

# **VIKING™** Dicamba Herbicide

GROUP 4 HERBICIDE

# **SOLUTION**

COMMERCIAL (AGRICULTURAL)

**REGISTRATION NO. 34737 PEST CONTROL PRODUCTS ACT** 

ACTIVE INGREDIENT: Dicamba, present as dimethylamine salt .............. 480 g a.e./L

NET CONTENTS: 1 - 1000 L

# READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

**KEEP OUT OF REACH OF CHILDREN** 



**WARNING: EYE IRRITANT** 

In case of emergency call the 24 hour Emergency Response Number 1-800-424-9300 or 1-703-527-3887

**Viking Crop Production Partners Inc.** 

Box 18033 RPO Shawnessy Calgary, AB. T2Y 0K3 1-587-743-1029

Viking (TM) is a trademark of Viking Crop Production Partners Inc.

## **PRECAUTIONS**

## KEEP OUT OF REACH OF CHILDREN.

Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes, and clothing. Thaw if frozen. Shake before use.

# **Ground Application:**

During mixing, loading, clean-up and repair, workers must wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes, and goggles or face shield.

During application, workers must wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes.

## **Aerial Application:**

During mixing, loading, clean-up and repair, the field crew and the mixers/loaders must wear coveralls, chemical-resistant gloves, socks and shoes, and googles or face shield.

Aerial applicators must wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and work shoes.

DO NOT enter treated fields until 12 hours after application to barley, lowbush blueberries, canary seed (*Phalaris canariensis*), corn (field), fallow, oats, pastures, red fescue, spring rye, seedling grasses, stubble fields, summer fallow and wheat (spring, durum).

## **ENVIRONMENTAL PRECAUTIONS**

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

READ THE ATTACHED LABEL BOOKLET FOR COMPLETE USE DIRECTIONS

## **FIRST AID**

## 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 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.

#### 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 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.

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

## **TOXICOLOGICAL INFORMATION**

Dicamba may cause severe irritation to the eyes and irritation to the skin and mucous membranes. Symptoms of overexposure to dicamba may include dizziness, muscle weakness, loss of appetite, weight loss, vomiting,

decreased heart rate, shortness of breath, excitement, tenseness, depression, incontinence, cyanosis, muscle spasms, exhaustion and loss of voice.

Treat symptomatically.

## **DISPOSAL**

## For Recyclable Containers

**DO NOT** reuse this container for any purpose. This is a recyclable container, and it 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 spray mixture in the tank.
- 2. 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 Returnable Containers

DO NOT reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

## For 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 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.

# 1000 L container refilling:

- 1. The container must be refilled by the distributor/dealer only with **VIKING Dicamba Herbicide**. Do not reuse this container for any other purpose.
- 2. Reseal and return to an authorized Bulk Site.
- 3. Prior to refilling, inspect thoroughly for damage such as cracks, punctures, bulges, dents, abrasions and damaged or worn threads on closure devices.
- 4. Check for leaks after refilling and before transportation.
- 5. Do not refill or transport damaged or leaking containers.
- 6. If the container is not being refilled, return to the point of purchase (distributor/dealer) for disposal.

# **STORAGE**

- 1. Store this product away from food or feed.
- 2. Keep the container closed to prevent spills and contamination.
- 3. Keep packages dry at all times.

#### **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.



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**POISON** 

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**Viking Crop Production Partners Inc.** 

Box 18033 RPO Shawnessy Calgary, AB. T2Y 0K3 1-587-743-1029

## **CONTAINER CLEANING**

# VIKING Dicamba Herbicide alone or with 2,4-D or MCPA

If you have used **VIKING Dicamba Herbicide** alone or **VIKING Dicamba Herbicide** in a tank-mix with 2,4-D or MCPA, to clean the spray equipment follow these steps:

- 1. Thoroughly hose down the inside and outside of equipment surfaces while filling the spray tank half-full with water. Flush by operating the sprayer until the system is purged of the rinse water.
- 2. Fill the tank with water, adding 1L of household ammonia for every 100 L of water. Operate the spray pump to circulate the ammonia solution through the sprayer solution for 15-20 minutes and discharge a small amount of the ammonia solution through the spray boom and nozzles.
- 3. Flush the solution out of the spray tank through the boom.
- 4. Remove the nozzles and screens and flush the system with two tanks full of water.

#### VIKING Dicamba Herbicide with other Herbicides

To clean spray equipment used to apply **VIKING Dicamba Herbicide** as a tank-mix with wettable powders (WP), emulsifiable concentrates (EC) or other types of water-dispersible formulations, follow these steps: (Note that if you use **VIKING Dicamba Herbicide** tank-mixes with water-dispersible formulation, you must add detergent to the rinse water.)

- 1. Thoroughly hose down the inside and outside of equipment surfaces while filling the spray tank half-full with water. Flush by operating the sprayer until the system is purged of the rinse water.
- 2. Fill tank with water while adding 1 kg of detergent for every 150 litres of water. Operate the pump to circulate the detergent solution through the sprayer system for 5-10 minutes and discharge a small amount of the solution through the boom and nozzles. Let the solution stand for several hours, preferably overnight.
- 3. Flush the detergent solution out of the spray tank through the boom.
- 4. Repeat step 1 and follow steps 2 and 3.

## **DISPOSAL**

## For Recyclable Containers

**DO NOT** reuse this container for any purpose. This is a recyclable container, and it 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 spray mixture in the tank.
- 2. 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 Returnable Containers

DO NOT reuse this container for any purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

## For 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 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.

## 1000 L container refilling:

1. The container must be refilled by the distributor/dealer only with **VIKING Dicamba Herbicide**. Do not reuse this container for any other purpose.

- 2. Reseal and return to an authorized Bulk Site.
- 3. Prior to refilling, inspect thoroughly for damage such as cracks, punctures, bulges, dents, abrasions and damaged or worn threads on closure devices.
- 4. Check for leaks after refilling and before transportation.
- 5. Do not refill or transport damaged or leaking containers.
- 6. If the container is not being refilled, return to the point of purchase (distributor/dealer) for disposal.

#### **STORAGE**

- 1. Store this product away from food or feed.
- 2. Keep the container closed to prevent spills and contamination.
- 3. Keep packages dry at all times.

## ABOUT VIKING DICAMBA HERBICIDE

**VIKING Dicamba Herbicide** controls broadleaf weeds in cereals, field corn, reduced tillage (prior to seeding and reduced tillage fallow), pastures and rangeland grasses, crop-free land (summerfallow and stubble), red fescue, canary seed (*Phalaris canariensis*), seedling grasses grown for seed and forage and low bush blueberries.

## **PRECAUTIONS**

## KEEP OUT OF REACH OF CHILDREN.

Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes, and clothing.

# **Ground Application:**

During mixing, loading, clean-up and repair, workers must wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes, and goggles or face shield.

During application, workers must wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and shoes.

## Aerial Application:

During mixing, loading, clean-up and repair, the field crew and the mixers/loaders must wear coveralls, chemical-resistant gloves, socks and shoes, and googles or face shield.

Aerial applicators must wear a long-sleeved shirt, long pants, chemical-resistant gloves, socks and work shoes.

DO NOT enter treated fields until 12 hours after application to barley, low bush blueberries, canary seed (*Phalaris canariensis*), corn (field), fallow, oats, pastures, red fescue, spring rye, seedling grasses, stubble fields, summer fallow and wheat (spring, durum).

Apply only when the potential for drift to areas of human habitation and areas of human activity such as houses, cottages, schools and recreational areas is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

# **FIRST AID**

## 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 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.

## 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 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.

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

## **TOXICOLOGICAL INFORMATION**

Dicamba may cause severe irritation to the eyes and irritation to the skin and mucous membranes. Symptoms of overexposure to dicamba may include dizziness, muscle weakness, loss of appetite, weight loss, vomiting, decreased heart rate, shortness of breath, excitement, tenseness, depression, incontinence, cyanosis, muscle spasms, exhaustion and loss of voice.

Treat symptomatically.

## **GENERAL PRECAUTIONS**

- 1. VIKING Dicamba Herbicide should not be applied on or near desirable trees or plants.
- 2. Apply **VIKING Dicamba Herbicide** when air temperature is between 10 and 25°C. Do not apply when there is a risk of severe fall in night temperature after use.
- 3. Do not treat areas where movement of the chemical into the soil or surface washing may bring **VIKING Dicamba Herbicide** into contact with roots of desirable plants.
- 4. Crop damage can occur if the chemical is applied at any time other than the recommended crop stage. <u>NOTE:</u> Crops growing under stress from adverse environmental conditions such as excess moisture, drought, disease, etc., may suffer a further setback and exhibit more pronounced injury symptoms if **VIKING Dicamba Herbicide** is applied. However, the crop injury that may occur is usually offset by the weed control obtained.
- 5. Do not use additives such as oil, wetting agents, emulsifiers, detergents, spreaders, sticking agents, or dispersing agents with **VIKING Dicamba Herbicide** on crops.
- 6. For information on feeding and grazing of beef and dairy cattle on treated vegetation and for recommendations on treatment/harvest intervals, refer to "Grazing Restrictions".
- 7. When tank-mixes are permitted, read and observe all label directions, including rates and restrictions for each product used in the tank-mix. Follow the more stringent label precautionary measures for mixing, loading and applying stated on both product labels.
- 8. Ensure that spray equipment used to apply **VIKING Dicamba Herbicide** is properly cleaned before re-using to apply any other chemicals. See section on suggested procedure for cleaning spray equipment.

# **SPRAY DRIFT PRECAUTIONS**

**VIKING Dicamba Herbicide** may cause injury to desirable trees and plants, particularly soybeans, flowers, fruit trees, grapes, ornamentals, peas, potatoes, tomatoes, tobacco, and other broadleaf plants especially in their developmental and growing stage. Follow these precautions when spraying in the vicinity of sensitive crops:

- 1. Ground Application: Avoid spraying when winds are gusty or in excess of 8 km/h and moving towards sensitive crops. Leave an adequate spray buffer zone between treatment areas and sensitive plants.
- 2. Use coarse sprays since they are less likely to drift than fine sprays. Select nozzles which minimize amounts of the fine spray particles. Keep the spray pressure below 150 kPa and the spray volume above 220 L/ha unless otherwise required by the nozzle manufacturer.
- 3. Do not spray when the temperature is expected to exceed 30°C.
- 4. Avoid spraying under conditions of high humidity or fog.

## **ENVIRONMENTAL PRECAUTIONS**

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

#### **DIRECTIONS FOR USE**

## Thaw if frozen. Shake before use.

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

## **Field Sprayer Application**

DO NOT apply during periods of dead calm. A void application of this product when winds are gusty. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S572.1) coarse classification. Boom height must be 60 cm or less above the crop or ground.

# Aerial Application (Cereals [not underseeded to legumes] in Western Canada only)

DO NOT apply during periods of dead calm. A void application of this product when winds are gusty. DO NOT apply when wind speed is greater than 16 km/h at flying height at the site of application. DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S.572.1) coarse classification. Reduce drift caused by turbulent wingtip vortices. Nozzle distribution along the spray boom length MUST NOT exceed 65% of the wingspan or rotor span.

#### **Surface Runoff**

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative filter strip between the treated area and the edge of the water body.

## Leaching

This product demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

## **Spray Buffer Zones**

Use of the following spray methods or equipment DO NOT require a spray buffer zone: hand-held or backpack sprayer, and spot treatment.

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

When tank mixes are permitted, consult the labels of the tank-mix partners and observe the largest (most restrictive) spray buffer zone of the products involved in the tank mixture and apply using the coarsest spray (ASAE) category indicated on the labels for those tank mix partners.

# **Spray Buffer Zones Using ASAE Coarse Applications**

|                       |                                |                            |                       | Spray Buffer Zones (metres) Required for the Protection of: |                  |                     |         |  |
|-----------------------|--------------------------------|----------------------------|-----------------------|---|------------------|---------------------|---------|--|
| Method of             |                                |                            | Freshwater Habitat of |   | Estuarine/Marine |                     |         |  |
| Application           | Crop                           | Crop                       |                       | Depths:   |                  | Habitats of Depths: |         |  |
| Application           |                                |                            | Less than 1 m         | Greater   | Less than 1      | Greater             | Habitat |  |
|                       |                                |                            | Less man i m          | than 1 m  | m                | than 1 m            |         |  |
|                       | Barley, oats, r                | ye, wheat,                 |                       |   |                  |                     |         |  |
|                       | canary seed                    | (Phalaris                  | 0                     | 0   | 0                | 0                   | 1 1     |  |
|                       | canariensis), fo               | canariensis), forage grass |                       | U   | U                | U                   | '       |  |
| (seed                 |                                | ngs)                       |                       |   |                  |                     |         |  |
| Field sprayer*        | Field sprayer* Corn, forage gi |                            | 1                     | 1   | 0                | 0                   | 4       |  |
| l leid sprayer        | (established),                 | red fescue                 | ı                     | ı   | U                | U                   | 7       |  |
|                       | Stubble fields,                | fallow land                | 1                     | 1   | 0                | 0                   | 5       |  |
|                       | Pasture and r                  |                            | 1                     | 1   | 0                | 0                   | 10      |  |
|                       | non-cropland (2                | .2 kg a.i./ha)             | 1                     | '   | U                | 0                   |         |  |
| Blueberry (low        |                                | ow bush)                   | 1                     | 1   | 1                | 0                   | 15      |  |
| Aerial                | Barley, oats, rye,             | Fixed wing                 | 0                     | 0   | 0                | 0                   | 50      |  |
| (Western Canada only) | wheat                          | Rotary wing                | 0                     | 0   | 0                | 0                   | 45      |  |

For field sprayer application, spray 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 spray 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 spray buffer zone can be reduced by 30%.

# **CEREALS (NOT UNDERSEEDED TO LEGUMES)**

## **Treatment Notes**

- 1. For best performance, spray when weeds are in the 2 to 3 leaf stage and rosettes are less than 5 cm across.
- 2. Use the higher level of listed rate ranges when treating more mature weeds or dense vegetative growth.
- 3. Crop damage can occur if application is made at any time other than the recommended crop stage.
- 4. Do not apply **VIKING Dicamba Herbicide** or **VIKING Dicamba Herbicide** tank-mixes if crop is underseeded to legumes.

# **Application Directions**

**Ground Application** 

Apply VIKING Dicamba Herbicide or VIKING Dicamba Herbicide tank-mixes in at least 110 litres of water/ha.

# Aerial Application (Western Canada Only)

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before

opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

# **Use Precautions**

Apply only when meteorological conditions at the treatment site allow for complete and eve n crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

# **Operator Precautions**

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a

closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and the mixer/loaders must wear coveralls, chemical-resistant gloves, and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

# **Product Specific Precautions**

Read and understand the entire label before opening this product. If you have questions, call Viking Crop Production Partners Inc. at 1-587-743-1029 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

- 1. VIKING Dicamba Herbicide or VIKING Dicamba Herbicide phenoxy herbicide tank-mixes may be aerially applied in not less than 20 litres of water/ha.
- 2. Apply **VIKING Dicamba Herbicide** alone at 230 mL/ha or tank mix **VIKING Dicamba Herbicide** at 230 mL/ha with the recommended rate of the phenoxy herbicides specified on this label.
- 3. Do not use nozzle pressure above 200 kPa.
- 4. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, or shelterbelt.
- 5. Do not use any additives with **VIKING Dicamba Herbicide**.

## **Weeds Controlled**

| Weeds Controlled   | VIKING Dicamba Herbicide Rate                   | Tank Mix   |
|--|---|--|
| buckwheat, tartary buckwheat, wild cockle, cow cleavers (higher rate only) lady's thumb sow-thistle, perennial (top growth only) smartweed, green spurry, corn thistle, Canada (top growth only)                       | VIKING Dicamba Herbicide alone at 230-290 mL/ha | none   |
| All of the above plus: burdock (young seedlings) canola, volunteer * cocklebur flixweed hemp-nettle** kochia pigweed, redroot pigweed, Russian radish, wild shepherd's-purse sunflower, volunteer *** thistle. Russian | VIKING Dicamba Herbicide at 230<br>mL/ha +      | 2, 4-D amine<br><b>OR</b><br>MCPA amine<br><b>OR</b><br>MCPA K |
| All of the above plus:<br>chickweed<br>hemp-nettle**<br>spurry, corn<br>stinkweed<br>sunflower, volunteer***   | VIKING Dicamba Herbicide at 230 mL/ha +         | Lexone <sup>®</sup>  |

| All of the above plus: buckwheat, wild canola, volunteer; * sow- thistle, perennial (top growth only) thistle, Canada (top growth only) | VIKING Dicamba Herbicide at 230 mL/ha + | Ally® |
|---|---|-------|
|---|---|-------|

- \* Best results will be obtained if application is made prior to bolting of canola, when this weed is at the 2 to 4 leaf stage.
- \*\* Use **VIKING Dicamba Herbicide** + MCPA K for hemp-nettle control. Apply at the 2 to 3 leaf stage of weed for best control. Hemp-nettle may not be controlled if application is made at a more advanced stage of crops and weeds.
- \*\*\* Depending on the growing conditions, control may be slightly delayed.

# **Application Directions**

VIKING Dicamba Herbicide may be applied to:

- Spring Wheat
- Spring Barley
- Winter Wheat
- Oats
- Spring Rye

The following sections describe application directions for these crops.

# **Spring Wheat**

| Herbicide Mix                     | Rate/ha                         | Crop Stage |
|-----------------------------------|---------------------------------|------------|
| VIKING Dicamba Herbicide<br>alone | 230-290 mL/ha                   | 2-5 leaf   |
| + 2,4-D amine                     | 850 mL/ha (500 g/L formulation) | 2-5 leaf   |
| or MCPA amine                     | 850 mL/ha (500 g/L formulation) | 2-5 leaf   |
| or MCPA K                         | 1.1 L/ha (400 g/L formulation)  | 2-5 leaf   |
| or Lexone DF*                     | 275 g/ha                        | 2-3 leaf   |
| or Ally DF***                     | 5 g/ha (60% formulation)        | 2-5 leaf   |

<sup>\*</sup> Lexone tank-mixes apply to Western Canada only. Application may be delayed until the 4-leaf stage of the crop however, crop tolerance may be reduced. Apply **VIKING Dicamba Herbicide** at 230 mL/ha with Lexone.

## Spring Rye

| Herbicide Mix                  | Rate/ha                          | Crop Stage |
|--------------------------------|----------------------------------|------------|
| VIKING Dicamba Herbicide alone | 230-290 mL/ha                    | 2-3 leaf   |
| + 2,4-D amine                  | 850 mL/ha (500 g/ L formulation) | 2-3 leaf   |

# **Spring Barley**

| Herbicide Mix            | Rate/ha                         | Crop Stage |
|--------------------------|---------------------------------|------------|
| VIKING Dicamba Herbicide | 230-290 mL/ha                   | 2-5 leaf   |
| alone                    |                                 |            |
| +2,4-D amine             | 850 mL/ha (500 g/L formulation) | 2-5 leaf   |
| or MCPA amine            | 850 mL/ha (500 g/L formulation) | 2-5 leaf   |
| or MCPA K                | 1.1 L/ha (400 g/L formulation)  | 2-5 leaf   |
| or Lexone DF*            | 275 g/ha                        | 2-3 leaf   |
| or Ally DF***            | 5 g/ha (60% formulation)        | 2-5 leaf   |

<sup>\*\*\*</sup> Ally DF tank-mixes apply to Western Canada only. Apply **VIKING Dicamba Herbicide** at 230 mL/ha with Ally DF. Ensure that Ally DF is completely in suspension in the spray tank before adding VIKING Dicamba Herbicide. Do not add a surfactant.

\* Lexone tank-mixes apply to Western Canada only. NOTE: Do not use on Klondike barley.

## Winter Wheat

| Herbicide Mix            | Rate/ha                          | Crop Stage                            |
|--------------------------|----------------------------------|---------------------------------------|
| VIKING Dicamba Herbicide | 230-290 mL/ha                    | 15-25 cm tall or before shot blade    |
| alone                    |                                  | stage                                 |
| + 2,4-D amine            | 850 mL/ha (500 g/L formulation)  | 45 05 and tall an hiefans about blade |
| or MCPA amine            | 1850 mL/na (500 g/L formulation) | 15-25 cm tall or before shot- blade   |
| or MCPA K                | 1.1 L/ha (400 g/L formulation)   | stage                                 |

## **Oats**

| Herbicide Mix            | Rate/ha                         | Crop Stage |
|--------------------------|---------------------------------|------------|
| VIKING Dicamba Herbicide | 230-290 mL/ha                   | 2-5 leaf   |
| alone                    | 250-290 IIIL/IIa                |            |
| + MCPA amine             | 850 mL/ha (500 g/L formulation) | 2-5 leaf   |
| or MCPA K                | 1.1 L/ha (400 g/L formulation)  | 2-5 leaf   |

## **Grazing Restrictions**

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.

## FIELD CORN

DO NOT apply by air.

## **Treatment Notes**

- 1. Apply **VIKING Dicamba Herbicide** or **VIKING Dicamba Herbicide** tank-mixes in 220 to 350 litres of water/ha at a pressure of 150 to 275 kPa. Use coarse sprays.
- 2. Keep spray mixture in suspension at all times. If mixture is allowed to settle, thoroughly agitate the mixture before spraying.
- 3. Do not apply to sweet corn.
- 4. Do not use additives such as oil, wetting agents, emulsifiers, detergents, spreaders, sticking agents, or dispersing agents on corn with **VIKING Dicamba Herbicide**.
- 5. Corn height refers to the crop as it stands, not leaf-extended.
- 6. When using drop pipes (drop nozzles), direct the spray beneath the lower leaves of the corn and onto the weeds and soil. Do not apply to corn over 50 cm in height.
- 7. Apply no later than 2 weeks prior to tassel emergence when using **VIKING Dicamba Herbicide** alone up to 50 cm.
- 8. For the best control of annuals, spray when they are actively growing and in the seedling stage. Poor results may occur if weeds are well advanced at the time of application.
- 9. When applying **VIKING Dicamba Herbicide** adjacent to sensitive crops, apply as a pre-emergent or early post-emergent treatment to avoid potential drift onto these sensitive crops.

<sup>\*\*\*</sup> Ally DF tank-mixes apply to Western Canada only. Apply **VIKING Dicamba Herbicide** at 230 mL/ha with Ally DF. Ensure that Ally DF is completely in suspension in the spray tank before adding **VIKING Dicamba Herbicide**. Do not add a surfactant.

## **VIKING Dicamba Herbicide /LIQUID NITROGEN**

Pre-emergent applications of **VIKING Dicamba Herbicide** are generally compatible with most liquid nitrogen fertilizers. To determine compatibility, mix all components of the finished spray in proportionate quantities in a small jar before mixing in the spray tank. If the herbicides do not ball-up or form flakes, sludge, jelly, oily films or layers, or other precipitates within 5 minutes after mixing, the tested spray-mix is compatible.

## **Weeds Controlled**

| Weeds Controlled  | VIKING Dicamba Herbicide Rate                                  | Tank Mix |
|---|--|----------|
| bindweed, field** buckwheat, tartary buckwheat, wild cleavers cockle, cow lady's-thumb lamb's-quarters* mustard, hare's-ear mustard, tumble mustard, wild mustard, wormseed pigweed, redroot* pigweed, Russian ragweed, false ragweed, giant sow-thistle, perennial** spurry, corn smartweed, green thistle, Canada** | <b>VIKING Dicamba Herbicide</b> alone at 600 mL -<br>1.25 L/ha | none     |

<sup>\*</sup> Including atrazine-resistant species.

# Pre-Emergence Treatment EASTERN CANADA ONLY

- 1. **VIKING Dicamba Herbicide** can be used in tank-mixes with Dual<sup>®</sup> Magnum<sup>®</sup>, Dual II Magnum, Frontier<sup>®</sup> Max, and Aatrex<sup>®</sup> Liquid 480 Herbicide for additional broadleaf and grassy weed control.
- 2. VIKING Dicamba Herbicide can be used alone at 1.25 L/ha or tank-mixed with the following herbicides:

| Herbicide                    | Rate/ha        |
|------------------------------|----------------|
| Dual Magnum                  | 2.0 - 2.75 L   |
| Dual II Magnum               | 2.0 - 2.75 L   |
| Frontier Max                 | 756 - 963 mL   |
| Aatrex Liquid 480 Herbicide* | 2.1 – 3.1 L/ha |

Other atrazine formulations will require a rate calculation adjustment according to percent active ingredient.

<sup>\*\*</sup> Apply VIKING Dicamba Herbicide annually for three years at the flowering stage of bindweed and the budding stage of thistles.

## **Pre-Emergence Treatment Notes**

- Apply VIKING Dicamba Herbicide tank-mixes as broadcast ground treatments after planting but before weeds and corn emerge.
- Apply to medium to fine textured soils containing more than 2.5% organic matter.
- Do not use on sandy or sandy loam soils.
- Avoid direct chemical contact with the corn seed. If you plan to apply VIKING Dicamba Herbicide prior to
  corn emergence, be sure to place the corn seeds 4 cm or more below the soil surface. If seeds are planted
  less than 4 cm below the soil surface, delay application of VIKING Dicamba Herbicide until the spikes
  stage.
- Do not incorporate. If applications are made during planting, apply **VIKING Dicamba Herbicide** far enough behind the planting equipment to avoid incorporation by the planter wheel or other covering device. If soil crusting makes it necessary to use a rotary hoe after a pre-emergence treatment, delay hoeing the soil more than 1.3 cm deep.
- Always consult the tank mix partner label for further limitations and restrictions (especially re: soil type).

## **Post-Emergence Treatment**

**VIKING Dicamba Herbicide** or **VIKING Dicamba Herbicide** tank-mixes can be applied as "overlay" to corn previously treated with any other broadleaf or grass herbicide. The 1.25 L rate of **VIKING Dicamba Herbicide** as "overlay" is particularly effective in controlling velvetleaf and providing extended residual control of other late germinating, deep rooted annuals.

**Note:** Do not use additives such as oils, wetting agents, or sticking agents.

## VIKING Dicamba Herbicide alone - Spike to 5-leaf corn - Eastern and Western Canada

| Herbicide                      | Rate/ha   | Corn Stage          | Weed Stage                           |
|--------------------------------|-----------|---------------------|--------------------------------------|
| VIKING Dicamba Herbicide alone | 1.25 L/ha | Emergence to 5-leaf | Pre-emergence to 2-leaf <sup>1</sup> |

<sup>1</sup> For best performance, spray when the broadleaf weeds are emerged and up to the 2-leaf stage of their development.

# VIKING Dicamba Herbicide Overlay Tank-Mixes - Spike to 3-leaf corn - Eastern Canada only

| Herbicide | Rate/ha                    | Corn Stage          | Weed Stage                                 |
|-----------|----------------------------|---------------------|--|
|           | 600 mL +<br>2.1 – 3.1 L/ha | Emergence to 3-leaf | Pre-emergence to 2-<br>leaf <sup>1,2</sup> |

<sup>1</sup> For best performance, spray when the broadleaf weeds are emerged and up to the 2-leaf stage of their development.

## Spike to 5-leaf corn Eastern Canada only

| Herbicide   | Rate/ha                 | Corn Stage          | Weed Stage                    |
|---|-------------------------|---------------------|-------------------------------|
| <b>VIKING Dicamba Herbicide</b> + Frontier<br>Max | 1.25 L + 756 - 963 mL   | Emergence to 3-leaf | Pre-emergence to 2-<br>leaf** |
| VIKING Dicamba Herbicide + Aatrex<br>Liquid 480*  | 1.25 L + 2.1 – 3.1 L/ha | Emergence to 5-leaf | Pre-emergence to 2-leaf       |

<sup>\*</sup> Other atrazine formulations may require a rate calculation adjustment according to percent active ingredient.

<sup>2</sup> Do not apply beyond the 2-leaf stage of the grassy weeds.

<sup>\*\*</sup> For the best control of annuals, apply before the 2- leaf stage of grassy weeds.

Spike to 50 cm standing corn - Eastern and Western Canada

| Herbicide                              | Rate/ha            | Corn Stage  | Weed Stage              |
|--|--------------------|---|-------------------------|
| VIKING Dicamba Herbicide alone         | 600 mL             | Emergence to 50 cm (drop<br>nozzles from 20-50 cm corn) | Pre-emergence to 2-leaf |
| VIKING Dicamba Herbicide + 2,4-D amine | 290 mL +<br>850 mL | Emergence to 50 cm (drop nozzles from 20-50 cm corn)    | Pre-emergence to 2-leaf |

## **Sequential VIKING Dicamba Herbicide Applications**

## **Eastern and Western Canada**

**VIKING Dicamba Herbicide** may be applied sequentially to a **VIKING Dicamba Herbicide** application to control late-emerging weeds such as field bindweed, Canada thistle and velvetleaf. Follow application directions as outlined for the **VIKING Dicamba Herbicide** alone post-emergence treatments up to 50 cm tall corn.

## **Grazing Restrictions**

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.

# WEED CONTROL IN REDUCED TILLAGE (PRIOR TO SEEDING)

DO NOT apply by air.

## **Treatment Notes**

- 1. **VIKING Dicamba Herbicide** + glyphosate (360 g/l equivalent) may be applied to emerged annual grass and annual broadleaf weeds in reduced tillage systems prior to seeding of wheat, barley, rye, oats, and field corn only.
- 2. Do not apply prior to seeding sweet corn.
- 3. Planting should follow soon after application since this tank-mix does not provide residual weed control.
- 4. Delayed planting following chemical application will allow weeds to emerge between application and crop emergence.
- 5. For field corn, apply to medium to fine textured soils containing more than 2.5% organic matter. Do not use on sandy or sandy loam soil.
- 6. Certain broadleaf crops such as sweet corn, lentils, peas, canola and flax can be injured by a pre-seeding application of this tank-mix and should not be planted after the use of this tank-mix.
- 7. Under certain stress conditions, such as drought, cool temperatures or where extremely hard water (> 700 ppm Ca + Mg) will be used, use 50 L/ha of water with this tank-mix to help improve results.

# **Application Directions**

| Weeds Controlled  | VIKING Dicamba Herbicide Rate | Tank Mix   |
|---|-------------------------------|--|
| Annual Grasses (Apply any time between emergence and heading) brome, downy cereals, volunteer darnel, Persian foxtail, green oats, wild  Annual Broadleaves (Apply up to 15 cm height) buckwheat, wild* canola, volunteer**** cockle, cow flixweed** kochia lady's-thumb lamb's-quarters mustard, wild pigweed, redroot smartweed stinkweed** thistle, Russian cleavers (1-4 whorls) (suppression only)  Perennials (Apply before initiation of seed head or browning of lower leaves) barley, foxtail (suppression only) |                               | Glyphosate*** (360 g/L<br>equivalent) at 935 mL/ha + 0.5<br>L of a non-ionic surfactant in<br>100 L of water |

<sup>\*</sup> Apply at the 1 to 4-leaf stage.

# WEED CONTROL IN REDUCED TILLAGE FALLOW

DO NOT apply by air.

## **Treatment Notes**

- 1. Apply **VIKING Dicamba Herbicide** tank-mixes in the spring to fallow land when seedling weeds have emerged, and are actively growing at the 2 to 4-leaf stage.
- 2. Reduced control may occur if applications are made at an advanced stage of weed development.

<sup>\*\*</sup> For optimal control of winter annual broadleaf weeds such as flixweed and stinkweed, 2,4-D should be applied to emerged, actively growing weeds in the fall the year prior to the **VIKING Dicamba Herbicide** + glyphosate spring preseding tank-mix. Refer to the 2,4-D product label for appropriate rates.

<sup>\*\*\*</sup> Other glyphosate formulations may require a rate calculation adjustment according to active ingredient concentration.

<sup>\*\*\*\*</sup> Not including glyphosate tolerant canola, i.e Roundup Ready Canola

**Application Directions** 

| Weeds Controlled   | VIKING Dicamba<br>Herbicide Rate | Tank Mix   |
|--|----------------------------------|--|
| buckwheat, wild buckwheat, tartary cockle, cow flixweed kochia lady's-thumb lamb's-quarters mustard, wild pigweed, redroot shepherd's-purse smartweed, green sow-thistle, perennial (top growth) stinkweed thistle, Russian  | 230 – 290 mL/ha +                | 1.1 L/ha of 2,4-D amine 500<br><b>OR</b><br>920 mL/ha of 2,4-D L.V. ester 600 in 50-100 L<br>of water  |
| barley, foxtail** buckwheat, wild** cereals, volunteer**** cockle, cow flixweed* foxtail, green kochia lady's-thumb lamb's-quarters mustard, wild oats, wild pigweed, redroot** canola, volunteer stinkweed thistle, Russian | 290 mL/ha +                      | Glyphosate*** (360 g/L equivalent) at 750 mL –<br>1.0 L/ha<br>+<br>350 mL of a non- ionic surfactant registered for<br>this use in 50-100 L of water |
| buckwheat, <i>wild</i>   | 600 mL/ha +                      | Glyphosate*** (360 g/L equivalent) at 750 mL – 1.0 L/ha + 350 mL of an approved non-ionic surfactant in 50-100 L of water                            |

<sup>\*</sup> For control of flixweed, use 1.0 L/ha of glyphosate herbicide.

# **VIKING Dicamba Herbicide / Glyphosate Application Notes**

- 1. These tank-mixes should be applied to emerged actively growing annual weeds from 8-5 cm in height.
- 2. Use the higher rate of glyphosate when weeds are at a more advanced stage of growth.
- 3. For perennial weed control, refer to the appropriate section of this label for proper stages of growth and recommended stages of application.
- 4. Reduced control may occur if muddy water is used, such as water from dug-outs, ponds and unlined ditches.

<sup>\*\*</sup> Suppression only.

<sup>\*\*\*</sup> Other glyphosate formulations may require a rate calculation adjustment according to active ingredient concentration.

<sup>\*\*\*\*</sup> Not including glyphosate tolerant canola, i.e Roundup Ready Canola

## PERENNIAL WEED CONTROL IN SUMMERFALLOW AND STUBBLE

DO NOT apply by air.

## **Treatment Notes**

- 1. Apply VIKING Dicamba Herbicide in 110-220 litres of water/ha.
- 2. For the most effective control of Canada thistle, follow a long-term approach that includes in crop, post-harvest, and summerfallow treatments, in conjunction with tillage operations.
- 3. If application is made after September 1st, or if soil moisture levels are extremely low after application, crop injury may occur in the spring following application.

## **Weeds Controlled**

| Weeds Controlled   | Rate  | Recropping in Year Following                                   |
|--|---|--|
| bindweed, field daisy, English dock, curled (top growth) goldenrod ragwort, tansy sow thistle, perennial thistle, Canada | VIKING Dicamba Herbicide alone at 2.5<br>L/ha   | cereals<br>soybeans<br>field corn<br>white beans<br>sweet corn |
| thistle, <i>Canada</i><br>sow-thistle, <i>perennial</i>  | VIKING Dicamba Herbicide at 1.25 L/ha + glyphosate* (360 g/L equivalent) at 1.7 L/ha + 350 mL of a non-ionic surfactant | <u>All of the above plus:</u><br>canola                        |

<sup>\*</sup> Only use glyphosate products registered for summerfallow and stubble. Other glyphosate formulations may require a rate calculation adjustment according to active ingredient concentration

# **Application Directions**

# **Summerfallow Treatment Notes**

1. Cultivate in the spring and apply VIKING Dicamba Herbicide when:

| Weed           | Weed Stage   |
|----------------|--|
| Thistles       | the majority of thistles are up and before the early bud stage (15-25 cm tall) |
| field bindweed | in the flowering stage   |
| other weeds    | in the early bud stage of growth   |

2. Cultivate three weeks after application.

# **Stubble Treatment Notes**

Apply to regrowth after harvest and at least 2 weeks prior to a killing frost.

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.

## PERENNIAL ROSETTE CONTROL IN SUMMERFALLOW

DO NOT apply by air.

## **Treatment Notes**

- 1. For the most effective control of Canada thistle, follow a long-term approach that includes in crop, post-harvest, and summerfallow treatments, in conjunction with tillage operations.
- 2. Commence early spring cultivation and continue as required throughout the summer. *Note:* The final cultivation must occur by the end of July between July 15 August 1 and the final cultivation should cut the thistle off 5 to 7.5 cm below the soil surface.
- 3. Spray in 110-220 L of water/ha when the majority of thistles have emerged as low growing rosettes 15 to 25 cm across

- 4. Apply at least two weeks prior to a killing frost.
- 5. Cultivate three weeks after application.

## **Weeds Controlled**

| Weeds Controlled       | VIKING Dicamba Herbicide | Recropping in Year Following                          |
|------------------------|--------------------------|---|
| thistle, <i>Canada</i> | II.Zo L/na               | cereals, field corn, white beans,<br>canola, soybeans |

# PASTURES, RANGELAND, AND NON-CROP AREAS

**VIKING Dicamba Herbicide** may be used to control deciduous brush species and broadleaf weeds that are found growing along fence rows and in other areas around the farm where they may be undesirable.

DO NOT apply by air.

## **Treatment Notes**

## For Broadleaf Weed Control

- 1. Apply **VIKING Dicamba Herbicide** or **VIKING Dicamba Herbicide** tank-mixes in 110-220 L of water/ha when weeds are actively growing. Thorough coverage of foliage is necessary to control weeds.
- 2. Do not apply **VIKING Dicamba Herbicide** or **VIKING Dicamba Herbicide** tank-mixes if pasture is underseeded to legumes.

| Weeds Controlled  | VIKING Dicamba<br>Herbicide Rate                 | Tank Mix  |
|---|--|---|
| bindweed, field<br>daisy, English<br>dock, curled (top growth)<br>goldenrod<br>ragwort, tansy<br>sow-thistle, perennial<br>thistle, Canada                              | VIKING Dicamba<br>Herbicide alone at 2.1<br>L/ha | none  |
| beard, <i>goat's, yellow</i> cherry, <i>ground,</i> knapweed, <i>diffuse</i> sage, <i>pasture</i> sorrel, <i>sheep</i> spurge, <i>thyme-leaved</i> weed, <i>poverty</i> | VIKING Dicamba<br>Herbicide alone at 4.6<br>L/ha | none  |
| poison ivy  | VIKING Dicamba<br>Herbicide at 1.65 L/ha<br>+    | 2.2 L/ha of 2,4-D amine<br>(500 g/L formulation) in 560 L of water/ha |
| wild carrot <i>plus</i> additional weeds found on the 2,4-D amine label   | VIKING Dicamba<br>Herbicide at 2.1 L/ha<br>+     | 2.2 L/ha of 2,4-D amine<br>(500 g/L formulation)                      |
| All of the above plus: additional weeds found on the 2,4-D amine label  | VIKING Dicamba<br>Herbicide at 2.1 L/ha<br>+     | 1.83 L/ha of 2,4-D L.V. ester (600 g/L<br>formulation)                |

# **For Brush Weed Control**

- 1. **VIKING Dicamba Herbicide** is effective in controlling many deciduous brush species that are found growing along fence rows and in other areas around the farm where they may be undesirable.
- 2. Apply **VIKING Dicamba Herbicide** tank-mixes in spring or early summer to deciduous species (leaves should be fully expanded) either as a leaf stem treatment or as a broadcast ground application.
- 3. Brush and trees over 2 meters tall should be cut and regrowth treated when it develops.
- 4. Do not apply VIKING Dicamba Herbicide tank-mixes if pasture or rangeland is underseeded to legumes.
- 5. For Stem Foliage Treatment, apply to all foliage and stems to the point of runoff. The volume of spray mix applied per hectare will vary according to the height and density of the woody species present.
- 6. For Broadcast Ground Treatment, apply VIKING Dicamba Herbicide tank-mixes in sufficient dilution to wet

all foliage. Normally, 220-230 litres of water/ha is recommended for brush stands.

DO NOT apply by air.

| Weeds Controlled  | VIKING Dicamba<br>Herbicide Rate              | Tank Mix  |
|-------------------|---|---|
| Wastarn snowbarry | Herbicide at 2.1 L /1000 L                    | 4.0 L of 2,4-D amine (500 g/L formulation)  OR  3.3 L of 2,4-D L.V. ester (600 g/L formulation)             |
| aspen poplar      |   | 4.4 L/ha of 2,4-D amine (500 g/L formulation) <b>OR</b> 3.75 L/ha of 2,4-D L.V. ester (600 g/L formulation) |
| prickly rose      |   | 4.4 L/ha of 2,4-D amine (500 g/L formulation) <b>OR</b> 3.75 L/ha of 2,4-D L.V. ester (600 g/L formulation) |
| Western snowberry | VIKING Dicamba<br>Herbicide at<br>3.65 L/ha + | 3.75 L/ha of 2,4-D L.V. ester (600 g/L formulation)   |

## **Grazing Restrictions**

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.

## **SEED PRODUCTION**

DO NOT apply by air.

## For New/Established Stands of Red Fescue

- 1. Apply **VIKING Dicamba Herbicide** or **VIKING Dicamba Herbicide** tank-mixes in at least 110 litres of water/ha.
- 2. Applications to new seedling stands may be made when the crop is 5 cm tall.
- 3. Application to established stands may be made up to the shot-blade stage of the crop.
- 4. For dandelion control, apply **VIKING Dicamba Herbicide** plus 2,4-D amine in the fall when weeds are in the rosette or early bud stage.

| ivveeds Controlled                            | VIKING Dicamba Herbicide<br>Rate               | Tank Mix                         |
|---|--|----------------------------------|
| lady's-thilmh                                 | VIKING Dicamba Herbicide<br>alone at 600 mL/ha | none                             |
| All of the above plus: additional weeds found | VIKING Dicamba Herbicide                       | 1.5 L/ha of 2,4-D amine (500 g/L |
| on the 2,4-D amine label                      | at 600 mL/ha +                                 | formulation)                     |

# For Canary Seed (Phalaris canariensis)

- 1. The canary seed (Phalaris canariensis) should only be used as bird seed.
- 2. For specific weeds controlled, refer to the **VIKING Dicamba Herbicide** + MCPA amine weed spectrum list under "Cereals".

| Herbicide                       | Rate                  | Canary Seed (Phalaris canariensis) Stage |
|---------------------------------|-----------------------|--|
| VIKING Dicamba Herbicide alone  | 290 mL/ha             | 3 - 5 leaf stage                         |
| VIKING Dicamba Herbicide + MCPA | 290 mL/ha + 850 mL/ha | 3 - 5 leaf stage                         |
| amine                           | (500 g/L formulation) | o - o lear stage                         |

# For Seedling Grasses (seeded alone or underseeded with cereals)

For seed and forage production of the following seedling grasses:

bromegrass, smooth
fescue, meadow
fescue, tall
foxtail, meadow
orchard grass
red fescue, tall
wheatgrass, intermediate
wheatgrass, pubescent
wheatgrass, slender
wheatgrass, streambank
wheatgrass, tall

timothy

- 1. Apply **VIKING Dicamba Herbicide** or **VIKING Dicamba Herbicide** tank-mixes in at least 110 litres of water/ha.
- 2. Application to new seedling grasses may be made when they are in the 2 to 4-leaf stage. If the seedling grass is under seeded with a cereal crop, refer to "Cereals" for additional restrictions pertaining to application type and rate.
- If the crops are to be used as feed or pasture following treatment with VIKING Dicamba Herbicide plus 2,4-D amine or MCPA, refer to "Grazing Restrictions".

| Weeds Controlled   | VIKING Dicamba   | Tank Mix  |
|--|--|---|
| buckwheat, tartary buckwheat, wild cockle, cow cleavers (higher rate only) lady's-thumb sow-thistle, perennial (top growth) smartweed, green spurry, corn thistle, Canada (top growth)                               | <b>VIKING Dicamba</b><br><b>Herbicide</b> alone at 230-<br>290 mL/ha | none  |
| All of the above plus: burdock (young seedlings) canola, volunteer* cocklebur flixweed hemp-nettle** kochia pigweed, redroot pigweed, Russian radish, wild shepherd's-purse sunflower, volunteer*** thistle, Russian |  | 850 mL/ha of 2,4-D amine (500 g/L formulation)  OR  850 mL/ha of MCPA amine (500 g/L formulation)  OR  1.1 L/ha of MCPA K (400 g/L formulation) |

Best results will be obtained if application is made prior to bolting of canola, when this weed is at the 2 to 4 leaf stage.

<sup>\*\*</sup> Use **VIKING Dicamba Herbicide** + MCPA K for hemp-nettle control. Apply at the 2 to 3 leaf stage of weed for best control. Hemp-nettle may not be controlled if application is made at a more advanced stage of crops and weeds.

<sup>\*\*\*</sup> Depending on the growing conditions, control may be delayed slightly.

## For Established Grass Pasture

- 1. Apply **VIKING Dicamba Herbicide** at 600 mL/ha with 1.5 L/ha of 2,4-D amine (500 g/L formulation) to suppress volunteer alfalfa.
- 2. Apply **VIKING Dicamba Herbicide** + 2,4-D amine in 110-220 L/ha in the spring to actively growing alfalfa at greater than 5 cm in height.

## **LOW-BUSH BLUEBERRIES**

DO NOT apply by air.

## **Treatment Notes**

- 1. VIKING Dicamba Herbicide can be used alone or in a tank-mix with 2,4-D L.V. ester.
- 2. Apply **VIKING Dicamba Herbicide** or the **VIKING Dicamba Herbicide** tank-mix in 550 litres of water per hectare.
- 3. Apply in the fall while the sweet-fern is still moderately green after 90% of the blueberries have dropped their leaves. This should be done before the area is burned. Fall burning or cutting should be carried out 4 to 5 weeks after spraying. If spring burning or cutting is planned, it should be done as early as possible in the spring to reduce injury to the blueberries.

## **Weeds Controlled**

| IVVEERS CONTROLLER                            | VIKING Dicamba Herbicide<br>Rate | Tank Mix  |
|---|----------------------------------|---|
| fern, <i>sweet</i><br>lambkill (sheep laurel) | 4.6-7.1 L/ha                     | none  |
| additional broadleaf control                  | 1/ 3   /ng +                     | 5.7 L of 2,4-D L.V. ester (600 g/L formulation) |

## RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, **VIKING Dicamba Herbicide** is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to **VIKING Dicamba Herbicide** 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 resistance- management strategies should be followed.

## To delay herbicide resistance:

- Where possible, rotate the use of **VIKING Dicamba Herbicide** or other Group 4 herbicides within a growing season (sequence) or among growing seasons 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. To delay resistance, the less resistance-prone partner should control the target weed(s) as effectively as the more resistance-prone partner.
- 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 control methods), cultural (for
  example, higher crop seeding rates; precision fertilizer application method and timing to favour the crop and
  not the weeds), biological (weed-competitive crops or varieties) and other management practices.
- Monitor weed populations after herbicide application for signs of resistance development (for example, only
  one weed species on the herbicide label not controlled). If resistance is suspected, prevent weed seed
  production in the affected area if possible by an alternative herbicide from a different group. Prevent
  movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment when moving
  between fields, and planting clean seed.
- Have suspected resistant weed seeds tested by a qualified laboratory to confirm resistance and identify alternative herbicide options.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistancemanagement and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, or if you have guestions, call Viking Crop

Production Partners Inc. at 1-587-743-1029.

# **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.

Viking (TM) is a trademark of Viking Crop Production Partners Inc. All other products mentioned are trademarks of their respective holders.