

# CASORON<sup>®</sup> G-4

## Granular Herbicide

contains dichlobenil

**COMMERCIAL**

GROUP 20 HERBICIDE

**READ THE LABEL BEFORE USING**

**GUARANTEE: Dichlobenil 4%**

**REGISTRATION NO. 12533**

**PEST CONTROL PRODUCTS ACT**

### DIRECTIONS FOR USE

**CASORON G-4** provides weed control in established plantings of Woody Ornamentals, Fruit trees, Nurseries, Shelterbelts, Hedgerows, Windbreaks, Poplar Plantations, Grapes, Saskatoons, Cranberries, Raspberries and High Bush Blueberries. **CASORON G-4** is recommended for control of many annual grasses, broadleaf weeds and certain perennial weeds including:

Annual bluegrass	Foxtail	Pigweed
Artemisia*	Groundsel	Plantain
Bindweed*	Horsetail	Purslane
Bittercress	Grasses (Sedges and Juncus species)	Sheep Sorrel*
Blue aster	Knotweed	Shepherd's-purse
Bracken fern	Kochia	Smartweed
Canada thistle*	Lamb's-quarters	Sow thistle
Chickweed	Loosestrife	Spurge
Crabgrass	Mustard	Vetch*
Quack grass*	Nutsedge*	Wild buckwheat*
Dandelion*		

\*Controlled with the higher rates and late fall applications.

### RESISTANCE MANAGEMENT RECOMMENDATIONS:

For resistance management, **CASORON G-4** is a Group 20 herbicide. Any weed population may contain or develop plants naturally resistant to **CASORON G-4** and other Group 20 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 **CASORON G-4** or other Group 20 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.
- 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 Crompton Co./Cie at 1-800-265-2156 or at [www.cromptoncorp.com](http://www.cromptoncorp.com)

### **Mode of Action**

**CASORON G-4** is a soil-active herbicide with the active ingredient dichlobenil. It controls broad leaved and grassy weeds at weed germination and weed growth initiation. **CASORON G-4** inhibits cell growth at the growing points or meristematic tissues of the plant. Weed germination and growth initiation is strongly affected. Under certain environmental conditions Dichlobenil can be volatile. It is recommended that **CASORON G-4** be applied when the temperature is less than 15°C. Applying at higher temperatures may reduce its herbicidal activity. Water is necessary to move the compound into the soil. **CASORON G-4** will stay in the upper 10 cm of soil and will not harm established plants with a well-developed root system below this herbicide barrier.

### **Application**

**CASORON G-4** is a ready to use granular product. It can be spread on the soil surface by hand, using small hand held or backpack equipment, or by larger and tractor mounted spreaders. Soil should be moist after application to activate the product. A light precipitation after application to moist soil is preferred. When a dry period is expected after application, incorporate or water in the product. Covering with moist mulch is also effective.

Annual Weed Control: Apply **CASORON G-4** to well prepared weed-free soil in early spring or late fall before annual weed seeds have germinated. If annual weeds have started to germinate before application cultivate to remove them. Apply granules uniformly over the soil surface.

Do not apply until 4 weeks after transplanting any crop. **CASORON G-4** should not be applied during periods when the soil temperature is high. These usually occur when air temperatures are greater than 15°C.

Apply 110-175 kilograms of **CASORON G-4** per hectare. The amount of **CASORON G-4** used should be based on the area actually treated. Do not use on light sandy soil. Lower rates on this label can be used if application is followed immediately by an application of 1.3 to 2.5 centimeters of water by overhead irrigation. Use the high rate in the use range only every other year.

Treating smaller areas or calibrating:

CASORON G-4 per	Area Treated				
	Hectare	1mx1m	1.5mx1.5m	2mx2m	2.5mx2.5m
110 kg	11 gm	25 gm	45 gm	70 gm	100 gm
175 kg	17 gm	40 gm	70 gm	110 gm	160 gm

**ESTABLISHED PLANTINGS OF WOODY ORNAMENTALS, NURSERIES AND SHELTERBELTS\*, HEDGEROWS AND WINDBREAKS\*:** CASORON G-4 may be used for annual weed control with repeat applications each year at the lower rate for maintenance weed control. Use the high rate (175 Kg / Ha) to control grasses and tough perennial weeds every other year at most. The lower rate, 110 Kg/Ha can be used the following year for annual weed control. Follow directions listed above. Apply by ground only.

CASORON G-4 may be used for weed control on the plants listed below. Follow application directions.

Arborvitae	Elm	Locust
Ash	Euonymous	Maple
Barberry	Forsythia sp.	Mock orange
Birch (Cut Leaf Weeping)	Heather	Poplars
Boxwood	Holly ( <i>Ilex spp.</i> )†	Rhododendron
Caragana	Honeysuckle	Rose
Cedar (Eastern Red)	Juniper	Spirea
Cedar (White)	Lilac	Willow
Crabapple	Linden	Yew (Taxus)

\* Only trees listed above should make up the Shelterbelts, Hedgerows, Windbreaks

† Holly (*Ilex spp.* Except *I. crenata*, *I. rotunda*, *I. vomitoria*)

**NOTE:** Do not use on:

Gladiolus	Firs (Abies species such as <i>Balsam Fir</i> [Abies concolour])
<i>Ajuga</i>	<i>Ilex crenata</i> Hemlock
<i>Ilex rotunda</i>	<i>Ilex vomitoria</i> Spruce
Herbaceous Perennials†	Mugho pine

† •avoid use on plants which die down to the ground in the fall  
•use with caution on shallow rooted ground covers (Euonymous can be treated), and other plants from list above.

**CONTAINER NURSERY STOCK:** Apply CASORON G-4 at 100 kg per hectare. Water in immediately after application. Apply by ground only.

For use on these specific species:

Juniper - *Juniperus chinensis*  
- *Juniperus horizontalis*

Eastern White Cedar - *Thuja occidentalis*

For the control of the weeds mentioned earlier on this label plus Bittercress.

**Note:** Observe these use guidelines.

## **DO NOT USE IN OR NEAR GREENHOUSES**

Wait to apply **CASORON G-4** for at least four (4) weeks after transplanting into containers. Use only on established container plants growing outside in the open air. Do not use in seedbeds, transplant or cutting beds or in greenhouses. Do not use after September 15 or within thirty (30) days of potting treated stock into a container holding house as damage to the crop may occur. Use only on potting mixes that have a minimum of 80% pure organic matter. Lower amount of organic matter may increase risk of injury to the crop.

Only small numbers of containers should be treated until a grower has experience with this application. For further information contact provincial government authorities.

### **FRUIT TREES AND FRUIT TREE NURSERIES:**

**CASORON G-4** may be used for weed control around bearing fruit trees and established second year orchard stock of the following:

**APPLE, CHERRY, PEACH, PEAR, AND PLUM.** Follow directions for broadcast or band (herbicide strip) tree area only application. Refer to precautions for timing with transplants.

Do not apply to trees within 3 months either before or after grafting or budding of root stocks or planting of new grafts. Do not apply more than the maximum recommended amount per growing season. Apply by ground only.

**NEWLY PLANTED APPLE TREES:** (in British Columbia only). May be treated with **CASORON G-4** four weeks after new trees are planted in the orchard but prior to weed growth. Apply 110-175 kg per hectare total per season. Use the lower rate on lighter soils. Use the high rate in the use range only every other year. Under warm growing conditions, immediately after application of the **CASORON G-4** apply 1.3-2.5 cm of water by overhead irrigation. Do not apply by air.

**POPLAR PLANTATIONS:** For control of many annual grasses, broadleaf weeds and certain perennial weeds as listed in Directions for Use section. **CASORON G-4** should be applied to poplar plantations by ground only. Apply 110-174 kg **CASORON G-4** per hectare, once per season. Apply uniformly over the soil surface. Do not use on trees established less than 6 months. Apply in late fall or early spring when poplar plants are dormant (or pre-bud break). Do not plant crops not registered for use with **CASORON G-4** in treated soil within one year after application.

**CRANBERRIES:** Control of annual broad leaved species, Blue Aster, Loosestrife, Horsetail, Knotweed, Plantain, Smartweed, Grasses, certain Sedges and Juncus Species. Application should be made early in the spring while perennial weeds are still dormant and annual weeds have not started to germinate, apply pre-bloom.

**SPRING APPLICATION:** Apply 110 kilograms **CASORON G-4** per hectare. Do not make a spring application after application the previous fall. See specific directions for British Columbia.

**BRITISH COLUMBIA:** Apply 175 - 225 kilograms **CASORON G-4** per hectare in two equal applications in early spring with an interval of 3 to 6 weeks between each 90 - 110 kilograms per hectare treatment. Use the high rate in the use range only every other year. Do not make fall applications.

**NOTE:** Distribute granules evenly. Avoid over application which may result from overlapping during treatment. Temporary reddening of Cranberry plants may occur, especially with late spring applications. Do not apply after Cranberry plants start to bloom as yield may be reduced. Do not use on young beds, newly sanded beds or beds recently mowed for vines. Use lower rates of application on sandy bogs.

**HIGHBUSH BLUEBERRIES:** Apply uniformly at the rate of 175 - 225 kilograms per hectare during the dormant period (late winter) Bracken fern and weeds listed in the cranberry section of this label will be controlled. Use the high rate in the use range only every other year. Apply by ground only.

**RASPBERRIES:** For couch grass, other perennial broadleaf weeds and annual weeds in established raspberry plantings. Apply **CASORON G-4** at the rate of 175 kilograms per hectare in late fall. Use this rate only every other year. Do not cultivate or work into the soil. Do not apply in the spring as injury may occur. Alternate herbicides to avoid weed resistance. Use with caution on new varieties. Apply by ground only.

**ESTABLISHED SASKATOONS:** Weeds controlled - as per above list including chickweed, stinkweed, groundsel, pigweed, dandelion and some grasses. Apply to Saskatoons, established for one or more years. Apply with a granular applicator in the fall before freeze-up. Use 110-175 kg of **CASORON G-4** granules per hectare on a broadcast basis. Use the high rate in the use range only every other year. Do not apply within 9 months of harvest. Apply by ground only.

**GRAPES:** Apply only to control weeds under grapes established for at least two full years. Do not treat soil the year before planting or replanting grapes. Grape nurseries should not be treated.

**RATES:** For seedling weeds use 110 - 175 kilograms per hectare in early spring or fall. For perennial weeds such as couch grass and thistles, apply in the fall using 175-225 kilograms per hectare. Use the high rate in the use range only every other year. Apply by ground only.

Follow these specific recommendations.

1. Treat when vines are completely dormant.
2. Treat only healthy vines.
3. Treat only vines established for at least two full years.
4. Apply in cool weather on moist soil.
5. Avoid over-application to base of the stem.

**NOTE:** If spring application is made, apply before the weeds germinate and a month before the grape buds burst. Do not apply on hazy, hot days.

**COUCH GRASS AND ARTEMISIA CONTROL IN ESTABLISHED WOODY**

**ORNAMENTALS:** Couch grass and Artemisia can be controlled in woody ornamentals listed above (except Boxwood, Euonymus, Forsythia, Heather) which has been planted for at least one year - and for control in non-crop areas. Uniformly apply 150 kilograms per hectare **CASORON G-4** in late fall (between October 15th and December 15th) and reapply at the rate of 150 kilograms per hectare in very early spring (before May 1). Do not repeat this application the next year. Apply by ground only.

**QUACKGRASS, THISTLES, BINDWEED, DANDELION:** Fall treat the areas of weeds from spring plantings of woody ornamentals. Uniformly apply 225 -275 kilograms of **CASORON G-4** per hectare in late October or November. **DO NOT TRANSPLANT INTO TREATED SOIL FOR ONE YEAR.** Apply by ground only.

**NUTSEDGE (NUTGRASS) CONTROL:** To control Nutsedge (Nutgrass) on mineral soils in areas on which containers of nursery stock are to be grown or held - also for control on cultivated non-crop land - apply 275 - 550 kilograms **CASORON G-4** per hectare and incorporate immediately to a depth of 10 to 15 centimeters. Seasonal control of annual weeds will also be obtained. Containers of plants listed above may be placed on treated soil immediately. **DO NOT TRANSPLANT INTO TREATED SOIL FOR ONE YEAR.** Apply by ground only.

**PRECAUTIONS:**

**KEEP OUT OF REACH OF CHILDREN.** Harmful if swallowed. Avoid breathing dust. Avoid skin or eye contact. Avoid contamination of feed and foodstuffs. Do not use crops other than those listed on the label. Do not use in seedbeds, transplant or cutting beds. **DO NOT USE IN OR AROUND GREENHOUSES.** Do not apply until 6 months after rooting of cuttings in the field. **CAUTION:** Do not graze livestock in treated areas or use treated crops for forage or fodder, sufficient data are not available to support such use. Application in spring should be made well before bud burst. Do not plant vegetables or other sensitive crops the year following soil treatment.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S. contact 1-866-375-4648 or [www.croplife.ca](http://www.croplife.ca).

**DO NOT APPLY BY AIR.**

**FIRST AID:**

**IF SWALLOWED:** INDUCE VOMITING by giving the patient syrup of ipecac (adult or child 12 years or older -30mL, child under 12 - 15mL) followed by water to enhance vomiting. Keep patient quiet, seek medical attention **IMMEDIATELY** or contact a poison control centre. Do not give anything by mouth or attempt to induce vomiting if the person is unconscious.

**IF IN EYES:** Wash immediately with running water for 15 minutes. Obtain medical attention or contact a poison control centre **IMMEDIATELY**.

**IF ON SKIN:** Wash with warm water and soap for 15 minutes.

**IF INHALED:** Remove victim to fresh air **IMMEDIATELY**.

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

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

**STORAGE AND DISPOSAL:**

**STORAGE:** Store product in original container only, away from other pesticides, fertilizer, food or feed. Keep container closed. Do not store in direct sunlight. Do not store above 35°C or below 0°C.

**DISPOSAL:**

1. Follow provincial instructions for any required cleaning of the container prior to its disposal.
2. Make the empty container unsuitable for further use.
3. Dispose of the container in accordance with provincial requirements.
4. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

**NOTICE TO USER:** This 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 a control product under unsafe conditions.

**NOTICE TO BUYER:** Seller's guarantee shall be limited to the terms set out on the label and, subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

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**NET CONTENTS 15 kg**

**Crompton**  
Uniroyal Chemical

**Crompton Co./Cie**  
25 Erb St., Elmira ON N3B 3A3  
**24 Hour Emergency Phone:**  
**(866) 744-3060**

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