

98.01.22

DowElanco

Warrant*

Herbicide

- . Water soluble packets.
- . Contains 2,4-dichlorophenoxyacetic acid.
- . For application by ground or air to wheat, barley, rye, grass for seed or forage production, established pastures and rangeland for the control of certain annual and perennial broadleaved weeds.

AGRICULTURAL

READ THE LABEL BEFORE USING

KEEP OUT OF REACH OF CHILDREN

GUARANTEE:

2,4-dichlorophenoxyacetic acid equivalent
(isomer specific) 85%
(each packet contains 0.5 kg of Warrant or 0.43 kg of
2,4-dichlorophenoxyacetic acid)

REGISTRATION NO. 24122
PEST CONTROL PRODUCTS ACT

WARNING (skull and crossbones in a diamond) POISON

DANGER: CORROSIVE TO EYES

NET CONTENTS:
4 x 5 packets (0.5 kg each)

DO NOT SELL INDIVIDUAL SOLUBLE BAGS SEPARATELY

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DowElanco Canada is a licenced user.

PRECAUTIONS
CORROSIVE TO EYES

Avoid contact with skin, eyes and clothing. Do not use in a greenhouse. Avoid spray drift to susceptible plants such as beans, peas, tomatoes, ornamentals, etc. Coarse sprays are less likely to drift than fine sprays. Do not store near food, feeds, fertilizers, seeds, insecticides or fungicides. Do not use the same spray equipment for other purposes without a thorough cleaning.

PROTECTIVE CLOTHING AND EQUIPMENT

Handling the concentrate (mixing and loading)

Wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks, shoes and protective eyewear (face shield or safety glasses). Rinse gloves before removal.

Handling the dilute spray solution (during application or repairing or cleaning equipment) Wear 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 an enclosed airplane cockpit.

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 material 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. Launder contaminated clothing separately from other materials. 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.

FIRST AID

If swallowed: If individual is conscious, promptly give individual a large quantity of milk, egg white, gelatin solution or if these are not available, large quantities of water to drink. Avoid using alcohol. Get medical attention or contact a poison control centre.

If in eyes: Hold eyelids open and flush with a gentle stream of water for 15 minutes. Get medical attention or contact a poison control centre.

If inhaled: Remove individual to fresh air. If breathing difficulty continues, get medical attention or contact a poison control centre at once.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation develops.

TOXICOLOGICAL INFORMATION

Treat symptomatically.

AGRICULTURAL CHEMICAL

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

STORAGE AND HANDLING

Warrant is packaged in water soluble plastic packets designed to dissolve in water in the spray tank. The water soluble packets may be emptied directly from the overpack bag into the sprayer (see label Mixing Instructions).

Do not open water soluble packets.

Do not freeze.

Store in areas not exposed to high temperatures (above 45°C).

The overpack bag is designed to protect water soluble packets from moisture and humidity. Open the outer bag only just prior to filling the spray tank.

Do not handle soluble packets with bare hands or wet gloves.

After opening the overpack bag, moisture, high temperatures and humidity will cause the water soluble packets to become fragile. Whenever possible use all 5 packets after opening the overpack bag. Partially used bags must be resealed in an airtight fashion to protect the soluble packets in storage. Store in a dry environment.

If broken water soluble packets are found when the overpack bag is opened, avoid contact and inhalation of the product, reseal

the outer bag and return to dealership for replacement.

DISPOSAL

Warrant is packaged in water soluble plastic packets for direct placement into the spray tank. After adding the correct number of Warrant packets to the tank, make the empty outer packaging unsuitable for use. Dispose of the foil lined package and box in accordance with provincial requirements. For information on the disposal of unused, unwanted product and the clean-up of spills, contact the provincial regulatory agency or the manufacturer.

GENERAL USE PRECAUTIONS

- . Spray only when daytime temperatures do not exceed 30°C.
- . Avoid spraying in areas where the roots of desirable plants may extend.
- . Avoid spraying steep sloping areas where heavy rainfall may result in the washing-down of treated soil or chemical to desirable vegetation.
- . Warrant should not be applied if the crop is underseeded to legumes. particularly alfalfa and sweet-clover, unless injury to the legumes can be tolerated.

DIRECTIONS FOR USE

This package contains 4 overpacks, each containing 5 water-soluble packets. Each water-soluble packet contains 0.5 kg of Warrant (this is the equivalent of 0.43 kg acid equivalent 2,4-D). Do not allow these packets to become wet prior to adding them to the sprayer tank.

MIXING INSTRUCTIONS

Vigorous agitation is essential for proper mixing. Return-line agitation is not sufficient. Jet or mechanical agitation is required. Agitation should be sufficient to create a rippling or rolling action on the surface. All in-line screens should be 50 mesh size or coarser. A 16 mesh size screen is recommended for the filter in the inlet side of the Pump.

The following mixing steps are suggested:

1. Fill the sprayer tank 1/2 full of water.
2. Start the agitation system.
3. Add the required number of Warrant herbicide packets directly into the sprayer tank. Do not make up a premixed slurry. Do not handle the packets with bare hands. Continue adding the balance of the water. Agitate the water in the

sprayer tank continuously throughout the filling period and spraying operation.

4. Continue agitation for an additional 5 minutes before starting to spray. Before spraying is commenced, inspect the spray mixture to make sure that the packets have completely disintegrated and that the product is thoroughly mixed with the water.

NOTE: If spraying and agitation are stopped before the sprayer tank is empty, the suspended material may settle to the bottom of the tank. If spraying must be interrupted, it is recommended that agitation be maintained until spraying is resumed. Rinse out the sprayer tank and all lines thoroughly after use.

DO NOT MIX WARRANT WITH LIQUID FERTILIZER.

Table 1: Application Rates

Weeds Controlled	Stage Of Weed(1)	Rate (kg/ha)	ha Treated With Each Packet
ball mustard, common ragweed, false ragweed, great ragweed, hare's-ear, Indian mustard, lamb's-quarters, thyme-leaved spurge, tumble mustard, wild mustard, wormseed mustard	Seedling (2-4 leaves) and growing rapidly	0.325	1.54
	Weeds in bud stage Dry, cool weather	0.5	1.0
Burdock (seedlings only), cocklebur, flixweed, (fall rosettes and spring seedlings only), goat's-beard (seedling only), plantain, prickly (lobed) lettuce, Russian pigweed, shepherd's-purse (fall rosettes and spring seedlings only), stinkweed (fall rosettes and spring seedlings only), sunflower, sweet-clover, tartary buckwheat, wild radish	Seedling (2-4 leaves) and growing rapidly	0.5	1.0
	Weeds in bud stage Dry, cool weather	0.65	0.77

Alfalfa (2), annual sow-thistle, biennial wormwood (3), bluebur, blue lettuce (3), Canada thistle (2), creeping buttercup (3), curled dock (2), dog mustard (2), dandelion (2), field bindweed (2), field peppergrass (2), flixweed (spring rosettes only), gumweed, hairy galinsoga, hedge bindweed (2), hoary cress (3), leafy spurge (2,3), oak-leaved goosefoot, perennial sow-thistle(2,3), pineappleweed (3), prostate amaranth, purslane, redroot pigweed, Russian knapweed (2,3), Russian thistle, shepherd's-purse (spring rosettes only), stinkweed (spring rosettes only), tumble mustard	Seedling (2-4 leaves) and growing rapidly	0.65	0.77
	Weeds in bud stage Dry, cool weather	1.0	0.5
American dragonhead, bladder campion, chickweed, chicory, clasping-leaved peppergrass, cleavers, common groundsel, cow cockle, false flax, field horsetail, green smartweed, hemp-nettle, lady's-thumb, narrow-leaved hawk's-beard (spring rosettes only), night-flowering catchfly, prostate knotweed, scentless mayweed, stinking mayweed, stinging nettle, wild buckwheat		1.0-2.4	0.21-0.5

- (1) Local conditions may affect the use of herbicides. Provincial agricultural authorities issue recommendations to suit local conditions.
- (2) Top growth control or suppression only.
- (3) Minimum rate needed for control is 1.0 kg/ha.
- (4) Rates greater than 1.0 kg/ha Warrant but not those exceeding the maximum rate indicated for each recommended crop may provide top growth control or suppression of these weeds. Better control can be achieved by using 2,4-D mixtures with other herbicides that are more effective.

SELECTIVE WEED CONTROL IN FIELD CROPS

Weeds differ in their susceptibility to Warrant and not all weed species can be controlled in a satisfactory manner in all crops. The amount of Warrant required will depend on the susceptibility of the weeds present and whether the host crop will tolerate the amount of herbicide needed to control the weeds. See Table 1 for rate recommendations for weed control.

Wheat, Barley and Rye (not underseeded to legumes)

Apply 0.325 to 1.0 kg/ha Warrant when the crop is in the 4-leaf stage (the period between the appearance of the 4th and 5th leaf with the plants about 15 cm tall) to just before the flag-leaf (shot-blade) stage. Treatment at the 4-leaf stage usually combines maximum crop tolerance and weed susceptibility. If Warrant is applied before the 4-leaf stage, leaf and spike deformities will develop. To avoid sterility, do not apply after the flag-leaf stage or during boot and flowering stages.

Pre-harvest Interval

- . Do not permit lactating dairy animals to graze fields 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.

Winter Wheat and Fall Rye

Apply 0.325 to 1.0 kg/ha Warrant to the crop in the spring from the time that growth commences until the flag-leaf stage. Do not apply in the fall.

Pre-harvest Interval

- . Do not permit lactating dairy animals to graze fields 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.

TREATMENTS TO FORAGE CROPS, SUMMERFALLOW, STUBBLE FARMLAND, PASTURES AND RANGELAND

Established Grasses - Eastern Canada

To control susceptible winter annual weeds in the fall, apply

0.65 to 1.3 kg/ha Warrant in sufficient water for adequate coverage. Use the higher rate for yellow rocket control.

Established Grasses - Western Canada

For the control of annual broadleaved weeds in established stands of grasses used for seed, apply no more than 0.65 kg/ha Warrant in no less than 50 L/ha water during the year of seed Production, in the spring, up to the shot-blade stage of the grass or in the fall after harvest.

For the control of annual broadleaved weeds in stands of grasses used for forage, apply up to 1.3 kg/ha Warrant in 50 to 200 L/ha water in the spring, up to the shot-blade stage or in the fall after harvest.

For the control of perennial broadleaved weeds in stands of grasses grown for hay or pasture, apply up to 2.35 kg/ha Warrant in 50 to 200 L/ha water before the shot-blade stage or after the seed has formed. Rates above 0.825 kg/ha are greater than those considered safe for this crop. However, the crop injury that may result may be offset by the weed control obtained.

Seedling Grass Stands

Apply 0.325 to 0.65 kg/ha Warrant in 50 to 200 L/ha water from the 3-leaf stage of grasses to just before the shot-blade stage. Do not apply during flower development or pollination as seed yield will be reduced.

Mixed Stands of Alfalfa and Grass

To control annual weeds, apply Warrant to established stands at 0.65 to 1.3 kg/ha in no less than 50 L/ha water. To control biennial weeds and winter annual weeds, apply when weeds are present but before growth of alfalfa and grasses begins. Application at 0.65 kg/ha Warrant may be made up to the time that the new growth of alfalfa is 2.5 cm but injury to alfalfa can be expected. Do not treat this crop after this stage because severe crop injury will occur. To control late germinating weeds in established stands in midsummer, apply up to 0.65 kg/ha Warrant immediately after the first hay crop has been removed.

Established Pastures and Rangeland (Without Legumes)

For broadleaved weed control, apply Warrant at 1.0 to 2.6 kg/ha in sufficient water to supply adequate coverage in established pastures when weeds are in full leaf in the spring, when weeds are growing rapidly prior to flowering, in the summer when the weeds are in bud or in the fall. Apply at a rate suitable for the weeds that are present. Use the lower rate early in the season when the weeds are young and actively growing. Use the higher rate when the weeds are more mature and the weather is dry and cool. Use enough spray mixture to give adequate coverage of the

target weeds. Repeat the treatment if necessary. Most legumes are usually damaged or killed by this treatment. Do not use this treatment if desired legumes are present.

For woody growth control, apply Warrant at 1.3 to 3.9 kg/ha as a spot treatment in sufficient water to thoroughly wet all parts of the targeted plants. Treat in the spring or early summer when leaves are fully expanded and the plants are actively growing. Treat pasture sage when it has several centimetres of new growth.

Pre-harvest Interval

- . Do not permit lactating dairy animals to graze fields 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.

Summerfallow and After Harvest

For the control of annual broadleaved weeds in stubble and summerfallow, apply Warrant in early June at 0.4 to 2.6 kg/ha in 50 to 200 L/ha water. For control of Canada thistle, sow-thistle and other perennial broadleaved weeds, apply when the weeds are in the bud to bloom stage or in early September after harvest, if weeds are actively growing. For control of winter annual or biennial weeds, apply Warrant in late September or early October before freeze-up.

BROADCAST APPLICATIONS

Ground Application

Use conventional farm field sprayers. Unless otherwise stated, apply 100 to 200 L/ha of spray mixture. Use sufficient spray mixture to provide adequate coverage of the target weeds. Use spray boom pressures in the range of 200 to 275 kPa and apply Warrant when weeds are actively growing. An approved agricultural spray surfactant may be used to improve weed control effectiveness.

Aerial Application

- . Avoid direct applications to any body of water. Do not contaminate water through spray drift, by cleaning of equipment or disposal of wastes.
- . Aerial applications should be made in a minimum of 30 L/ha total spray mixture but in a sufficient spray volume to provide adequate coverage of the intended target weed. Use boom pressures of 235 kPa or less. Avoid placing nozzles where spray solution will enter wing tip or rotor vortices.

- . Do not apply this product directly to or otherwise permit it to come into contact with desirable crops, 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 configurations 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 combinations 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 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, 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.

SPOT TREATMENTS

Knapsack Sprayer Application

To apply Warrant for spot treatment of weeds such as thistles, mix 1 packet of Warrant in 50 L of water. Spray until all foliage on the targeted plants are thoroughly wet.

Tank Mixes

Before using any recommended tank mixtures, read and understand the directions and all use precautions on both labels.

NOTICE TO USER: This control product is to be used only in accordance with the directions on this 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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