Group 6 Herbicide

# **BROADLOOM® HERBICIDE**

For selective post-emergence broadleaf weed control in soybeans, dry and snap common beans, peas, lima beans, fababeans, corn (grain, silage, sweet and seed), flax (including low linolenic acid varieties), peanuts, blueberries, turf, spring wheat (excluding durum), snow peas, seedling and established forage legumes and seedling forage grasses (seed production only for forage legumes and grasses), newly-planted fruit trees - apple, apricot, cherry, peach, pear and nectarine (directed use only).

## **COMMERCIAL (AGRICULTURAL)**

#### SOLUTION

GUARANTEE: Bentazon (present as the sodium salt)....... 480 g/L

REGISTRATION NO. 32661 PEST CONTROL PRODUCTS ACT

#### **CAUTION EYE IRRITANT**

FOR CHEMICAL EMERGENCY: spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

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

**NET CONTENTS:** 1 L to 200 L

United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406, USA 1-800-438-6071

#### **GENERAL INFORMATION**

**BROADLOOM Herbicide** is a liquid herbicide for selective post-emergence control of many broadleaf weeds, yellow nutsedge, cleavers, stork's bill and volunteer canola in soybeans, dry and snap common beans, peas, lima beans, fababeans, corn (grain, silage, sweet and seed), flax (including low linolenic acid varieties), peanuts, spring wheat (excluding durum), snow peas, seedling forages (alfalfa\*, red clover\*\*, alsike clover\*\*, sainfoin\*\*, bromegrass\*\*, creeping red fescue\*\*, meadow foxtail\*\*, orchardgrass\*\*, timothy and crested wheatgrass\*\*), established forages (alfalfa\*, red clover\*, sainfoin\* and sweet clover\*) and newly-planted fruit trees - apple, apricot, cherry, peach, pear and nectarine. (Directed use only. Do not overspray.)

**BROADLOOM Herbicide** will also control yellow nutsedge in blueberries (directed spray only) and turf (sod farms and golf courses only).

- \* For seed production only.
- \*\* For seed production only in Western Canada.

**BROADLOOM Herbicide** does not control grasses.

**BROADLOOM Herbicide** is a herbicide with mainly contact action. Uptake into the plant occurs primarily through the leaves. Thorough coverage of foliage is important for consistent weed control. Failure to penetrate crop or weed leaf canopies with the spray will result in incomplete control of small weeds growing underneath.

Cool weather conditions or drought will delay herbicidal activity and if prolonged, may result in poor weed control. Use of **BROADLOOM Herbicide** in hot, humid weather may result in temporary leaf yellowing, leaf flecking, bronzing or burning. The crop usually outgrows this condition within 10 days (see Restrictions and Limitations).

#### **DIRECTIONS FOR USE**

## **Timing of Application**

Apply **BROADLOOM Herbicide** when broadleaf weeds are small and actively growing and before the weeds reach the maximum size recommended for treatment as listed in the **BROADLOOM Herbicide** Weed Control and Application Rate Table.

**BROADLOOM Herbicide** should be applied when the main weed of concern is in the suggested growth stage for treatment.

Early treatment of weeds with **BROADLOOM Herbicide** is important to maximize crop yield potential through elimination of early weed competition and permits optimum coverage of the weeds, thereby increasing the performance of **BROADLOOM Herbicide**.

Although the timing of application should be primarily in relation to the stage of weed growth, the crop must be in a tolerant stage as shown below. The information on usual stage of crop for optimum weed control may also serve as a guide to spray timing.

### **Blueberries**

Apply **BROADLOOM Herbicide** at the rate of 1.75 L/ha plus **ASSIST**<sup>®</sup> **Oil Concentrate** not to exceed 2 L/ha when yellow nutsedge is 15-20 centimetres tall. Use as a directed spray only. Do not overspray.

Apply by ground in sufficient water volume of 100-400 L of water per hectare at 140 kPa spray pressure. Repeat application in 7-10 days but do not apply **BROADLOOM Herbicide** more than two times per year.

BROADLOOM Herbicide may not be applied within 25 days of harvest.

#### **Snow Peas**

Apply **BROADLOOM Herbicide** at the rate of 1.75 L/ha plus **ASSIST** oil concentrate at 1 to 2 L/ha once a year at or after 3-leaf stage of the crop.

Apply by ground in sufficient water volume of 300 L of water per hectare.

Do not apply BROADLOOM Herbicide within 30 days of harvest.

#### Turf

For optimum control in turf, treat when nutsedge is young and actively growing. An additional application may be necessary at an interval of 10 to 14 days. Do not apply more than two applications of **BROADLOOM Herbicide** per year. For best results, do not mow grass 3 to 5 days before or after application. Do not treat newly-seeded turf until seedlings are well established as injury may result.

### **ADDITIVES**

Use ASSIST® Oil Concentrate or XA<sup>™</sup> Oil Concentrate at the rate of 1.0 to 2.0 L/ha (depending on climatic conditions and the spray volume used) for improved control of broadleaf weeds and yellow nutsedge on all crops. Either CITOWETT PLUS or ASSIST or XA Oil Concentrate can be used on peas. Refer to Spraying Instructions table.

## **Additives in Soybeans Only**

Add 6 L/ha ammonium sulphate or 10 L/ha 28% urea ammonium nitrate (UAN) for improved and more consistent control of velvetleaf and lamb's-quarters in soybeans. The addition of either form of nitrogen source to **BROADLOOM Herbicide** may cause slight leaf burn, but the new growth is normal and crop vigour is not reduced. A high quality source of 28% UAN or ammonium sulphate should be used to avoid solids or contaminants that may interfere with spray application (clogging nozzle tips) or reduced product performance. Do not use brass or aluminum nozzles when spraying **BROADLOOM Herbicide** plus a nitrogen source.

Note: Do not add nitrogen source when tank mixing BROADLOOM Herbicide with PINNACLE and ASSIST or XA Oil Concentrate.

### Additive in Dry Beans (pinto, great northern, pink and small red)

The addition of ammonium sulphate at 1.5% v/v will result in more consistent weed control. The addition of ammonium sulphate may cause some leaf burn, but new growth is normal and yield is not reduced. The potential for leaf burn is increased when relative humidity and temperature are high. Use with **ASSIST** Oil Concentrate.

Do not apply **BROADLOOM Herbicide** + **ASSIST** or **XA Oil Concentrate** with the addition of either 28% **UREA AMMONIUM NITRATE** or **AMMONIUM SULPHATE** by air.

Do not use any additives not specifically registered under the **Pest Control Products Act** for use with **BROADLOOM Herbicide**.

#### TANK MIX COMBINATIONS

## Soybeans

BROADLOOM Herbicide can be tank mixed with PINNACLE® plus ASSIST or XA Oil Concentrate (in soybeans only) for improved control of lamb's-quarters and redroot pigweed. BROADLOOM Herbicide can be tank mixed with BLAZER® plus ASSIST or XA Oil Concentrate (in soybeans only) for improved control of ragweed, redroot pigweed and nightshade. BROADLOOM Herbicide can be tank mixed with PURSUIT® plus a Nitrogen Source for control of nightshade (Eastern black), velvetleaf, common ragweed, redroot pigweed, barnyard grass, green and yellow foxtail, cocklebur, lady's thumb, wild mustard, and improved control of lamb's-quarters.

For further details refer to the **BROADLOOM Herbicide** Weed Control and Application Rate Table. Always refer to the **PINNACLE**, **BLAZER and PURSUIT** labels for precautions and use limitations.

## **Dry Common Beans**

**BROADLOOM Herbicide** can be tank mixed with **REFLEX**® plus **ASSIST** or **XA Oil Concentrate** for suppression of redroot pigweed and control of lamb's-quarters, common ragweed and lady's-thumb. For further details, refer to the **BROADLOOM Herbicide** Weed Control and Application Rate Table. Always refer to the **REFLEX** label for precautions and use limitations.

**BROADLOOM Herbicide** and **REFLEX** tank mix (ground application only) is registered in dry common beans only.

### Dry Edible Beans in the Red River Valley of Manitoba

**BROADLOOM Herbicide** can be tank mixed with **REFLEX** for selective postemergence broadleaf weed control in dry edible beans in the Red River Valley of Manitoba. See **REFLEX** label for weeds controlled in addition to those listed on the **BROADLOOM Herbicide** label.

Apply **BROADLOOM Herbicide** at the rate of 1.75 L/ha plus **REFLEX** at 0.58 L/ha plus **AGRAL**<sup>®</sup> **90** at 0.10% v/v at 1 to 2 trifoliate leaf stage of the crop and 3 to 4 leaf stage of the weeds.

Apply once a year, post-emergent and by ground only. Always refer to the **REFLEX** label for precautions and use limitations.

Do not apply this tank mix within 84 days of harvest.

# **Spring Wheat (excluding durum)**

When tank mixed with **2,4-D amine** or **ester** formulation, **BROADLOOM Herbicide** will control lady's-thumb, bluebur, burdock (< 4-leaf), cocklebur, common plantain, daisy fleabane, false flax, flixweed, goat's beard, lamb's-quarters, mustard (except dog and tansy), prickly lettuce, ragweed, redroot pigweed, Russian pigweed, Russian thistle, shepherd's purse, stinging nettle, stinkweed, sweet clover, volunteer canola, wild radish and wild sunflower. All of the above-mentioned broadleaf weeds will be controlled if

applied from the weed 2-4 leaf stage. For further details, refer to the **BROADLOOM Herbicide** Weed Control and Application Rate Table. Always refer to the **2,4-D amine** or **ester** label for precautions and use limitations.

#### RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, **BROADLOOM Herbicide** is a Group 6 herbicide. Any weed population may contain or develop plants naturally resistant to **BROADLOOM Herbicide** and other Group 6 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 BROADLOOM Herbicide or other Group 6
  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 resistancemanagement and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact United Phosphorus Inc. at 1-800-438-6071.

# SPRAYING INSTRUCTIONS Ground Application

Use sprayers equipped with standard flat fan pesticide nozzles with the recommended spray volume, pressure and additives. Tilt spray nozzles 45 degrees forward to ensure better coverage.

SPRAY VOLUME	SPRAY PRESSURE	ADDITIVES
Minimum 100 L/ha. Use	Minimum 275 kPa. Use	Use 1 litre of ASSIST or
larger water volumes (up to	higher pressure (up to 425	XA Oil Concentrate per
400 L/ha) for weeds at the	kPa) for weeds at the	100 litres of water with a
upper limit of their	upper limit of their	maximum application rate
recommended stage of	recommended stage for	of 2 L/ha. Under hot,
treatment.	treatment.	humid conditions, restrict
		ASSIST or XA Oil
		Concentrate rate to 1 L/ha.
		Alternatively, CITOWETT
		PLUS may be used on
		peas only at a rate of 2.5 L
		per 1000 L of spray
		solution.

# **TIMING OF APPLICATION RATE TABLE**

CROP	TOLERANT STAGE	USUAL STAGE OF CROP FOR OPTIMUM WEED CONTROL
Soybeans	Tolerant at any growth stage	Unifoliate to two expanded trifoliate leaves, usually 18-20 days after planting
Lima beans, dry common beans <sup>1</sup> ( <i>Phaseolus vulgaris</i> only - including but not limited to: white, kidney, black, pinto, great northern, pink, small red, cranberry and otebo) and most snap common beans including snap beans	Tolerant after 1st trifoliate leaf has fully expanded	1 to 3 trifoliate leaves
Corn (grain, silage, sweet, seed)	Tolerant at any growth stage	1 to 5-leaf stage
Peas (field and processing)	Tolerant after 3 pairs of leaves (or 3 nodes) are present	Soon after 3 pairs of leaves form
Fababeans	Tolerant after 2 to 3-leaf stage or crop is 10 cm high	Soon after 3-leaf stage
Peanuts	Tolerant at any growth stage	Unifoliate to two expanded trifoliate leaves
Flax (including low linolenic acid varieties)	Tolerant when crop is 5 cm or higher	Soon after crop reaches 5 cm
Spring wheat (excluding durum)	Tolerant at any growth stage	2 to 4 leaves

Turf (sod farms and golf courses) for yellow nutsedge control only	Tolerant on established turf	When turf is actively growing in late spring and early summer
Blueberries for yellow nutsedge control only	Tolerant as a directed spray only. Do not overspray.	
Snow peas		Soon after 3-leaf stage
Newly-planted fruit trees (apple, apricot, cherry, peach, pear, and nectarine)	Tolerant as a directed spray only. Do not overspray.	

<sup>1</sup> Dry common bean varieties may vary in their tolerance to herbicides, including **BROADLOOM Herbicide**. Since not all dry common bean varieties have been tested for tolerance to **BROADLOOM Herbicide**, first use of **BROADLOOM Herbicide** should be limited to a small area of each variety to confirm tolerance prior to adoption as a general field practice. Additionally, consult your seed supplier for information on the tolerance of specific varieties of dry common beans to **BROADLOOM Herbicide**.

**TIMING OF APPLICATION RATE TABLE (Continued)** 

CROP	TOLERANT STAGE	USUAL STAGE OF CROP FOR OPTIMUM WEED CONTROL
Seed Production <sup>1</sup> for annual	broadleaf weed control	
Forage Grasses (Seedling)	Tolerant at 1- 7-leaf growth stage <sup>2</sup>	2 - 5-leaf of seedling forage grasses
Forage Legumes (Seedling)	Tolerant after third trifoliate stage <sup>2</sup>	3 - 5 trifoliate. Approximately 4-6 weeks after planting.
Forage Legumes (Established)  • Alfalfa <sup>3</sup>	Tolerant before crop canopy closes, prior to flowering <sup>2</sup>	
Forage Legumes (Established) <sup>2</sup> • Red clover • Sainfoin • Sweet clover	Tolerant between 7.5 and 25 cm high <sup>2</sup>	After crop is 7.5 cm and before crop canopy closes.

<sup>&</sup>lt;sup>1</sup> All crops listed for seed production are Western Canada only with the exception of alfalfa, and established sainfoin, sweet clover and red clover.

<sup>&</sup>lt;sup>2</sup> For seed production, only one application of **BROADLOOM Herbicide** per season is recommended. Crop injury may occur under hot, humid conditions. Speed of recovery will be influenced by growing conditions and weed control. (**SEE RESTRICTIONS AND LIMITATIONS SECTION**)

<sup>3</sup> Some leaf scorch may appear but the effect is transient and will outgrow within 3-4

weeks.

# **BROADLOOM HERBICIDE WEED CONTROL AND APPLICATION RATE TABLE**

WEED SPECIES RECOMMENDED TREATMENT			TOO LATE FOR BEST RESULTS	
	HEIGHT (CM)	HEIGHT (CM)	LEAF	
	FOR WEEDS	, ,	STAGE	
BROADLOOM Herbio			Concentrate	
	at 1-2 L/ha			
Bird rape*	5-10	over 10	6-leaf	
Buttercup	5-10	over 10		
Cleavers	4-8	over 8	1-3 whorl	
Cocklebur	17-30	over 30	10-leaf	
	1-3 weeks after	Later than 3		
Common chickweed	emergence	weeks after		
	emergence	emergence		
Common groundsel*	5-10	over 10		
Common ragweed*	2-5	over 5	6-leaf	
Corn spurry	2-10	over 10	<b>0</b> 100	
Flower-of-an hour	5-10	over 10		
Giant ragweed	5-15	over 15	4-leaf	
Hairy galinsoga	5-8	over 8	1 1001	
Hairy nightshade	1-2	over 2	6-leaf	
Jimsonweed	5-15	over 15	10-leaf	
Lady's-thumb				
(smartweed)	7-20	over 20	10-leaf	
Lamb's-quarters*	1-3	over 3	8-leaf	
Low cudweed	2-5	over 5	6-leaf	
Purslane	2-5	over 5	6-leaf	
Redroot pigweed*	4.4	4		
(suppression only)	1-4	over 4	4-leaf	
Russian thistle	2-8	over 8	6-leaf	
Shepherd's-purse	10-25	over 25	6-leaf	
Stinkweed	5-15	over 15	6-leaf	
Stork's bill	4-10	over 10	2-6-leaf	
Velvetleaf**	10-15	over 15	6-leaf	
Volunteer canola	2-15	over 15	8-leaf	
Wild mustard	12-25	over 25	10-leaf	
Wild radish	2-5	over 5	6-leaf	
SOYBEANS ONLY:	ı	1	1	
BROADLOOM Herbicide at 2.25 L/ha + PINNACLE at 5.5-8.0 g/ha +				
ASSIST	Γ or XA Oil Concent	trate at 1-2 L/ha		
Controls all the above I	isted weed species v	vith the following	improvements:	
+Lamb's-quarters*	1-10	over 10	8-leaf	
Redroot pigweed*	1-10	over 10	6-leaf	
BROADLOOM Herbic	ide at 1.75 L/ha + A	SSIST or XA Oil	Concentrate	

at 1-2 L/ha			
Bird rape*	2-5	over 5	
Cocklebur	8-18	over 18	
Flower-of-an-hour	2-5	over 5	
Lady's-thumb (smartweed)	2-8	over 7.5	
Shepherd's-purse	Rosette - 10	over 10	
Stinkweed	Rosette - 5	over 5	
Velvetleaf**	5-10	over 10	
Volunteer canola	2-15	over 15	8-leaf
Wild mustard	2-13	over 13	

<sup>+</sup> Use 8.0 g/ha rate of **PINNACLE** for advanced leaf staging.

# **BROADLOOM HERBICIDE WEED CONTROL AND APPLICATION RATE TABLE** (Continued)

(Continued)				
WEED SPECIES	RECOMMENDED	TOO LATE	FOR BEST	
	TREATMENT	RESULTS		
	HEIGHT (CM)	HEIGHT	LEAF STAGE	
	FOR WEEDS	(CM)		
DRY COMMON BEAN	S ONLY:			
BROADLOOM Herbic	ide at 1.75 L/ha + RE	FLEX at 0.58	L/ha + ASSIST	
or XA Oil Concentrate				
Controls all the above I	isted weed species w	ith the followir	ng improvements:	
++Common ragweed*	1-5	over 5	6-leaf	
++Lamb's-quarters*	1-3	over 3	8-leaf	
++Redroot Pigweed*	1-4	over 4	4-leaf	
(suppression only)				
SOYBEANS ONLY:				
BROADLOOM Herbic	ide at 1.75 L/ha + PIN	NNACLE at 5.	.5-8.0 g/ha +	
ASSIST or XA Oil Cor	centrate at 1-2 L/ha			
Controls all the above I	isted weed species w	ith the followir	ng improvements:	
+, ++Lamb's-	1-10	over 10	8-leaf	
quarters*				
Redroot Pigweed*	1-10	over 10	6-leaf	
BROADLOOM Herbicide at 1.25 L/ha + PURSUIT at 0.312 L/ha +				
Nitrogen Source at 2 L/ha				
For control of nightshade (Eastern black), velvetleaf, common ragweed,				
redroot pigweed, barnyard grass, green and yellow foxtail, and improved				
control of lamb's-quarters.				
BROADLOOM Herbicide at 1.75 L/ha + PURSUIT at 0.312 L/ha +				
Nitrogen Source at 2 L/ha				
1				

Use when weeds are under stress due to environmental conditions. For

<sup>\*</sup> Triazine resistant strains of these weeds are controlled by **BROADLOOM Herbicide**.

<sup>\*\*</sup> **BROADLOOM Herbicide** will defoliate velvetleaf 15 cm or taller, but regrowth may occur.

control of nightshade (Eastern black), velvetleaf, common ragweed, redroot pigweed, barnyard grass, green and yellow foxtail, cocklebur, lady's thumb, wild mustard, and improved control of lamb's-quarters.

# BROADLOOM Herbicide at 1.75 L/ha + BLAZER at 0.63 L/ha + ASSIST or XA Oil Concentrate at 1-2 L/ha

Controls all the above listed weed species with improved control of ragweed, redroot pigweed and nightshade. Use this treatment where lamb's-quarters and weeds other than common ragweed and redroot pigweed are the dominant weed species present.

# BROADLOOM Herbicide at 1.25 L/ha + BLAZER at 1.25 L/ha + ASSIST or XA Oil Concentrate at 1-2 L/ha

Controls all the above listed weed species with improved control of ragweed, redroot pigweed and nightshade. Use this treatment where common ragweed and/or redroot pigweed are the dominant weed species present

#### **PERENNIAL WEEDS:**

# BROADLOOM Herbicide at 1.75 L/ha + ASSIST or XA Oil Concentrate at 1-2 L/ha

Repeat application 7 to 15 days after 1st application (if necessary):				
Canada thistle	15 - 20	Over 20		
Field bindweed**	3 - 6	over 6		
(suppression only)				
Yellow nutsedge 15 - 20 over 20				

## **SPRING WHEAT (excluding durum):**

# BROADLOOM Herbicide at 1.0 L/ha + 2,4-D amine or ester (470 g/L) at 0.75-1.0 L/ha

WEEDS	RECOMMENDED APPLICATION TIMING
Lady's-thumb	2 - 4 leaf
Bluebur	2 - 4 leaf
Burdock	< 4 leaf
Cocklebur	2 - 4 leaf
Common plantain	2 - 4 leaf
Daisy fleabane	2 - 4 leaf
False flax	2 - 4 leaf
Flixweed	2 - 4 leaf
Goat's beard	2 - 4 leaf
Lamb's-quarters	2 - 4 leaf
Mustard (except dog and tansy)	2 - 4 leaf
Prickly lettuce	2 - 4 leaf
Ragweed	2 - 4 leaf
Redroot pigweed	2 - 4 leaf
Russian pigweed	2 - 4 leaf
Russian thistle	2 - 4 leaf
Shepherd's purse	2 - 4 leaf

Stinging nettle	2 - 4 leaf
Stinkweed	2 - 4 leaf
Sweet clover	2 - 4 leaf
Volunteer canola	2 - 4 leaf
Wild radish	2 - 4 leaf
Wild sunflower	2 - 4 leaf

- + Use 8.0 g/ha rate of **PINNACLE** for advanced leaf staging.
- ++ Second flushes of these weeds will not be controlled.
- \* Triazine resistant strains of these weeds are controlled by **BROADLOOM Herbicide**.
- \*\* Treat field bindweed before it is dark green and has begun to trail.

#### **BROADLOOM HERBICIDE BANDING TECHNIQUES**

- 1. Spray a minimum of 25 cm wide band.
- 2. Minimize the amount of dust striking target weeds to ensure adequate coverage and penetration.
- 3. Do not use cultivation equipment when spraying.
- 4. Adjust the **BROADLOOM Herbicide** rate to proportion of the total area to be sprayed.

#### **AIRCRAFT APPLICATIONS**

DO NOT APPLY **BROADLOOM Herbicide** BY AIR TO: Corn, peas, fababeans, peanuts, flax, blueberries, snow peas, turf, newly-planted fruit trees, spring wheat, forage grasses and forage legumes.

Aerial applications are allowed on soybeans, dry and snap common beans only. Apply **BROADLOOM Herbicide** when weeds are in the early stages of growth recommended for treatment. Crop canopy should not be so dense as to prevent spray from thoroughly covering weeds. Use spray volumes, pressure and additives as recommended below:

SPRAY VOLUME	SPRAY PRESSURE	ADDITIVES
50 to 100 L/ha	Minimum 275 kPa	0.125 to 0.25 L <b>ASSIST</b> or
		XA Oil Concentrate per
		hectare

Do not use **ASSIST** or **XA Oil Concentrate** in excess of 0.25 L/ha as substantial crop injury could occur.

Treat when wind is less than 8 kilometres per hour. Do not apply when weather conditions may cause spray drift from target areas to adjacent crops.

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 even 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. Do not apply to any body of water. Avoid drifting of spray onto any body of water or other nontarget areas. Specific buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in finer particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

## **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.

During mixing, loading, application, clean-up and repair workers must wear a long-sleeved shirt, long pants, a hat, chemical-resistant gloves, socks and chemical-resistant footwear. In addition, workers must also wear goggles or a face shield and a NIOSH approved respirator during mixing and loading.

In addition, the field crew must wear coveralls during mixing/loading, clean-up 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. Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1-800-438-6071 or obtain technical advice from the distributor or your provincial agricultural representative.

# SPRAY DRIFT MANAGEMENT FOR GROUND AND AERIAL APPLICATION Field Sprayer Application

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

# **Aerial Application**

DO NOT apply during periods of dead calm. Avoid application of this product when winds are gusty. DO NOT apply when wind speed is greater than 8 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) medium classification. To reduce drift caused by turbulent wingtip vortices, the nozzle distribution along the spray boom length MUST NOT exceed 65% of the wing or rotorspan.

#### **Buffer Zones**

Use of the following spray methods or equipment DO NOT require a buffer zone: hand-held or backpack sprayer, interrow hooded sprayer, spot treatment, soil drench and soil incorporation. The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands).

Method of application	Сгор		Buffer zone (metres) required for the protection of:
			Terrestrial Habitat
Field sprayer <sup>1</sup>	Snow peas, peas (field and processing), seedling forage grasses/legumes and established forage legumes (for seed production)  Turf, soybeans, corn, peanuts, beans (snap, lima, faba), dry beans, flax, newly planted fruit trees, blueberries, spring wheat		2
Aerial	Dry common beans	Fixed and rotary wing	20
	Soybeans, snap	Fixed Wing	35
	beans	Rotary wing	30

<sup>&</sup>lt;sup>1</sup> For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields.

When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labelled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labelled buffer zone can be reduced by 30%.

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

#### **MIXING**

1. Clean spray tank and fill half full with clean water. Start agitation or by-pass system.

- 2. If required add correct amount of nitrogen source. Note: Do not add nitrogen source when tank mixing BROADLOOM Herbicide with PINNACLE, REFLEX or 2,4-D amine or ester and ASSIST or XA Oil Concentrate.
- If required, add the correct amount of PINNACLE, PURSUIT or BLAZER (for use on soybeans only), REFLEX (for use on dry common beans only) or 2,4-D amine or ester (for use on spring wheat [excluding durum]). Continuous agitation is required to keep PINNACLE, PURSUIT, BLAZER, REFLEX or 2,4-D amine or ester in suspension.

**NOTE:** On repeat tank loads, prepare a **PINNACLE**/water slurry in a separate container with clean water before adding to spray tank.

- 4. Add correct amount of **BROADLOOM Herbicide** and agitate 2 to 3 minutes.
- 5. Add correct amount of **ASSIST** or **XA Oil Concentrate** or **CITOWETT PLUS** and agitate 2 to 3 minutes. When tank mixing **BROADLOOM Herbicide** with **PINNACLE**, **REFLEX**, **BLAZER** or **2,4-D amine** or **ester**, only **ASSIST** or **XA Oil Concentrate** may be used.
- 6. Add remainder of water, agitate and spray.
- 7. If an oil film starts to build up in the tank, drain and clean tank with a strong detergent solution.

#### **RESTRICTIONS AND LIMITATIONS**

Do not treat any crops not listed on this label.

Do not use **BROADLOOM Herbicide** with additives, pesticides or fertilizers not specifically recommended on this label. **NOTE: Do not add nitrogen source when tank mixing BROADLOOM Herbicide with PINNACLE, REFLEX, BLAZER or 2,4-D amine or ester and ASSIST or XA Oil Concentrate.** 

Do not allow livestock to graze on **BROADLOOM Herbicide** treated turf.

Do not apply **BROADLOOM Herbicide** to any crops that have been subjected to stress from conditions such as hail damage, flooding, hot, humid weather, drought, widely fluctuating temperature conditions, prolonged cold weather or injury from prior herbicide applications, as crop injury may result.

Do not apply **BROADLOOM Herbicide** to newly-seeded turf until seedlings are well established.

Rainfall within 6 to 8 hours of application may reduce effectiveness of spray. When **BROADLOOM Herbicide** is applied beyond recommended weed growth stages, limited to unsatisfactory weed control will result.

Cool weather conditions or drought will delay herbicide activity and if prolonged, may result in poor weed control.

**BROADLOOM Herbicide** and **PINNACLE**, **BLAZER** or **Pursuit** tank mixes are registered for use in soybeans only (ground application only).

**BROADLOOM Herbicide** and **REFLEX** tank mix (ground application only) is registered in dry common beans only.

**BROADLOOM** Herbicide and **2,4-D** amine or ester tank mix is registered for use in spring wheat (excluding durum) only. **Do not apply this tank mix by air.** A fifty (50) day pre-harvest interval is required after application, before harvesting the treated crop. Do not apply **BROADLOOM** Herbicide within 36 days of harvest of red clover grown for seed production.

#### WARNING

Do not apply **BROADLOOM Herbicide** when weather conditions may cause spray drift from treated areas to adjacent crops.

Lentils, adzuki and mung beans, cucumbers, sugar beets and sunflowers can be injured by **BROADLOOM Herbicide**.

#### **ENVIRONMENTAL HAZARDS**

The use of this chemical may result in contamination of groundwater, particularly in areas where soils are permeable (e.g. sandy soil) or the water table is shallow.

DO NOT apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands), or to estuarine/marine habitats.

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

TOXIC to non-target terrestrial plants. Observe buffer zones specified under SPRAY DRIFT MANAGEMENT FOR GROUND AND AERIAL APPLICATION.

#### **PRECAUTIONS**

- 1. KEEP OUT OF REACH OF CHILDREN.
- 2. Do not take internally.
- 3. Avoid inhalation of vapour, dust or spray mist.
- 4. Avoid contact with eyes, skin or clothing. Potential skin sensitizer.
- 5. Wash thoroughly after handling and before eating, drinking or smoking.
- 6. If clothing becomes contaminated, remove and wash separately from household laundry before re-use.
- 7. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.
- 8. DO NOT enter or allow worker entry into treated areas for 12 hours following application.

- 9. Clean spray equipment thoroughly after use. When tank mixing **BROADLOOM Herbicide** with **PINNACLE**, **REFLEX**, **BLAZER**, **PURSUIT** or **2,4-D amine** or **ester**, refer to **PINNACLE**, **REFLEX**, **BLAZER**, **PURSUIT** or **2,4-D amine** or **ester** label for sprayer cleanup.
- 10. **CAUTION:** Do not graze the treated crops or cut for hay; sufficient data are not available to support such use.

### **FIRST AID**

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

**If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

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

### TOXICOLOGICAL INFORMATION

Treat symptomatically.

### **STORAGE**

- 1. Store in original tightly closed container.
- 2. Do not ship or store near food, feed, seed and fertilizers.
- 3. Store in cool, dry, locked, well-ventilated area without floor drain.
- 4. Herbicides should be shipped or stored separately from other pesticides to avoid cross contamination.
- 5. Freezing will not harm **BROADLOOM Herbicide**. Should product freeze, warm to room temperature and shake well before using.

#### **DISPOSAL**

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

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

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

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

#### **NOTICE TO USER**

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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