	45	30
	Rights-of-way (17.3 L/ha)	Fixed wing	175	100
		Rotary wing	75	45

For Very Coarse – Extremely Coarse Spray (ASAE)

Method of Application	Target/Rate (L/ha)		Aquatic habitat of depth:	
			< 1 m	> 1 m
Aerial	Rights-of-way (3.7 L/ha)	Fixed wing	55	35
		Rotary wing	30	25
	Rights-of-way (7 L/ha)	Fixed wing	80	45
		Rotary wing	40	30
	Rights-of-way (17.3 L/ha)	Fixed wing	150	85
		Rotary wing	65	40

*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%.

RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management, Ram is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to Ram 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 Ram or other Group 4 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.

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- 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.

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.

¹An aquifer is "an underground, saturated, permeable, geologic formation capable of producing significant quantities of water to a well or spring. It is the ability of the saturated zone, or portion of that zone, to yield water which makes it an aquifer" (American Chemical Society, 1983).

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