GROUP

4

HERBICIDE

## DyVel® DS Herbicide

## **LIQUID HERBICIDE**

## **COMMERCIAL (AGRICULTURAL)**

GUARANTEE: Dicamba ...... 110 g/L

(all present as amines)

\*Isomer Specific Analysis

**REGISTRATION NO. 9606** 

PEST CONTROL PRODUCTS ACT



# IN CASE OF EMERGENCY ENDANGERING LIFE OR PROPERTY INVOLVING THIS PRODUCT, CALL DAY OR NIGHT 1-800-454-2673

READ THE LABEL AND BOOKLET BEFORE USING. THAW IF FROZEN. SHAKE WELL BEFORE USE.
KEEP OUT OF REACH OF CHILDREN.

**NET CONTENTS: 10 L** 

BASF Canada Inc. 345 Carlingview Drive Toronto, Ontario M9W 6N9

**DyVel® DS** is a registered trademark of BASF Corporation, used under license by BASF Canada Inc.

**DyVel DS** Herbicide is used for systemic control of many broadleaf weeds in spring and winter wheat, barley (not underseeded to legumes), corn, crop-free land (stubble fields and summerfallow), roadsides and pasture lands.

#### **CAUTION:**

The symptoms of the effect on the weeds differ from 2,4-D. Visible effects on some of the "hard to kill weeds" may not be seen immediately as much of the dicamba action takes place in the roots. Under certain conditions, **DyVel DS** Herbicide may cause shortening of the straw of cereals but yield will not be affected. Crops under stress from adverse environmental conditions such as excess moisture, drought, disease, etc., may suffer a further setback when this herbicide is applied. However, the crop injury that may occur is normally offset by the weed control obtained

#### **FIRST AID:**

**If on skin**, wash with soap and water. **If in eyes**, flush with clear water for 15 minutes. Get medical attention, if irritation persists. **If swallowed**, INDUCE VOMITING. Obtain prompt medical attention or contact a poison control centre IMMEDIATELY.

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

#### TOXICOLOGICAL INFORMATION:

Eye contact with the undiluted product will cause irritation. Repeat skin exposure may cause dermatitis.

#### **PRECAUTIONS:**

**KEEP OUT OF REACH OF CHILDREN.** DO NOT APPLY BY AIR. Avoid breathing spray or spray mist and avoid contact with skin. Keep in original container during storage. Do not allow spray, spray mist, visible or invisible vapours or air containing mist or vapours to contact plants other than those being sprayed.

If phenoxy susceptible plants are growing within a distance of 400 m from the area being sprayed, spray only when there is a light breeze away from the susceptible plants. Susceptible crops include grapes, tomatoes, tobacco, sugar beets, sunflowers, beans, soybeans, turnips, cauliflower and cabbages, as well as many other field, vegetable, ornamental and fruit crops. Spray drifting can be reduced by using high volume sprays under low pressure, coarse sprays and drop nozzles. Sprayers which have contained **DyVel DS** Herbicide should not be used to apply other pesticides to phenoxy susceptible crops.

Do not contaminate streams, lakes, ponds, irrigation water, water used for livestock, or domestic purposes. Do not store open container near seeds, feeds, fertilizers, or pesticides including insecticides, fungicides, and weed killers other than those containing 2,4-D, MCPA or brushkillers.

Do not add surfactants, emulsifiable oils or oil concentrates to **DyVel DS** Herbicide.

Do not apply **DyVel DS** Herbicide when temperatures are above 27°C and the relative humidity is very high.

Do not apply **DyVel DS** Herbicide if wind velocity exceeds 8 km/hr.

Spray **DyVel DS** Herbicide only when wind is blowing away from susceptible adjacent crops.

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.cropro.org.

## PROTECTIVE CLOTHING AND EQUIPMENT:

Handling the concentrate (mixing and loading): wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes, and protective eye wear (face shields or safety glasses). Rinse gloves before removal.

Coveralls or a chemical-resistant apron should also be worn when open pouring from containers greater than 5 L.

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 applicator is in an enclosed tractor.

#### **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 materials 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. 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 separately from household laundry.
- After work, remove all clothing and shower using soap and water.

#### **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:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for any 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.

#### **NOTICE TO USER:**

This 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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# PROTECTIVE CLOTHING AND EQUIPMENT

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- After work, remove all clothing and shower using soap and water.

## DISPOSAL

#### **Returnable/Refillable Containers:**

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

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.

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## **DIRECTIONS FOR USE**

#### MIXING:

Shake this product well before using. Half fill the spray tank with clean water. Add the required amount of product and agitate thoroughly. Fill the tank with clean water and agitate well before use. NOTE: If spray solution has been left standing, agitate thoroughly before use.

**TRANSFER SYSTEM - Containers larger than 20 Litres:** Use a transfer system that avoids open pouring when transferring the liquid concentrate from such containers into the spray tank.

## WEEDS CONTROLLED

## **EASY TO KILL**

Kochia

Wild Buckwheat Pigweeds Lady's-thumb (prostrate, redroot)\* Annual Smartweeds Lamb's-quarters\* Common Ragweed\* Russian Thistle Hedge Bindweed Sow Thistle Mustards (wild, ball, tall, Corn Spurry Knotweed wormseed, yellow) Cocklebur Volunteer Cultivated Stinkweed Buckwheat

Volunteer canola\*\*\*\*

<sup>\*</sup>including triazine resistant weeds

#### HARD TO KILL

Cow Cockle Shepherd's-purse Field Bindweed\*\* Tartary Buckwheat Flixweed Velvetleaf

Jerusalem Artichoke\*

#### SUPPRESSION ONLY

Cleavers\*\*\* Round-leaved Mallow

#### TOP GROWTH CONTROL ONLY

Canada Thistle\*\*\*\*

#### NOTE:

- Refer to the section "Jerusalem Artichoke Control in Corn".
- \*\* Best results are obtained when DvVel DS Herbicide is applied to Field Bindweed when it is actively flowering.
- Best results will be obtained on cleavers if applied when this weed is in the first to second whorl stage.
- Refer to the section "Program for the Gradual Eradication of Canada Thistle".
- Best results will be obtained if application is made prior to the bolting of canola, when this weed is at the 2 - 4 leaf stage.

For best results, apply when weeds are actively growing and are in the 2 to 3 leaf stage. Use the low rate for the easy to kill weeds, when weed densities are low and growing conditions are optimum.

Use the **high rate** for the hard to kill weeds, (a) for suppression of cleavers and round-leaved mallow, (b) for top growth control of Canada Thistle, (c) when weeds are at an advanced stage of growth, (d) when weed densities are high or (e) under adverse weather conditions.

#### RATE OF APPLICATION RATE PER HECTARE

Spring and Winter Wheat 850 mL - 1.1 Litres Barley 850 mL

Corn 850 mL - 1.1 Litres

Crop-Free land (stubble fields and summerfallow) Roadsides, pasture lands

1.1 - 1.75 Litres 3.25 Litres

**SPRAY VOLUME** 

PER HECTARE 100 Litres Spring and Winter Wheat Barley 100 Litres 200-350 Litres Corn

#### TIMING OF APPLICATION:

Spring Wheat: 3 - 5 leaf stage

Winter Wheat: Examine crop for weeds as soon as

growth starts in the spring. Winter annual weeds, such as flixweed, stinkweed and shepherd's-purse, should be sprayed early while they are in the rosette stage. before the crop is more than 30 cm

WATER VOLUME

high (top leaf extended).

Barley: 2 to 3 leaf stage

## PRE-HARVEST INTERVALS Wheat, Barley, Winter Wheat:

- 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.

## DYVEL DS HERBICIDE + EVEREST® 70 DF HERBICIDE TANK-MIX

For control of wild oats and green foxtail populations in spring wheat, DvVel DS Herbicide can be tankmixed with Everest Solupak 70 DF.

## RATE OF APPLICATION RATE PER HECTARE

Spring Wheat 850 mL DvVel DS Herbicide +

> 43 g Everest Solupak 70 DF\* + 0.25% v/v Agral® 90 or Ag-Surf ®

adjuvant.

\*Reduction in wild oat control may be observed with this tank-mix partner.

Please consult the Everest Solupak 70 DF label for additional precautions and restrictions.

## Corn (Field and Sweet): **Early Post Emergent Application**

Apply DyVel DS Herbicide as a broadcast application before corn reaches 15 cm in height (top leaf extended) and before the broadleaf weeds\* reach 10 cm in height. Apply in a minimum of 200 litres of water per hectare. Minimize drift by applying at the lowest pressure that gives complete coverage of the crop and weeds with spray tips that generate coarse droplets.

\*Includes triazine tolerant broadleaf weeds.

## PRE-HARVEST INTERVALS Corn:

- Do not permit lactating dairy animals to graze fields within 7 days after application.
- Do not harvest as forage within 30 days after application.
- Withdraw meat animals from treated fields at least 3 days before slaughter.

DyVel DS Herbicide can be tank-mixed with Aatrex® Liquid, Aatrex® Nine-O or Aatrex® 90W for control of both broadleaf weeds\* and annual grasses. Apply when corn is 5 to 10 cm in height and before the broadleaf weed reaches 10 cm in height and the annual grasses exceed the two leaf stage. Apply **DyVel DS** Herbicide at 850 mL - 1.1 litres per hectare plus either AAtrex Liquid at 2.25 L per hectare or AAtrex Nine-O at 1.25 kg per hectare or AAtrex 90W at 1.25 kg per hectare.

Consult the product labels to be tank-mixed with DyVel DS Herbicide for specific recommendations. Adhere to these product labels for precautions, warnings, restrictions, tank-mixing and spraying instructions, rotational crops and detailed directions for use.

#### **Directed Post Emergent Application**

If the crop is beyond 30 cm in height, apply DyVel DS Herbicide using drop nozzles. Do not allow the spray solution to contact the corn stalk above the point where the first leaf meets the stem. Apply in 250-300 litres of water per hectare. Minimize drift by spraying at a pressure of no more than 150 kPa with spray tips that generate coarse droplets. If weeds are well advanced a supplemental cultivation preceding or during application may be beneficial.

#### PRE-HARVEST INTERVALS Corn:

- Do not permit lactating dairy animals to graze fields within 7 days after application.
- Do not harvest as forage within 30 days after application.
- Withdraw meat animals from treated fields at least 3 days before slaughter.

#### NOTE:

Under certain environmental conditions (e.g., extended periods of either cold or hot dry weather), corn may become brittle after applying DvVel DS Herbicide. Do not cultivate for two weeks following application. Heavy winds during the two week period following application may cause some stalk lodging.

DyVel DS Herbicide is not to be applied in the growth interval between 15 and 30 cm of corn.

# JERUSALEM ARTICHOKE **CONTROL IN CORN**

DvVel DS Herbicide will control Jerusalem artichoke, when applied in a "TWO YEAR CONTINUOUS CORN PROGRAM". Failure to follow the "Two Year Continuous Corn Program" will result in decreased control of the weed.

#### YEAR 1

Apply DyVel DS Herbicide at 1.1 litres per hectare when Jerusalem artichoke is 30-45 cm in height, following instructions and precautions listed under the section "DIRECTED POST EMERGENT APPLICATION". Re-apply DyVel DS Herbicide at 1.1 litres per hectare 10 -14 days following the initial application mentioned above.

#### YEAR 2

Repeat the entire Year 1 program.

## **CAUTION**

Do not cultivate infested areas of Jerusalem artichoke as this will spread tubers and rhizomes and result in decreased control.

# ROADSIDES AND **PASTURE LANDS**

For control of a wide range of broadleaf weeds, including bull thistle, chicory, goat's-beard, ragwort, white cockle plus poison ivy, alders and sheep-laurel, apply DvVel DS Herbicide at 3.25 litres per hectare in sufficient water for good coverage. For best results, apply in the spring when weeds are actively growing.

DO NOT apply on freshly seeded grasses and pastures until established. There is a possibility that plants poisonous to livestock will appear more palatable and could be grazed more readily after treatment (e.g. tansy ragwort, water hemlock, poison hemlock, death camas). Suitable precautions should be taken when such plants are present. Livestock should not be allowed to graze the treated area until poisonous plants have been removed, are dead or have resumed a normal growth habit.

DO NOT apply to a pasture land where legumes are present. Most legumes may be damaged or killed by this product.

## PRE-HARVEST INTERVALS Stubble land, roadsides, pasture lands and uncropped land:

- Do not permit lactating dairy animals to graze fields within 7 days after application.
- Do not harvest forage or cut for hay within 30 days after application.
- Withdraw meat animals from treated fields at least 3 days before slaughter.

# PROGRAM FOR THE **GRADUAL ERADICATION** OF CANADA THISTLE

#### YEAR 1 In Stubble Fields

Apply **DyVel DS** Herbicide at 1.1-1.75 litres per hectare to Canada thistle regrowth. Treatment at the 15-20 cm stage of actively growing Canada thistle will provide the best results. Do not apply within 2 weeks of a killing frost.

#### In Summerfallow Fields

Apply **DyVel DS** Herbicide at 1.1-1.75 litres per hectare when Canada thistle is in the early bud stage. Do not cultivate for a minimum of 4 weeks after application.

#### YEAR 2

Next spring apply DyVel DS Herbicide at 850 mL-1.1 litres per hectare when weeds are young and See section on "Rate of actively growing. Application" for rates recommended for specific crops.

#### NOTE:

Continuation of this program will gradually eliminate Canada thistle.

## RESISTANCE MANAGEMENT

For resistance management, DyVel DS is a Group 4 herbicides. Any weed population may contain or develop plants naturally resistant to DyVel DS and other Group 4 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 resistancemanagement strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of DyVel DS or other Group 4 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 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 resistance-management pesticide and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact BASF at 1-877-371-2273.

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