

10-APR-2001

((LABEL))

™Dow AgroSciences

Broadstrike* Dual®

Soybean Herbicide

SUPPLEMENTAL LABEL

AGRICULTURAL

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

GUARANTEE: metolachlor 895 g/L
flumetsulam 28 g/L

REGISTRATION NO. 24453 PEST CONTROL PRODUCTS ACT

CAUTION POISON

**WARNING: EYE AND SKIN IRRITANT
POTENTIAL SKIN SENSITIZER**

NET CONTENTS: 2 x 9.6 L

Dow AgroSciences Canada Inc.

Suite 201, 1144 - 29 Avenue N.E.
Calgary, Alberta
T2E 7P1
1-800-667-3852

*Trademark of Dow AgroSciences LLC

®Trademark of Novartis Crop Protection Canada Inc.
Dow AgroSciences Canada Inc. is a licenced user.

PRECAUTIONS

Causes substantial but temporary eye injury. Do not get in eyes, on skin or on clothing. Harmful if swallowed, inhaled or absorbed through the skin.

Avoid breathing spray mist. Metolachlor may cause skin sensitization reactions in certain individuals.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- . Long-sleeved shirt and long pants
- . Chemical-resistant gloves
- . Shoes plus socks
- . Protective eye wear
- . Chemical-resistant headgear for overhead exposure
- . Chemical-resistant apron when cleaning equipment, mixing or loading

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining personal protective equipment. If no such instructions for washables, use detergent and hot water. Keep and wash personal protective equipment separately from other laundry.

OPERATOR USE PRECAUTIONS

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Potential Skin Sensitizer

When handling this product, users should:

- . Wash hands before eating, drinking, chewing gum, using tobacco or using the washroom.
- . If herbicide penetrates clothing remove immediately; then wash thoroughly and put on clean clothing.
- . Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRST AID

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

If swallowed: Do not induce vomiting. If individual is conscious, give 30 to 40 mL of activated charcoal with a large quantity of water to drink and transport to a medical facility at once or contact a poison control centre.

If in eyes: Hold eyelids open and flush with a steady, 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 occurs, get medical attention at once or contact a poison control centre.

If on skin: Immediately wash with plenty of soap and water. Get medical attention or contact a poison control centre.

TOXICOLOGICAL INFORMATION

No specific antidote. Employ supportive care. Treatment should be based on judgment of the physician in response to reactions of the patient.

For further information consult the Material Safety Data Sheet

AGRICULTURAL CHEMICAL

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

ENVIRONMENTAL HAZARDS

Buffer Zone: Overspray or drift into important wildlife habitats such as shelterbelts, wetlands, woodlots, vegetated ditch, pond and lake banks and other cover on the edges of fields should be avoided. A 50 m buffer zone should be observed adjacent to aquatic habitats, such as streams, ponds, rivers and lakes.

Do not contaminate water when disposing of equipment washwaters.

Caution should be exercised when handling this product at mixing and loading sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placing of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

Do not contaminate water used for domestic purposes.

STORAGE

Store in original container only. Store in a dry location. Do not contaminate other pesticides, fertilizers, water, food or feed during storage or disposal. **Do not store below -34EC.** Do not store near heat or flame. In case of a leak or spill use absorbent materials to contain liquids and dispose as waste. For minor spills, leaks, etc., follow all precautions on this label and clean up immediately.

DISPOSAL

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:

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

GENERAL INFORMATION

SHAKE WELL BEFORE USING.

Broadstrike Dual is a selective soil applied herbicide for the control of annual grasses and broadleaved weeds in soybeans. Broadstrike Dual may be applied surface preplant, preplant incorporated or preemergence. Broadstrike Dual controls broadleaved weeds during germination or soon after emergence and grass weeds during germination. Susceptible weeds exposed to Broadstrike Dual on broadleaved weeds involves uptake and movement to weed growing points, adequate soil moisture is necessary for optimal activity. Broadstrike Dual may provide residual control of susceptible broadleaved weeds which emerge after application.

GENERAL USE PRECAUTIONS

FAILURE TO FOLLOW LABEL INSTRUCTIONS MAY RESULT IN ERRATIC WEED CONTROL OR CROP DAMAGE. READ ALL DIRECTIONS CAREFULLY BEFORE APPLYING.

Uneven application or incorporation of Broadstrike Dual can result in erratic weed control or crop injury. Over-application may result in crop injury or rotational crop damage from soil residue.

When applications are made under adverse (dry or cold) conditions or when less susceptible species are treated, weed suppression may be observed. Weed suppression is a visual

reduction in weed competition (reduced population, size and/or vigour) as compared to an untreated area. If these conditions exist, a cultivation can provide enhanced control.

- **DO NOT APPLY BROADSTRIKE DUAL BY AIR.**
- If Broadstrike Dual is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.
- Dry weather following preemergence applications of Broadstrike Dual may reduce effectiveness. Cultivate when weeds develop.
- Make only 1 application per year.
- Do not apply to areas where (both apply) the soil pH is greater than 7.8 and organic matter is less than 2% as this may result in decreased crop tolerance.
- Do not apply to peat or muck soils or any soil containing more than 5% organic matter as this may result in decreased weed control.
- Do not apply to areas where the soil organic matter is less than 1%.
- Do not repeat application of Broadstrike Dual to the same field in the following season as there is a potential for residue build-up.

NOTE TO BUYER/USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR SPECIAL USE APPLICATIONS: THE DIRECTIONS FOR USE for this product for the use(s) described below were developed by persons other than Dow AgroSciences Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Dow AgroSciences Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed on this supplemental label.

DIRECTIONS FOR USE

BROADSTRIKE DUAL PLUS VANTAGE*, VANTAGE PLUS, OR ROUNDUP¹ (TANK-MIX) PREPLANT FOR SUPPRESSION OF FIELD HORSETAIL

Broadstrike Dual tank mixed with either Vantage, Vantage Plus or Roundup provides suppression of field horsetail in glyphosate-tolerant soybeans. Only one application may be made per year. Apply pre-plant.

Application rates:

Broadstrike Dual:	2.4 L/ha
Vantage, Vantage Plus, or Roundup:	2.5 L/ha

Refer to the main Broadstrike Dual and tank-mix partner labels for specific instructions, recommendations and precautions.

READ THE ROTATIONAL CROPPING RESTRICTIONS ON THE FULL LABEL BEFORE USING.

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.

*Vantage is a registered trademark of Dow AgroSciences LLC

¹Roundup is a registered trademark of Monsanto Canada Inc.

((BOOKLET))

™Dow AgroSciences

Broadstrike*

Dual (R)

Soybean Herbicide

A selective soil applied liquid herbicide for
broad spectrum weed control in soybeans
in Eastern Canada only.

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900-0069971 / 00076199

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broadleaved weeds during germination or soon after emergence and grass weeds during germination. Susceptible weeds exposed to Broadstrike Dual either die or remain non-competitive with the crop. Because the herbicidal activity of Broadstrike Dual on broadleaved weeds involves uptake and movement to weed growing points, adequate soil moisture is necessary for optimal activity. Broadstrike Dual may provide residual control of susceptible broadleaved weeds which emerge after application.

GENERAL USE PRECAUTIONS

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When applications are made under adverse (dry or cold) conditions or when less susceptible species are treated, weed suppression may be observed. Weed suppression is a visual reduction in weed competition (reduced population, size and/or vigour) as compared to an untreated area. If these conditions exist, a cultivation can provide enhanced control.

- . DO NOT APPLY BROADSTRIKE DUAL BY AIR
- . If Broadstrike Dual is incorporated, any supplemental tillage before planting must not exceed the depth of incorporation.
- . Dry weather following preemergence applications of Broadstrike Dual may reduce effectiveness. Cultivate when weeds develop.
- . Make only 1 application per year.
- . Do not apply to areas where (both apply) the soil pH is greater than 7.8 and organic matter is less than 2% as this may result in decreased crop tolerance.
- . Do not apply to peat or muck soils or any soil containing more than 5% organic matter as this may result in decreased weed control.

- . Do not apply to areas where the soil organic matter is less than 1 %.
- . Do not repeat application of Broadstrike Dual to the same field in the following season as there is a potential for residue build-up.

Sprayer Clean-up

To avoid injury to or exposure of non-target crops thoroughly clean and drain spray equipment used to apply Broadstrike Dual after use. Cleaning should occur as soon as possible after Broadstrike Dual application. All rinsate material should be collected in a suitable container and disposed of according to label directions (i.e., applying it to cropland to be planted to crops recommended on this label) or in a locally approved manner (see Disposal section). Spray equipment used to apply Broadstrike Dual should be cleaned after use by the following procedure:

1. Drain the sprayer tank.
2. Hose down the interior surfaces of the tank. Flush tank, hoses, boom and nozzles with clean water for 10 minutes. Fill the tank with water and recirculate for 15 minutes. Spray part of the mixture through the hoses, boom and nozzles and drain the tank.
3. Remove the nozzles and screens and clean them separately.
4. If the spray equipment will be used on crops other than soybeans, repeat steps 1 and 2 again and thoroughly wash the spray mixture from the outside of spray tank and the boom.

ROTATIONAL CROP RESTRICTIONS

When tank mixing with other herbicides, follow the most restrictive crop rotation guidelines on the label of each product used. The table below outlines the interval required between the application of Broadstrike Dual and the seeding of rotational crops.

Crop	Crop Rotation Interval (months)
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winter wheat	4
spring wheat, barley, soybeans, common beans (dry, snap), lima beans, processing peas, field corn, seed corn	10

Rotational crops except field corn and soybeans may sustain injury if dry conditions, not favourable to herbicide breakdown, persist.

Following application of Broadstrike Dual in a dry year, the risk of injury to rotational crops may increase in light-textured soils containing less than 2% organic matter because of a higher bioavailability of herbicide residues for plant uptake.

A field bioassay should be conducted before planting other crops not listed above. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production the following year.

Field Bioassay

Using typical tillage, seeding practices, and timings for the particular crop, plant several strips of the desired crop across the field previously treated with Broadstrike Dual. Plant the strips perpendicular to the direction Broadstrike Dual was applied. The strips should also be located so that different field conditions are encountered, including soil texture, drainage and compacted areas. If the crop does not show visible symptoms of injury or stand reduction, the field can be seeded with the test crop in the growing season following the bioassay. If visible injury or stand reduction occurs, the test crop should not be seeded and the bioassay must be repeated the next growing season.

PREHARVEST/GRAZING INTERVALS

Do not graze the treated soybean crop or cut for hay; sufficient data are not available to support such use.

DIRECTIONS FOR USE

Broadstrike Dual is for use on soybeans in Eastern Canada only.

Weeds Controlled

Annual Broadleaved Weeds

American nightshade
Canada fleabane++++
common chickweed+++

common lamb's-quarters+
common ragweed
Eastern black nightshade
lady's-thumb
redroot pigweed+
velvetleaf
wild mustard
wild carrot+++
wormseed mustard

Grasses

barnyard grass
crabgrass (smooth, hairy)
foxtail (green, yellow,
giant)
fall panicum
Old witchgrass
yellow nutsedge++

+Includes triazine tolerant biotypes.

++Preplant incorporated applications only.

+++Surface preplant applications only

++++Surface preplant and preemergence applications only

Weeds Suppressed+

cocklebur

+Weed suppression is a visual reduction in weed competition (reduced population, size and/or vigour) as compared to an untreated area.

Surface Preplant Application

Broadstrike Dual may be surface applied in minimum or no-tillage systems. Apply up to 21 days before planting. Broadstrike Dual must be tank mixed with Roundup 1 for control of emerged annual, winter annual or perennial weeds. To the extent possible do not move treated soil out of the row or move untreated soil to the surface during planting or weed control will be diminished.

Preplant Incorporated Application

Apply up to 15 days before planting. Incorporate Broadstrike Dual in a uniform manner with equipment set to work at a depth of 5 to 8 cm. Use a C or S shank field cultivator equipped

with a levelling device such as harrows or rolling basket attachment. The cultivator must have a minimum of 4 rows of sweeps spaced at 18 cm or less intervals and staggered so that no soil is left unturned. Tandem discs may also be used, providing the blades are less than 50 cm in diameter and spaced 18 cm or less apart. Equipment design including any drag attachments must be adequate to avoid soil ridging which may result in streaked or reduced weed control. Operate disc implements at 6 to 10 km/hr and cultivators at 10 to 13 km/hr.

Preemergence Application

Preemergence applications may be made in conventional tillage as well as reduced tillage, ridge tillage and no-till systems. Apply during (behind the planter) or after planting but prior to crop or weed emergence. Adequate soil moisture is required for optimum herbicidal activity. Rainfall is necessary to move Broadstrike Dual into the weed germination zone. Sufficient rainfall to moisten the soil to a depth of 5 cm is generally adequate. If adequate rainfall is not received within 7 to 10 days after a surface application, a shallow cultivation or use of a rotary hoe is recommended to control established weeds and move the herbicide into the weed germination zone. When adequate rainfall is received following dry conditions, activity on established weeds will depend on the weed species and the location of its root system in the soil.

RATES OF APPLICATION

Broadstrike Dual Applied Alone

Apply Broadstrike Dual at one rate of application for all soil types as follows:

Component	Amount
Broadstrike Dual	2.4 L/ha (9.6 L jug treats 4 ha)

Broadstrike Dual Tank-Mix with Roundup

Broadstrike Dual at 2.4 L/ha may be tank mixed with Roundup at 2.5 L/ha for control of existing annual weeds and certain perennial weeds including quackgrass. This tank-mix may be applied surface preplant or preemergence in minimum-till or no-till conditions. See the Roundup label for weeds controlled, recommended rates for specific weeds and

application instructions. Add the different components of the spray solution in the following order:

Component	Amount
1. Broadstrike Dual	2.4 L/ha (9.6 L jug treats 4 ha)
2. Roundup	2.5 L/ha

MIXING AND APPLICATION

Spray Preparation

Broadstrike Dual is a liquid suspension concentrate formulation. SHAKE CONTAINER THOROUGHLY BEFORE POURING. Fill the spray tank with 1/4 to 1/3 of the total amount of water required for the load and begin agitation. Add the required amount of Broadstrike Dual and allow for complete mixing and dispersion. Then add Roundup (if applicable). Finish filling the spray tank. Maintain continuous agitation during mixing and application to maintain a uniform suspension.

Spray Application

Apply Broadstrike Dual in sufficient spray volume to provide uniform coverage using properly calibrated ground equipment. A total spray volume of 100 to 400 L/ha using low pressure (135 to 270 kPa) application is recommended. Maintain sufficient agitation in the sprayer tank during mixing and spraying to ensure a uniform spray mixture.

WEED RESISTANCE MANAGEMENT

Flumetsulam is an ALS/AHAS enzyme inhibitor. Some naturally occurring populations of certain weeds listed on this label may not be controlled by Broadstrike Dual or other herbicides with the same mode of action. These resistant populations are able to survive use rates several times higher than required to control susceptible populations. To delay selection for resistant populations, rotate the use of ALS/AHAS inhibitor herbicides with other herbicides effective on the same weeds. Avoid the use of ALS/AHAS inhibitor herbicides repeatedly in the same field. Contact your local DowAgroSciences Canada Inc. representative for more information.

ALS/AHAS inhibitor herbicides registered for use in Eastern

Canada are: Elim(2) EP, Muster(2), Pinnacle(2), Pursuit(3), Refine Extra(2), Ultim(2), Fieldstar*, Striker* and Broadstrike* Treflan*.

Other sound weed resistance management strategies are:

1. Rotate to different crops and to herbicides in different chemical families.
2. Use an integrated weed management system, including cultivation to control weeds that escape herbicide treatment.
3. Monitor fields regularly for resistant weed populations.
4. Prevent the spread of weeds from contaminated areas.
5. Use tank-mixes or formulated mixtures.
6. Keep accurate records of crops and herbicides used in each field.

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1. Roundup is a registered trademark of Monsanto Canada Inc.
2. Elim EP, Muster, Pinnacle, Refine Extra and Ultim are registered trademarks of DuPont Canada Inc.
3. Pursuit is a registered trademark of Cyanamid Canada Inc.

(R) Dual is a registered trademark of Novartis Crop Protection Canada Inc.

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