

2021-1503

2021-12-09

Last approved label: 2018-3408, dated 2019-02-14

12% WHITE VINEGAR

Herbicide Solution

Perennial weed control in CROP SUBGROUP 13-07B: Bushberries and cranberry crop  
Non-selective herbicide applied by soil injection

AGRICULTURAL

CAUTION: SKIN IRRITANT  
DANGER: CORROSIVE TO EYES

READ THE LABEL BEFORE USING

ACTIVE INGREDIENT: Acetic acid .... 12%

REGISTRATION NUMBER 31447,  
PEST CONTROL PRODUCTS ACT

NET CONTENTS: 200 L - 1040 L, Bulk

Association des producteurs de canneberges du Québec (A.P.C.Q.)  
Quebec Cranberry Growers Association  
859 Ancienne route de l'Église  
Notre-Dame-de-Lourdes, Québec, Canada, G0S 1T0  
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[www.notrecanneberge.com](http://www.notrecanneberge.com)

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#### **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.

#### **GENERAL PRODUCT INFORMATION**

**For bulk distribution: A complete copy of this product's label must be provided to the user upon delivery.**

White vinegar is a non-selective herbicide. It must be applied in a localized manner, in the soil near the crown of the weeds, with an injector specifically designed for this purpose. The acidic properties of the herbicide provokes root burning of treated weeds. Product is fast acting and symptoms of weed deterioration are generally visible 3 to 7 days following treatment.

Suppressed weeds: Perennial plants with growth in tillers or compact tufts such as the Grass, Cyperceae (Sedges; Scirpus and Carex) and Juncaceae (rushes) families.

#### **PRECAUTIONS**

KEEP OUT OF REACH OF CHILDREN

CORROSIVE to eyes. DO NOT get in eyes. Causes irritation of the respiratory tract. Avoid inhaling vapours. Avoid contact with skin and clothing.

This product may cause mild burns or irritation to the skin.

Handle only in a well-ventilated area.

Wear long-sleeved shirt, long pants, chemical resistant gloves, safety goggles or face shield, shoes and socks during handling, mixing/loading, applying, and when performing clean-up and maintenance activities. In addition, wear protective eyewear (goggles or face shield) during handling, mixing, loading and applying.

Wash immediately after use. Wash contaminated clothing with soap and hot water before reuse.

Product is corrosive to reactive metals. Avoid applying product on metal such as aluminum, tin or iron. Use non-reactive materials in the creation of an injection system.

Will not ignite, but in case of fire, carbonic oxides (CO and CO<sub>2</sub>), vapor and smoke may occur.

#### **FIRST AID**

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.

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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**

Treat symptomatically

### **DIRECTIONS FOR USE**

#### **CRANBERRY**

TIME OF INTERVENTION it is recommendable to treat weeds early in the season when they are young, at the beginning of their growth cycle and above all prior to seed development. In cultivated fields, begin treatment at the beginning of crop development when the plants are in bud break and bud swell stages. During this time, circulating in the fields for treatment application will not damage plants. Avoid treatment during the hook stage (closed floral buds) and during flowering as these are critical developmental periods for cranberry plants. For late applications during fruiting, circulation can cause serious damage by trampling the fruit. The use of a footbridge is favorable in situations where treatment targets more than the weeds along field edges. Newly installed fields can be treated throughout the summer season.

DOSAGE AND APPLICATION CONDITIONS: apply 12% WHITE VINEGAR at a time when the soil water reserves are at a level comfortable for cranberry plants. The use of tensiometers in cultivated bogs allows adequate monitoring of the soil's hydric state. The ideal tension for vinegar (12% White Vinegar) application is between -4 and -6 kPa. In drier soil conditions the risk of phytotoxicity in cranberry plants is high. Dilute the 12% WHITE VINEGAR to obtain a weaker concentration of 6-9% when tension is  $\leq$  -6 kPa. Do not apply when soil is very dry ( $\leq$  -7 kPa). It is very important to avoid application during extreme heat as plants are already under hydric stress at such times. High levels of humidity in the soil result in a probable loss of efficacy because the soil water will act as a dilutant. Strong precipitation after treatment brings the risk of dilution of the product. Never apply when the soil is very humid or wet (0 to -3 kPa) or in rainy conditions.

For small tillers of approximately 7 cm diameter or less, one injection per plant is usually sufficient. For larger tillers, a minimum of 2 to 3 injections per plant is necessary. All injections must be made in the center of the tiller at a depth of approximately 6.5 cm. During injection, keep the injector in the soil and avoid product rising to the surface. It may be necessary to repeat application 7 days after the first treatment, depending on soil conditions as well as the size and maturity of the treated plant.

DESCRIPTION OF INJECTION TOOL: the injection tool is composed of a stainless steel shaft with an outward diameter of 9.5mm (3/8 inches) and an interior diameter of 5.5 mm (7/32 inches) the length of

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which is 86.4cm (34 inches) ending in a pointed tip. The tip must be removable in order to be changed when worn. The tip is equipped with two openings allowing the expulsion of the liquid. The two jets have a diameter of 1.6mm (1/16 inches) and are located on opposite sides 19mm (¾ inches) from the tip end. The injection shaft is linked to a discharge valve by a transparent plastic tube with an interior diameter of ¼ inches. Watertight joints are used to connect each element together. The injector must be calibrated in order to insure the injection of 35 to 40 ml of white vinegar per injection at a pressure rate of 240 to 275 kPa (35 to 40 psi).

For minor interventions, this tool can be attached to a hand-held or backpack sprayer. It is also possible to use a system allowing several people to work simultaneously. This system is equipped with an opaque white reservoir made of high density polyethylene and placed on a mobile platform. The reservoir contains white vinegar and is connected to spray equipment using a ground boom. Multiple injection tools are attached along the pesticide boom in place of spray nozzles. It is possible to assign one worker per injection station with a maximum of 3 to 5 workers along the boom. This system functions with the aid of a 12 volt plastic pump resistant to corrosion.

**CAUTION:** white vinegar is phytotoxic to cranberries. Primary symptoms of phytotoxicity are chlorosis or parching of cranberry plants:

Avoid all contact with cranberry plants.

Under no circumstances should the product be used in foliar spraying:

**DO NOT** use as a broadcast spray on foliage with a boom or air blast sprayers

**DO NOT** apply this product through any type of irrigation system.

**DO NOT** apply by air.

Applications should be completed solely in a localized manner and only with the soil injection system specifically designed for this purpose.

Ensure that the liquid has been completely inserted in the soil before removing the injection shaft.

Ensure water tightness of the injection tool in order to avoid dripping of vinegar solution on cranberry plants or leaves as the device is moved around the field.

Avoid treatment when the soil is very dry or in extreme heat.

Treat highly infested areas progressively as the cranberry plants are at greater risk when weed density is high.

Avoid treating annual weeds as well as single-stem perennial weeds such as horsetail, couch grass, rice cut-grass, goldenrod, St. John's Wort, *Rorippa sylvestris*, *Spiraea* spp, vetches spp, potentilla and many species of small trees (birch, willow, poplar, and maple spp). For such plants, the efficacy rate is variable and uncertain and the risk of phytotoxicity to cranberry plants is high when dealing with single-stem weeds rather than tillers.

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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.

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than l'Association des producteurs de canneberges du Québec under the User Requested Minor Use Label Expansion program. For these uses, l'Association des producteurs de canneberges du Québec has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

#### **DIRECTION FOR USE – CROP SUBGROUP 13-07B: Bushberries**

##### **Soil injection application**

Apply 12% WHITE VINEGAR at a time when the soil water reserves are at a level comfortable for bushberry plants. It is very important to avoid application during extreme heat as plants are already under hydric stress at such times. High levels of humidity in the soil result in a probable loss of efficacy because the soil water will act as a dilutant. Strong precipitation after treatment brings the risk of dilution of the product. Never apply when the soil is very humid or wet or in rainy conditions.

**CROP SUBGROUP 13-07B: Bushberries** Crops: Aronia berry; blueberry, highbush; blueberry, lowbush; buffalo currant; Chilean guava; highbush cranberry; currant, black; currant, red; elderberry; European barberry; gooseberry; honeysuckle, edible; huckleberry; jostaberry; Juneberry (Saskatoon berry); lingonberry; native currant; salal; sea buckthorn; as well as cultivars, varieties, and/or hybrids of these commodities.

**Pests :** Perennial plants with growth in tillers or compact tufts such as the Grass, Cyperceae (Sedges; Scirpus and Carex) and Juncaceae (rushes) families.

**Rate :** 35 to 40 ml of white vinegar per injection

**Application :** For small tillers of approximately 7 cm diameter or less, one injection per plant is usually sufficient. For larger tillers, a minimum of 2 to 3 concurrent injections per plant is necessary. All injections must be made in the center of the tiller at a depth of approximately 6.5 cm. During injection, keep the injector in the soil and avoid product rising to the surface.

**Interval :** It may be necessary to repeat application up to 3 times per year, depending on soil conditions as well as the size and maturity of the treated plant. The sequential application should be made 7 days after the previous treatment.

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Timing : It is recommendable to treat weeds early in the season when the weeds are young, at the beginning of their growth cycle and above all prior to seed development, and when the crops are in bud break and bud swell stages, at the beginning of development.

#### RESTRICTIONS AND PRECAUTIONS:

White vinegar is phytotoxic to bushberries. Primary symptoms of phytotoxicity are chlorosis or parching of bushberry plants:

Avoid all contact with bushberry plants.

Under no circumstances should the product be used in foliar spraying:

**DO NOT** use as a broadcast spray on foliage with a boom or air blast sprayers

**DO NOT** apply this product through any type of irrigation system.

**DO NOT** apply by air.

Applications should be completed solely in a localized manner and only with the soil injection system specifically designed for this purpose.

Ensure that the liquid has been completely inserted in the soil before removing the injection shaft.

Ensure water tightness of the injection tool in order to avoid dripping of vinegar solution on bushberry plants or leaves as the device is moved around the field.

Avoid treatment when the soil is very dry or in extreme heat.

Treat highly infested areas progressively as the bushberry plants are at greater risk when weed density is high.

#### ENVIRONMENTAL PRECAUTIONS

TOXIC to aquatic organisms and non-target terrestrial plants.

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.

Product creates no residual effect on the soil and breaks down quickly.

#### STORAGE

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In normal relative-humidity, this product will conserve its quality for a minimum of one year when stored at room temperature. Store product in a hermetically sealed container in a cool, dry and well-ventilated area. Do not expose product to temperatures lower than 0°C. Keep out of direct sunlight and avoid heat or sources of heat in close proximity. Keep away from incompatible bases and metals. To prevent contamination store this product away from food or feed. Avoid contact with seeds.

#### **DISPOSAL AND DECONTAMINATION**

In the case of cardboard containers (barrels of 200 L and boxes of 1040 L) DO NOT reuse this container for any other 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. Dispose of the rinsings in accordance with provincial requirements.
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.

In the case of the Refillable Container for bulk distribution made of high density polyethylene, it must be refilled by the distributor/dealer with the same product. For disposal, this container may be returned to the point of purchase (distributor/dealer). Do not reuse this container for any other purpose.

In the case of non-recyclable, non-returnable or non-refillable containers:

1. Rinse three times the emptied container thoroughly.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.

For information on the disposal of unused or unwanted product as well as in the event of a spill and for the cleaning of spills, contact the provincial regulatory agency or the manufacturer.