

SPARTAN® HERBICIDE

WATER DISPERSIBLE GRANULES

FOR SALE FOR USE IN EASTERN CANADA FOR WEED CONTROL IN LOWBUSH BLUEBERRIES IN
EASTERN CANADA ONLY

Contains the allergen sulfites and milk

AGRICULTURAL

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

GUARANTEE: Tribenuron Methyl 75%

REGISTRATION NO.: 23632 PEST CONTROL PRODUCTS ACT

NET CONTENTS: 160 GRAMS

WARNING :EYE IRRITANT
POTENTIAL SKIN SENSITIZER

E. I. DU PONT CANADA COMPANY
AGRICULTURAL PRODUCTS
P.O BOX 2300, STREETSVILLE
MISSISSAUGA, ONTARIO
L5M 2J4
1-800-667-3925

PRECAUTIONS:

- **KEEP OUT OF REACH OF CHILDREN.**
- WARNING: EYE IRRITANT
- POTENTIAL SKIN SENSITIZER
- May be harmful if swallowed, inhaled or absorbed through skin.
- Avoid contact with skin, eyes and clothing.
- Wear suitable chemical resistant gloves and goggles or face shield during mixing and loading.
- Avoid breathing spray mist. Use with adequate ventilation.
- Do not contaminate any body of water.
- When using, do not eat, drink or smoke. Wash skin thoroughly with soap and water after handling.
- Remove contaminated clothing immediately after use.
- Store and wash contaminated clothing separately from household laundry before re-use.
- Do not apply by air
- **DO NOT** enter or allow worker entry into treated areas for 12 hours following application.

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.

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.

For medical emergencies call 1-800-441-3637 (24 hours).

TOXICOLOGICAL INFORMATION: Treat symptomatically.

STORAGE:

Store product only in original container in a secure, dry area, away from fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed.

DISPOSAL:

1. Triple-or pressure-rinse the empty container. Add rinsings to the spray mixture in the tank.
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.
5. 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. The user assumes the risk to persons or property that arises from any such use of this product.

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- Avoid breathing spray mist. Use with adequate ventilation.
- Do not contaminate any body of water.
- When using, do not eat, drink or smoke. Wash skin thoroughly with soap and water after handling.
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TOXICOLOGICAL INFORMATION: Treat symptomatically.

RESTRICTIONS AND USE PRECAUTIONS:

- DO NOT APPLY BY AIR.
- Carefully observe sprayer clean-up instructions, as spray tank residue may damage crops other than blueberries.
- DO NOT APPLY SPARTAN® HERBICIDE WITH A CARRIER OTHER THAN WATER OR ANY ADDITIVE OTHER THAN THOSE INDICATED IN THIS BOOKLET. Other carriers may accelerate breakdown of this product and reduce its effectiveness.
- SPARTAN® Herbicide applied to blueberries stressed by severe conditions such as drought, low fertility, water logged soils (soils at or near field capacity), disease or insect damage may result in crop injury. Drought, disease or insect damage following application may also result in crop injury, grade or yield loss.
- Use a maximum of 40 grams per hectare of SPARTAN® Herbicide per year.
- Do not apply to irrigated land where tail water will be used to irrigate other crop land.
- Do not contaminate irrigation water.
- Do not remove soil from treated fields for use on lawns, in gardens or for backfill.
- If rainfall occurs soon after application, control may be reduced. At least 4-6 hours of dry weather are needed to allow SPARTAN® to be absorbed by weed foliage.
- SPARTAN® Herbicide should be applied only with a carrier such as water. Do not use any additive other than those indicated in this booklet. Other carriers may accelerate breakdown of this product and reduce its effectiveness.
- Under certain conditions such as prolonged cool weather temperature or wide fluctuations in day/night temperatures just prior to or soon after treatment, temporary yellowing and/or crop stunting may occur.

ENVIRONMENTAL HAZARDS:

- **TOXIC** to aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under **DIRECTIONS FOR USE**.

DIRECTIONS FOR USE:

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) medium classification. Boom height must be 60 cm or less above the crop or ground.

Buffer Zones:

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer, spot treatment, inter-row hooded sprayer, soil drench and soil incorporation.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of Application	Crop	Buffer Zones (meters) Required for the Protection of:		
		Aquatic Habitat of Depths:		Terrestrial Habitat
		Less than 1 m	Greater than 1 m	
Field Sprayer	Lowbush blueberries (Eastern Canada only)	1	0	10

* 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%.

When a tank mixture is used, consult the labels of the tank-mix partners and observe the largest (most restrictive) buffer zone of the products involved in the tank mixture.

NOTE: Applicators may recalculate a site-specific buffer zone by combining information on current weather conditions and spray configuration for the following applications: all airblast applications, and for field and aerial applications which specify the following droplet size category wording on the product label: 'DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification.' To access the Buffer Zone Calculator, please visit the Pest Management Regulatory Agency web site.

SPARTAN® Herbicide is to be mixed in water and applied as a uniform broadcast spray. It is non-corrosive, nonflammable, nonvolatile and does not require heated storage.

Warm, moist growing conditions promote active weed growth and enhance the activity of SPARTAN®

Herbicide by allowing maximum foliar uptake and contact activity. Weeds hardened off by environmental stress such as cold weather, drought stress or excessive heat may not be adequately controlled or suppressed, and regrowth may occur. SPARTAN® Herbicide may only be applied using ground spray equipment. For best results, ensure thorough spray coverage of target weeds.

SPARTAN® Herbicide rapidly stops growth of susceptible weeds. However, typical symptoms (discolouration) of dying weeds may not be noticeable for 1 to 3 weeks after application, depending on growing conditions and weed susceptibility. Degree of control and duration of effect depend on weed sensitivity, weed size, spray coverage and growing conditions. Favourable growing conditions following treatment promote the activity of SPARTAN® Herbicide while cold, dry conditions delay the activity.

For bunchberry control, apply SPARTAN® Herbicide at 40 g/ha with 0.2% v/v AGRAL 90* (2 L per 1000 L of water) in the spring of the sprout year**. Apply in 150 to 250 L water per hectare.

For best results, application should be made when the majority of the emerged bunchberry plant leaves have unfolded to form a 45 degree angle, but no later than when the first white blossoms are visible on the most advanced plants. SPARTAN® Herbicide + AGRAL® 90 should be applied before blueberry sprout regrowth exceeds 2 cm in height. Applications made at later stages of blueberry development or applications made in spring burnt fields are not recommended due to potential crop injury and yield reductions. Blueberry plant stunting can result following SPARTAN® Herbicide + AGRAL® 90 application, but they recover and fruit bud numbers and yields should not be affected. Recommended fertilizer applications following SPARTAN® Herbicide + AGRAL® 90 applications can be beneficial.

*Control will not be achieved if AGRAL® 90 is not applied with SPARTAN® Herbicide.

**Make only one application per crop cycle (2 or 3 years) in the sprout year.

SPARTAN® Herbicide is taken up mainly through actively growing plant tissue, thus no specific soil restrictions apply.

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than DuPont Canada and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. DuPont Canada itself makes no representation or warranty with respect to performance (efficacy) or crop tolerance (phytotoxicity) claims for this product when used on the crop listed below. Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold DuPont Canada harmless from any claims based on efficacy or phytotoxicity in connection with the uses below.

LOWBUSH BLUEBERRY: Bunchberry control – fall application For bunchberry control, apply SPARTAN® Herbicide at 40 g/ha with 0.2% v/v AGRAL 90* (2 L per 1000 L of water) 1-4 weeks after completion of harvest. Apply in 150 to 250 L water per hectare. Do not apply more than once in a crop cycle.

LOWBUSH BLUEBERRY: To control yellow loosestrife, speckled alder, wild rose, and bracken fern in lowbush blueberries, mix 0.25 grams SPARTAN® Herbicide per litre of water plus AGRAL® 90 at a rate of 0.2% v/v (2 L per 1000 L spray solution).

Apply SPARTAN® Herbicide as a spot treatment. Application should be made in mid summer of the prune

or vegetative year of the crop to fully expanded foliage of bracken fern and yellow loosestrife. Wild rose and speckled alder may also be controlled by early fall applications. Apply enough spray solution to thoroughly wet the weed foliage. Stunting and reduction of fruit buds may occur if the crop is sprayed directly.

WEED RESISTANCE MANAGEMENT:

For resistance management, Spartan Herbicide is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to Spartan Herbicide and other Group 2 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 Spartan Herbicide or other Group 2 herbicides with different herbicide groups that control the same weeds in a field.
- ✓ Use tank mixtures with herbicides from different groups 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 your local Du Pont representative or the DuPont hotline at 1-800-667-3925 or at www.dupont.ca/ag/home

MIXING INSTRUCTIONS:

1. Fill spray tank 1/4 to 1/3 full with fresh water. Use a minimum of 150 L water per hectare.
2. Add the required amount of SPARTAN[®] Herbicide to the tank with the agitator running. Continuous agitation is required for uniform suspension and application.
3. Add AGRAL[®] 90 at a rate of 2 L/1000 L spray solution (0.2% v/v).
4. Fill the remainder of the tank with water.
5. For repeat tank loads, reduce the volume in the tank to 10% or less of the original volume before proceeding with step 1. If this is not possible, pre-slurry SPARTAN[®] Herbicide in a small amount of water (5-10 L) before adding to the tank.

Apply the spray mixture uniformly with properly calibrated ground equipment. Ensure thorough coverage and a uniform spray pattern. Flat fan nozzles are recommended. Use 50 mesh filter screens or larger (metal or nylon). Continuous agitation is required to keep SPARTAN[®] Herbicide in suspension. Apply uniformly and avoid overlapping. Shut off spray boom while starting, turning, slowing or stopping to prevent crop injury from over application.

Use spray preparation of SPARTAN[®] Herbicide within 24 hours or product degradation may occur. If spray preparation is left standing without agitation, thoroughly agitate and resuspend the mixture before spraying.

Calibrate sprayers only with clean water away from well sites. Make scheduled checks of spray equipment. Assure accurate measurement of product. Mix only enough product for the job at hand. Avoid overfilling of spray tank.

In some cases, tank mixing a pest control product with another pest control product or a fertilizer can result in biological effects that could include, but are not limited to: reduced pest efficacy or increased host crop injury. The user should contact E.I du Pont Canada Company at 1-800-667-3925 for information before mixing any pesticide or fertilizer that is not specifically recommended on this label. The user assumes the risk of losses that result from the use of tank mixes that do not appear on this label or that are not specifically recommended by E.I du Pont Canada Company.

MANAGEMENT OF SPRAY DRIFT:

- When applying SPARTAN® Herbicide near adjacent, sensitive crop and/or plants, do everything possible to reduce the potential for spray drift.
- High temperatures, drought and low relative humidity increase the potential for spray drift. Extreme caution must be used when these conditions exist.
- Do not apply when a temperature inversion exists characterized by low air movement and an increase in temperature with an increase in altitude.

GROUND AND SURFACE WATER PROTECTION:

- Do not mix or load within 15 metres of a body of water or wetland.
- Do not mix, load or apply within 15 metres of any wells.
- Do not apply SPARTAN® Herbicide during periods of intense rainfall or to areas where surface water could run off to adjacent land or water bodies, including ditches and streams.
- Observe provincial regulations and guidelines that regulate treatments around water bodies and well sites.

SPRAY TANK CLEAN OUT:

To avoid subsequent injury to crops other than blueberries, immediately after spraying and prior to spraying other crops, thoroughly remove all traces of SPARTAN® Herbicide from mixing and spray equipment as follows:

1. Drain tank; then flush tank, boom and hoses with clean water for a minimum of ten minutes to remove all visible residues.
2. Fill the tank with clean water then add 1 litre household AMMONIA (containing a minimum of 3% ammonia) per 100 litres of water. Fill boom and hoses with solution and allow sprayer to sit for 15 minutes. Drain.
3. Repeat step 2.
4. Nozzles and screens should be removed and cleaned separately. To remove traces of ammonia, rinse the tank, hoses and booms thoroughly with clean water.
5. Dispose of tank rinsate according to Provincial directions.

CAUTION:

Do not use ammonia with chlorine bleach. Using Ammonia with chlorine bleach will release a gas with a musty chlorine odour, which can cause eye, nose, throat and lung irritation. Do not clean equipment in an enclosed area.

STORAGE:

Store product only in original container in a secure, dry area, away from fertilizer, food or feed. Not for use or storage in or around the home. Keep container closed.

DISPOSAL:

1. Triple-or pressure-rinse the empty container. Add rinsings to the spray mixture in the tank.
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.
5. 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.

WILDLIFE AND HABITAT PROTECTION:

Injury to or loss of desirable trees, vegetation or habitat may result from failure to observe the following: Do not apply, drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts, or similar areas. Do not contaminate any body of water, including irrigation water that may be used on crops.

Overspray or drift to important wildlife habitats such as shelterbelts, wetlands, sloughs or dry slough borders, or woodlots, should be avoided. Leave a 15 meter buffer zone between the last spray swath and the edge of any of these habitats.

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