

Container Label

GROUP	2	HERBICIDE
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VIKING™ Maloy Herbicide

60% WATER DISPERSABLE GRANULES

COMMERCIAL (AGRICULTURAL)

FOR SALE FOR POSTEMERGENCE USE ON WHEAT (SPRING AND DURUM), BARLEY AND ESTABLISHED CREEPING RED FESCUE, ORCHARD GRASS, CRESTED AND INTERMEDIATE WHEAT GRASS (SEED OR FORAGE) (SOIL PH 7.9 OR LOWER), FOR CONTROL OF WESTERN SNOWBERRY AND WILD ROSE IN PASTURE AND RANGELAND, AND AS A SUMMER FALLOW AND A PRESEEDING HERBICIDE ON FIELDS TO BE PLANTED TO WHEAT (SPRING AND DURUM) AND BARLEY (TANK MIX ONLY) IN THE PRAIRIE PROVINCES AND THE PEACE RIVER REGION OF BRITISH COLUMBIA ONLY

REGISTRATION NO. 35412 PEST CONTROL PRODUCTS ACT

ACTIVE INGREDIENT: Metsulfuron-methyl..... 60%
Warning: contains the allergen sulfites

NET CONTENTS: 40 g to 1 kg

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

KEEP OUT OF REACH OF CHILDREN



POISON

CAUTION - 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**

- Avoid breathing spray mist.
- Avoid contact with skin, eyes and clothing.
- Do not contaminate any body of water.
- Wear long-sleeved shirt, long pants, socks and shoes, chemical-resistant gloves during mixing and loading, clean-up and repair activities. Wear long-sleeved shirt and long pants, socks and shoes when applying.
- Do not enter or allow workers entry into treated areas during the restricted-entry interval (REI) of 12 hours.

FIRST AID:

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 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 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: Treat symptomatically.

ENVIRONMENTAL PRECAUTIONS:

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

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.

STORAGE:

Store product in original container only, away from other pesticides and fertilizer. Store this product away from food or feed. Not for use or storage in or around the home. Keep container closed.

DISPOSAL:

1. Make the empty container unsuitable for further use.
2. Dispose of the container in accordance with provincial/territorial requirements.

For information on the disposal of unused, unwanted product contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial regulatory agency in case of a spill and for cleanup of spills.

NOTICE TO USER:

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.

Booklet Label

GROUP

2

HERBICIDE



VIKING

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

TOXICOLOGICAL INFORMATION: Treat symptomatically.

ENVIRONMENTAL PRECAUTIONS:

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

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.

STORAGE:

Store product in original container only, away from other pesticides and fertilizer. Store this product away from food or feed. Not for use or storage in or around the home. Keep container closed.

DISPOSAL:

1. Make the empty container unsuitable for further use.
2. Dispose of the container in accordance with provincial/territorial requirements.

For information on the disposal of unused, unwanted product contact the manufacturer or the provincial/territorial regulatory agency. Contact the manufacturer and the provincial/territorial regulatory agency in case of a spill and for cleanup of spills.

DIRECTIONS FOR 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.

IMPORTANT

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

TANK MIXES

This product may be tank mixed with a fertilizer, a supplement, or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Viking Crop Production Partners Inc. at 1-587-743-1029 for information before applying any tank mix that is not specifically recommended on this label.

APPLY **VIKING Maloy Herbicide** WITH RECOMMENDED SURFACTANT. DO NOT APPLY BY AIR.

Carefully observe sprayer clean-up instructions, as spray tank residue may damage crops other than wheat, barley or creeping red fescue.

PRIOR TO USE REFER TO "MINIMUM CROP ROTATION GUIDELINES" SECTION OF LABEL.

GENERAL INFORMATION

VIKING Maloy Herbicide is recommended for postemergence use on wheat (spring and durum), barley and established creeping red fescue, orchard grass, crested and intermediate wheat grass (seed or forage) in the Prairie Provinces and the Peace River Region of British Columbia (soil pH of 7.9 or lower). In addition, **VIKING Maloy Herbicide** is recommended for use on pasture and rangeland in the same geographic region (no soil pH restriction).

VIKING Maloy Herbicide is to be mixed in water with a recommended surfactant and applied as a uniform broadcast spray. Use for selective control or suppression of certain broadleaf weeds in spring wheat (including durum), barley and established creeping red fescue (seed or forage) and for control of Western Snowberry and Wild Rose in pasture and rangeland. **VIKING Maloy Herbicide** is non-corrosive, non-flammable, non-volatile and does not freeze. Wheat, barley or creeping red fescue may be grazed by or fed to livestock any time after treatment.

VIKING Maloy Herbicide is a 60% active ingredient herbicide formulated as water dispersible granules.

Prior to using **VIKING Maloy Herbicide**, careful consideration should be given to crop rotation plans. Crops other than those listed in the “Minimum Crop Rotation Guidelines” section can be very sensitive to low concentrations of **VIKING Maloy Herbicide** in the soil. Refer to the “Minimum Crop Rotation Guidelines” section of this label to plan your **VIKING Maloy Herbicide** use and crop rotations.

Rainfall, soil temperature and soil pH are important factors affecting **VIKING Maloy Herbicide** breakdown in the soil. **VIKING Maloy Herbicide** breakdown is more rapid under conditions of moist soil, warm soil temperatures and low soil pH. The breakdown process is slower under conditions of dry soil, cool soil temperatures and high soil pH.

VIKING Maloy Herbicide must be applied with a recommended surfactant early postemergence to the main flush of actively growing broadleaf weeds. For pasture and rangeland applications, **VIKING Maloy Herbicide** should be applied between mid-June and mid-August after the target species have leafed out, but before fall colouration begins. Cattle may graze the treated areas on the day of treatment.

Warm, moist growing conditions promote active weed growth and enhance the activity of **VIKING Maloy Herbicide** by allowing maximum foliar uptake and contact activity. If cold, dry conditions prevail, delay treatment until active weed growth resumes. Weeds hardened off by cold weather or drought stress may not be adequately controlled or suppressed and re-growth may occur. **VIKING Maloy Herbicide** may only be applied with ground spray equipment. For best results, ensure good spray coverage of target weeds.

VIKING Maloy Herbicide rapidly inhibits the growth of susceptible weeds, however, typical symptoms (discolouration) of dying weeds may not be noticeable for 1 to 3 weeks after application depending upon growing conditions and weed susceptibility. Degree of control and duration of effect depend on weed sensitivity, weed size, growing conditions, soil pH and spray coverage.

SURFACTANTS FOR USE WITH VIKING MALOY HERBICIDE:

Ag-surf[®], Agral[®] 90, Citowett[®] Plus, Super Spreader Sticker[®] and Liberate are registered for use with **VIKING Maloy Herbicide**, **VIKING Maloy Herbicide + 2,4-D**, and **VIKING Maloy Herbicide + MCPA**. Not all tank mixes require the use of an adjuvant. Use the surfactant at the rate of 2 L per 1000 L spray solution (0.2% v/v). See section on MIXING INSTRUCTIONS.

CROP LEAF STAGING: WHEAT, BARLEY AND CREEPING RED FESCUE

Apply **VIKING Maloy Herbicide** or **VIKING Maloy Herbicide** tank mixtures to wheat, barley, or creeping red fescue when the crop is between the stages listed in the table below.

Post-Emergent Treatment	Crop Leaf Staging	Crop
VIKING Maloy Herbicide	2 leaf to flag leaf (shot blade)	Wheat, barley, Creeping red fescue
VIKING Maloy Herbicide + 2,4-D (amine or ester)	Full 3 leaf to just before flag leaf	Wheat, barley
VIKING Maloy Herbicide + MCPA (amine or ester)	Full 3 leaf to just before flag leaf	Wheat, barley
VIKING Maloy Herbicide + HELLCAT[®] HERBICIDE	1 leaf to 6 leaf + 3 tillers	Spring and durum wheat
VIKING Maloy Herbicide + AURORA[®] HERBICIDE	2 leaf to flag leaf	Spring wheat only

HOW TO APPLY TO WHEAT (SPRING OR DURUM), BARLEY OR ESTABLISHED CREEPING RED FESCUE (SEED OR FORAGE)

Apply **VIKING Maloy Herbicide** or **VIKING Maloy Herbicide** tank mixtures to the first main flush of actively growing weeds, when the crop is in the leaf stage specified in the section CROP STAGE. Apply before the

crop canopy is dense enough to prevent thorough coverage of the weeds. Apply with ground equipment only. Make only one application per growing season. For further information on control of Canada thistle, sow thistle, Russian thistle, lamb's quarters or wild buckwheat, refer to the section SPECIFIC WEED CONTROL RECOMMENDATIONS.

DO NOT APPLY BY AIR.

RATES TO APPLY:

VIKING Maloy Herbicide 7.5 g/ha (plus surfactant)
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VIKING Maloy Herbicide + 2,4-D (use one of the following, plus surfactant):

VIKING Maloy Herbicide	5.0 or 7.5 g/ha
Plus	
2,4-D Amine 500	0.84 – 1.1 L/ha
Or	
2,4-D Ester LV 700	0.6 – 0.8 L/ha
Or	
2,4-D Ester LV 600	0.7 – 0.9 L/ha
Or	
2,4-D Acid equivalent	420 – 560 g/ha

VIKING Maloy Herbicide + MCPA (use one of the following, plus surfactant):

VIKING Maloy Herbicide	5.0 or 7.5 g/ha
Plus	
MCPA Amine 500	0.7 – 1.1 L/ha
Or	
MCPA Ester 500	0.7 – 1.1 L/ha

VIKING Maloy Herbicide + HELLCAT HERBICIDE (Do not add surfactant):

VIKING Maloy Herbicide	5 or 7.5 g/ha
Plus	
HELLCAT HERBICIDE	0.385 or 0.77 L/ha

VIKING Maloy Herbicide + AURORA * Herbicide Tank Mix:

VIKING Maloy Herbicide	7.5 g/ha
Plus	
AURORA HERBICIDE	230 or 290 ml/ha
CHEM SPRAY Crop Oil Concentrate	0.8% or 1.0% v/v

(0.8 L or 1.0 L per 100 L of spray solution)

A non-ionic surfactant is NOT required when **VIKING Maloy Herbicide** is tank mixed with AURORA HERBICIDE.

WEEDS CONTROLLED OR SUPPRESSED†

† Weed suppression is a visual reduction in weed competition (reduced population or vigour) as compared to an untreated area. Degree of suppression will vary with size of weed and environmental conditions prior to and following treatment.

VIKING Maloy Herbicide 7.5 grams/ha + surfactant:

Ball mustard	Prostrate pigweed
Blue bur	Redroot pigweed
Canada thistle†	Russian thistle†
Chickweed	Scentless chamomile
Common groundsel	Shepherd's purse
Corn spurry	Sow thistle (annual; perennial)†
Cow cockle	Stinkweed
Flixweed	Stork's bill
Green smartweed	Tartary buckwheat
Hemp-nettle	Toadflax†
Kochia	Volunteer canola°
Lady's thumb	Wild buckwheat†
Lamb's-quarters†	Wild mustard

°Volunteer canola: **VIKING Maloy Herbicide** alone will not control imazethapyr tolerant canola varieties, eg., canola varieties with the Clearfield® trait.

VIKING Maloy Herbicide 5 grams/ha + 2,4-D (amine or ester) + Surfactant:

Annual sunflower	Prickly lettuce
Ball mustard	Redroot pigweed
Canada thistle†	Russian pigweed
Chickweed	Russian thistle
Cow cockle	Shepherd's purse
Flixweed	Sow thistle†
Green smartweed	Stinkweed
Hemp-nettle	Sweet clover
Kochia	Toadflax†
Lamb's-quarters	
Volunteer canola°	
Narrow-leaved hawksbeard	
Wild buckwheat† (spring seedlings)	
Wild mustard	
Plantain	
Wormseed mustard	

° Including imazethapyr tolerant canola varieties, eg. Canola varieties with the Clearfield trait. Consult the 2,4-D label for appropriate use rates.

VIKING Maloy Herbicide 7.5 grams/ha + 2,4-D (amine or ester) + Surfactant:

All of the weeds controlled or suppressed by **VIKING Maloy Herbicide** 5 grams/ha + 2,4-D plus:

Bluebur	Prostrate pigweed
Common groundsel	Scentless chamomile
Corn spurry	Stork's bill
Lady's-thumb	
Tartary buckwheat	
Toadflax†	

VIKING Maloy Herbicide 5.0 grams/ha + MCPA (amine or ester) + Surfactant:

Annual sunflower	Russian pigweed
Ball mustard	Russian thistle
Canada thistle [†]	Shepherd's purse
Chickweed	Sow thistle [†]
Cow cockle	Stinkweed
Flixweed	Sweet clover
Green smartweed	Toadflax [†]
Hemp-nettle	Tumble mustard
Kochia	Volunteer canola [°]
Lamb's-quarters	Wild buckwheat [†]
Plantain	Wild mustard
Prickly lettuce	Wormseed mustard
Redroot pigweed	

[°] Including imazethapyr tolerant canola varieties, eg. canola varieties with the Clearfield trait. Use the highest rate of MCPA (1.1 litre/ha) when volunteer imazethapyr tolerant canola is the target weed.

VIKING Maloy Herbicide 7.5 grams/ha + MCPA (amine or ester) + Surfactant:

All of the weeds controlled or suppressed by **VIKING Maloy Herbicide 5.0 grams/ha + MCPA**, plus:

Bluebur
Common groundsel
Corn spurry
Lady's-thumb Prostrate
pigweed Scentless
chamomile
Stork's bill
Tartary buckwheat
Toadflax[†]

VIKING Maloy Herbicide + HELLCAT HERBICIDE (0.385 L/ha) (No surfactant):

Broadleaf weeds controlled by **VIKING Maloy Herbicide** at 5 or 7.5 grams/ha, plus:

Green foxtail

VIKING Maloy Herbicide + HELLCAT HERBICIDE (0.77 L/ha) (No surfactant):

Broadleaf weeds controlled by **VIKING Maloy Herbicide** at 5 or 7.5 grams/ha, plus:

Green foxtail
Barnyard grass
Wild oats

VIKING Maloy Herbicide + AURORA HERBICIDE:

Broadleaf weeds controlled or suppressed by **VIKING Maloy Herbicide** alone at 7.5 g/ha, plus control of the following:

Wild oats	230 ml/ha AURORA HERBICIDE + 0.8% v/v CHEM SPRAY Crop Oil Concentrate (0.8 L per 100 L of spray solution)
Wild oats Green foxtail Yellow foxtail	290 ml/ha AURORA HERBICIDE + 1.0% v/v CHEM SPRAY Crop Oil Concentrate (1.0 L per 100 L of spray solution)

SPECIFIC WEED RECOMMENDATIONS:

Weeds must be actively growing at time of application or control may be reduced. Application should be made before the crop canopy prevents thorough coverage of the weeds.

CANADA THISTLE, SOW THISTLE – Apply when the majority of thistles have emerged. **VIKING Maloy Herbicide** + surfactant should be applied before the thistles are more than 15 cm tall. **VIKING Maloy Herbicide** + 2,4-D or **VIKING Maloy Herbicide** + MCPA + surfactant may be applied up to the bud stage of the thistles. Thistles that emerge after application will not be controlled. A single application will prevent emerged thistles from competing with the crop.

WILD BUCKWHEAT – Apply **VIKING Maloy Herbicide** + surfactant at the cotyledon to 3-leaf stage. **VIKING Maloy Herbicide** + 2,4-D or **VIKING Maloy Herbicide** + MCPA + surfactant should be applied at the 1-3 leaf stage. Under dry conditions, control may be reduced. Large weeds may re-grow after treatment.

LAMB'S-QUARTERS, RUSSIAN THISTLE – Apply **VIKING Maloy Herbicide** + surfactant before these weeds are more than 8 cm tall.

PASTURE AND RANGELAND

For control of Western Snowberry apply 25 grams of **VIKING Maloy Herbicide** per hectare. For control of Wild Rose apply 30 grams of **VIKING Maloy Herbicide** per hectare.

Add a recommended surfactant at 0.2% v/v (2.0 litres per 1000 litres of spray solution).

Apply as a ground application only in 100 – 225 litres spray volume per hectare. Apply as a full coverage spray to foliage and stems using equipment that will assure uniform coverage.

CONTROL OF BROADLEAF WEEDS AND GRASSES IN FALLOW AND PRE-SEED TO SPRING WHEAT (INCLUDING DURUM) AND BARLEY.

With any summerfallow treatment, allow 10 days to elapse between treatment and tillage. Only weeds emerged at time of application will be controlled.

Fields treated with **VIKING Maloy Herbicide** can be seeded to spring wheat (including durum) or barley a minimum of 24 hours after application.

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

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Viking Crop Production Partners Inc. under the User Requested Minor Use Label Expansion program. For these uses, Viking Crop Production Partners Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

FORAGE GRASSES FOR FEEDS OR SEED PRODUCTION:

For post-emergent application to creeping red fescue, orchard grass, crested and intermediate wheat grass. These forage grasses should be established for a minimum of one year before applying **VIKING Maloy Herbicide**. Optimum control of narrow-leaved hawk's beard and scentless chamomile is obtained if application is made to small, actively growing weeds.

Apply **VIKING Maloy Herbicide** as a broadcast application at 7.5 g/ha post-emergent. Application should be made from the 2 leaf, up to the shot blade stage of the crop, and before canopy closure to permit thorough coverage of actively growing weeds.

Make only one application per growing season. Application should be made using ground equipment only.

Rotation options are determined by soil pH, the crop to be planted and a minimum interval. Refer to the recropping recommendation section as well as other application instructions.

ESTABLISHED CREEPING RED FESCUE FOR SEED:

For postemergent broadleaf and grassy weed control, apply one of the following tankmixes:

VIKING Maloy Herbicide + ASSURE™ II Herbicide or QUIZ® HERBICIDE or QUIZ II HERBICIDE + Adjuvant:

VIKING Maloy Herbicide	7.5 grams/hectare
plus	
ASSURE® II Herbicide or QUIZ HERBICIDE or QUIZ II HERBICIDE	0.5 - 0.75 litres/hectare
plus	
SURE-MIX™	5 litres per 1000 litres spray solution

These tankmixes will control all label weeds listed on the respective **VIKING Maloy Herbicide** and ASSURE II Herbicide or QUIZ HERBICIDE or QUIZ II HERBICIDE labels.

Apply **VIKING Maloy Herbicide** + ASSURE II Herbicide or QUIZ HERBICIDE or QUIZ II HERBICIDE tank mixtures post-emergent to the first main flush of actively growing weeds, when established creeping red fescue is in the 2 leaf to flag leaf (shot blade) stage. Apply before the crop canopy is dense enough to prevent thorough coverage of the weeds.

Apply with ground equipment only. Make only one application per growing season.

Refer to other sections of this label for additional application and/or use precautions instructions.

SPRAY DRIFT MANAGEMENT:

Apply only to agricultural crops 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.

Field sprayer application:

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty.

DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S.572.1) medium classification for application to crops.

DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE S.572.1) coarse for application to pasture and rangeland. Boom height must be 60 cm or less above the crop or ground.

Spray buffer zones:

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, riparian areas and shrub lands) and sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands).

Application Rate (and use)	Spray Buffer Zones (metres) Required for the Protection of :		
	Freshwater Habitat of Depths :		Terrestrial Habitat
	0.8 m	greater than 1 m	
4.5 g a.i./ha (crops)	1	0	15
12 g a.i./ha (pasture and rangeland)	1	1	10
15 g a.i./ha (pasture and rangeland)	1	1	10
18 g a.i./ha (pasture and rangeland)	1	1	10

The spray buffer zones for this product can be modified based on weather conditions and spray equipment configuration by accessing the Spray Buffer Zone Calculator on the Pesticides portion of the Canada.ca website.

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.

MIXING INSTRUCTIONS:

1. Fill the spray tank 1/4 to 1/3 full with clean water. Prepare mixture volume to apply a minimum of 100 litres spray volume per hectare.
2. With the agitator running, add the required amount of **VIKING Maloy Herbicide**.
3. Continue to agitate until **VIKING Maloy Herbicide** is completely dispersed.
4. If another herbicide is to be added, do this now.
5. Add the rest of the required water.
6. If required in the mixture, add the surfactant now.
7. On repeat tank loads, draw down the tank contents to less than 10% of the original volume, and repeat from step 1. If more than 10% of the spray volume remains, pre-slurry the **VIKING Maloy Herbicide** in a bucket of water before adding to the spray tank.
8. If an antifoam agent is required, add it last.

NOTE:

Continuous agitation is required to keep **VIKING Maloy Herbicide** in suspension in the spray tank for a uniform application.

Use spray preparation of **VIKING Maloy Herbicide** within 48 hours or product degradation may occur. If spray preparation is left standing without agitation, thoroughly agitate before spraying.

Do not mix **VIKING Maloy Herbicide** with liquid fertilizers, substances that contain boron or substances that release free chlorine. Mixing **VIKING Maloy Herbicide** with any of these compounds will result in an insoluble substance in the tank.

APPLICATION INSTRUCTIONS:

Apply the spray mixture with ground equipment only, using a minimum of 100 litres spray volume per hectare. Use a properly calibrated sprayer that will ensure thorough coverage and a uniform spray pattern. Flat fan nozzles are recommended. Use 50-mesh screens or larger.

Continuous agitation is required to keep **VIKING Maloy Herbicide** in suspension. Avoid overlapping, and shut

off spray booms while starting, turning, slowing or stopping to prevent over-application.

NOTE:

Extreme care must be taken to prevent drift to desirable plants or non-target agricultural land.

SPRAYER CLEANUP:

Immediately after spraying, thoroughly remove all traces of **VIKING Maloy Herbicide** from mixing and spray equipment in order to avoid subsequent injury to sensitive crops (other than wheat or barley or creeping red fescue). Follow these instructions:

1. Empty the tank and drain the sump completely. Remove any contamination on the outside of the spraying equipment by washing with clean water.
2. Spray the interior tank walls (including the lid) with clean water using a minimum volume of 10% of the tank volume. Add household ammonia (containing a minimum 3% ammonia) at a solution rate of 1 L/100 L water or ALLCLEAN Cleaner (or other similarly approved cleaner) to the tank. Circulate the water through the lines, including all by-pass lines, for at least two minutes. Flush the boom well and empty the sprayer. Completely drain the sump.
3. Repeat step 2. For this rinse, the addition of household ammonia or other cleaner is not required.
4. Remove the strainers, nozzles, tips and screens and clean separately in a bucket containing water and ammonia solution.

If only ammonia is used as a cleaner, the rinsate solution may be applied to the crop(s) listed on this label. Do not exceed the maximum-labeled use rate. If other cleaners are used consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

CAUTION:

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

MINIMUM CROP ROTATION GUIDELINES:

Rotation options are determined by soil pH, the crop to be planted and a minimum interval. Minimum interval is the time from the last application of **VIKING Maloy Herbicide** to date of planting the rotational crop.

BLACK AND GREY WOODED SOILS									
INTERVAL PRIOR TO PLANTING (MONTHS AFTER APPLICATION)									
Soil pH	SW	DW	BR	OT	RS	FL	LN	CS	YM
6.9 or Lower	10	10	10	10	10	10	34	48	48
7.0 to 7.9	10	10	10	10	22	34	48	48	48

SW = spring wheat; DW = durum wheat; BR = barley; OT = oats; RS = canola; FL = flax; LN = lentils; CS = canary seed; YM = yellow mustard

On black and grey wooded soils of pH 7.5 or lower, FESCUE may be planted in 10 months; ALFALFA, RED CLOVER, PEAS, and FLAX 22 months following application of **VIKING Maloy Herbicide**.

Do not use on soils with pH greater than 7.9.

For all other crops, refer to the FIELD BIOASSAY section.

BROWN AND DARK BROWN SOILS									
INTERVAL PRIOR TO PLANTING (MONTHS AFTER APPLICATION)									
Soil pH	SW	DW	BR	OT	RS	FL	LN	CS	YM
6.9 or Lower	10	10	10	10	22	22	34	48	48
7.0 to 7.9	10	10	10	22	34	34	48	48	48

SW = spring wheat; DW = durum wheat; BR = barley; OT = oats; RS = canola; FL = flax; LN = lentils; CS = canary seed; YM = yellow mustard

Do not use on soils with pH greater than 7.9.

For all other crops, refer to the "FIELD BIOASSAY" section.

IMPORTANT:

Land previously treated with **VIKING Maloy Herbicide** cannot be rotated to crops other than those listed until a FIELD BIOASSAY confirms that residues of **VIKING Maloy Herbicide** are not present. A FIELD BIOASSAY involves growing test strips of the crop(s) intended for production the following year in fields previously treated with **VIKING Maloy Herbicide**. Crop response will indicate whether or not to rotate to the crop(s) used in the test strip. See "Field Bioassay" section. A successful bioassay would be anticipated in the 3rd or 4th season after application (soil pH 7.0 – 7.9) dependent on the rotational crop selected. Failure to follow these instructions could result in injury to subsequent crops.

NOTE:

When considering interval prior to recropping broadleaf crops after an **VIKING Maloy Herbicide** application, extend the rotational interval one year if rainfall was less than 130 mm in the Brown & Dark brown Soil Zones or 250 mm in the Black and Grey Wooded Soil Zones in any year within a stated interval prior to planting.

FIELD BIOASSAY:

Select a representative area or areas of the field previously treated with **VIKING Maloy Herbicide** to plant your bioassay crop(s). Be sure to consider factors such as size of field, soil texture, drainage and turn-around areas when selecting the site(s) that are most representative of the soil conditions in the field. On large fields, more than one site may be needed in order to obtain reliable results.

Plant the test strips perpendicular to the direction in which the field was sprayed. The strips should be long enough to cross the width of several spray swaths. Large test strip areas are more reliable than small ones.

Use standard tillage and seeding equipment to plant the bioassay.

Prepare a seed bed and plant the crops and varieties you want the option of growing the following year. It is important to use the same planting time, conditions, techniques and cultural practices you normally use to plant and grow the bioassay crop(s). Also plant into an adjacent area not treated with **VIKING Maloy Herbicide** to use as a comparison.

As the crop(s) emerges and grows, examine these key points in **VIKING Maloy Herbicide** treated and non-treated areas:

crop stand
root development
rate of growth plant colour and vigour
yield

Allow the bioassay crop(s) to grow to maturity while making your observations.

Do not overspray the test strips with herbicides that may damage the bioassay crop(s).

If the bioassay indicates that **VIKING Maloy Herbicide** residues are still present, continue cropping only to those crops listed on the label, and do not rotate to other crops until bioassay results indicate that susceptible crops are growing normally.

RESISTANCE-MANAGEMENT RECOMMENDATIONS:

For resistance management, **VIKING Maloy Herbicide** is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to **VIKING Maloy Herbicide** and other Group 2 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of **VIKING Maloy Herbicide** or other Group 2 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 integrated weed management 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 resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Viking Crop Production Partners Inc. at 1-587-743-1029 or at www.vikingcropproduction.com.

USE PRECAUTIONS:

- Do not use on soils above pH 7.9.
- Do not use on highly variable soils that have large gravelly or sandy areas, eroded knolls, or calcium deposits.
- Do not use more than 7.5 grams per hectare per year.
- Do not apply to irrigated land where tail water will be used to irrigate other crop land.
- Do not apply to frozen ground where surface runoff may occur.

Because crop varieties differ in their tolerance to herbicides, limit first use of **VIKING Maloy Herbicide** to a small area of each variety prior to adoption as a field practice.

Do not apply **VIKING Maloy Herbicide** to a crop that is stressed by severe weather conditions, drought, low fertility, water saturated soil, disease or insect damage as crop injury may result. Drought, disease or insect damage following application also may result in crop injury.

Under certain conditions (such as heavy rainfall, prolonged cool weather, frost conditions, wide fluctuations in day/night temperatures) temporary lightening in crop colour and occasionally a slight reduction in crop height may occur.

Do not apply to a crop undersown with legumes or grasses as injury to the forage may result.

Do not remove soil from treated fields for use on lawns, in gardens or for backfill.

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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