# ASSERT® 300 SC

#### **HERBICIDE**

Suspension

FOR SALE FOR USE IN PRAIRIE PROVINCES, PEACE RIVER REGION AND OKANAGAN VALLEY & CRESTON FLATS AREAS OF BRITISH COLUMBIA ONLY

# FOR SALE FOR USE IN BORAGE AND PERENNIAL RYEGRASS GROWN FOR SEED PRODUCTION IN ALL REGIONS OF CANADA

#### AGRICULTURAL

GUARANTEE: imazamethabenz-methyl ... 300 g ester/L (Contains 1,2-benzisothiazolin-3-one at 0.027% as a preservative)

REGISTRATION No. 21032 PEST CONTROL PRODUCTS ACT

CAUTION {symbol} POISON

**WARNING - EYE IRRITANT** 

KEEP OUT OF REACH OF CHILDREN

READ THE LABEL AND BOOKLET BEFORE USING

(1 Litre to (Bulk) Litres)

Nufarm Agriculture Inc. 5101, 333 - 96th Ave NE Calgary, Alberta T3K 0S3 1-800-868-5444

24 HOUR EMERGENCY RESPONSE NUMBER 1-800-424-9300

ASSERT® is a registered trademark of Nufarm Agriculture Inc.

#### **PRECAUTIONS:**

KEEP OUT OF REACH OF CHILDREN.

MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH THE SKIN.

DO NOT CONTAMINATE FOOD OR FEED PRODUCTS.

AVOID CONTACT WITH EYES, SKIN AND CLOTHING.

AVOID BREATHING VAPOUR OR SPRAY MIST.

Causes eye irritation.

May cause skin irritation.

Use with adequate ventilation.

Wear a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves during mixing, loading, application, clean-up and repair. Chemical-resistant gloves are not required while operating groundboom sprayers.

Wear dust and/or splash-proof goggles or face shield when handling.

Wash thoroughly with soap and water after handling.

Wash all protective clothing separately from normal laundry in detergent and hot water before reuse.

Wash protective eye wear upon removal with soapy water.

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

#### **ENVIRONMENTAL HAZARDS**

Toxic to aquatic organisms and non-target terrestrial plants. Observe 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 of this product when heavy rain is forecast.

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

# Leaching

The use of this chemical may result in contamination of groundwater, particularly in areas where soil  $pH \le 7$ , are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

#### FIRST AID:

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have a 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:**

Keep containers closed to avoid spills and contamination.

DO NOT mix or store in unlined containers.

DO NOT contaminate any body of water by cleaning of equipment or disposal of wastes. Store between 0° - 35° C. DO NOT freeze. Shake well before using.

#### **DISPOSAL:**

# For Recyclable Containers:

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 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 Returnable-Refillable Containers:

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

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

# **EMERGENCY TELEPHONE NUMBERS:**

For spills or transportation accidents, Chemtrec, 1-800-424-9300. For health or environmental emergencies, ProPharma Group, 1-877-325-1840. For product and use information, Nufarm Agriculture Inc., 1-800-868-5444.

# **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.

18-1736

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AVOID CONTACT WITH EYES, SKIN AND CLOTHING.

AVOID BREATHING VAPOUR OR SPRAY MIST.

Causes eye irritation.

May cause skin irritation.

Use with adequate ventilation.

Wear a long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves during mixing, loading, application, clean-up and repair. Chemical-resistant gloves are not required while operating groundboom sprayers.

Wear dust and/or splash-proof goggles or face shield when handling.

Wash thoroughly with soap and water after handling.

Wash all protective clothing separately from normal laundry in detergent and hot water before reuse.

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#### **ENVIRONMENTAL HAZARDS**

Toxic to aquatic organisms and non-target terrestrial plants. Observe 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 of this product when heavy rain is forecast.

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

# Leaching

The use of this chemical may result in contamination of groundwater, particularly in areas where soil pH  $\leq$  7, are permeable (e.g. sandy soil) and/or the depth to the water table is shallow.

#### FIRST AID:

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#### TOXICOLOGICAL INFORMATION:

Treat symptomatically.

#### **STORAGE:**

Keep containers closed to avoid spills and contamination.

DO NOT mix or store in unlined containers.

DO NOT contaminate any body of water by cleaning of equipment or disposal of wastes. Store between 0° - 35° C. DO NOT freeze. Shake well before using.

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#### **DIRECTIONS FOR USE:**

Do not re-enter treated fields until 12 hours after application

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. Avoid 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) medium classification. Boom height must be 60 cm or less above the crop or ground.

#### **Buffer Zones:**

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), sensitive aquatic habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs, wetlands and estuarine/marine habitats).

Use of the following spray methods or equipment **DO NOT** require a buffer zone: handheld or backpack sprayer and spot treatment.

	Crop	Buffer Zones (metres) Required for the Protection of:		
Method of application		Aquatic Habitat of Depths:		Terrestrial habitat
		Less than 1 m	Greater than 1 m	
Field sprayer	Spring wheat, durum wheat and spring barley, annual and perennial rye grass for seed	1	0	1
	Sunflower, borage	0	0	1

For tank mixes, consult the labels of the tank-mix partners and observe the largest (most restrictive) 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.

NOTE: Applicators may recalculate a site-specific buffer zone by combining information on current weather conditions and spray configuration for the following applications: all airblast applications, and for field and aerial applications which specify the following droplet size category wording on the product label: 'DO NOT apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) [Fine or Medium or Coarse] classification.' To access the Buffer Zone Calculator, please visit the Pest Management Regulatory Agency web site.

#### **WARNINGS:**

DO NOT APPLY BY AIR. APPLY WITH GROUND EQUIPMENT ONLY.

DO NOT make more than one application of ASSERT 300 SC Herbicide per growing season.

DO NOT apply ASSERT 300 SC Herbicide to the same field in two successive years.

DO NOT spray ASSERT 300 SC Herbicide if rain is predicted within 6 hours.

DO NOT spray ASSERT 300 SC Herbicide when freezing temperatures are forecast.

DO NOT graze treated fields or cut treated forage for silage or hay; sufficient data are not available to support such use. (Barley, wheat grain or straw from fields treated with ASSERT 300 SC Herbicide can be fed to livestock.)

#### **MIXING:**

Fill the spray tank 3/4 full with clean water. Add 1 package of Spray Water pH Adjuster per jug of ASSERT 300 SC Herbicide to your tank water before adding ASSERT 300 SC Herbicide. Shake ASSERT 300 SC Herbicide well, then add required quantity of ASSERT 300 SC Herbicide while agitating. When ASSERT 300 SC Herbicide is thoroughly mixed fill remainder of tank with water while agitating. To ensure thorough mixing circulate the spray mixture in the tank for 5 minutes before spraying begins.

#### **INSTRUCTIONS FOR TANK-MIXING:**

(2,4-D Ester, MCPA Ester, ATTAIN®, CURTAIL® M, ESTAPROP XT, EXPRESS® PACK (EXPRESS + 2,4-D LV 700), PRESTIGE®, CORDON or PUMA 120 SUPER HERBICIDE, REFINE® EXTRA, REFINE SG, TURBOPROP®, DICHLORPROP-D, SPECTRUM®, FRONTLINE®, FRONTLINE XL, or TROPHY or INFINITY)

Fill tank one-half to three-quarters full with clean water and start agitating.

If mixing with EXPRESS PACK, REFINE SG, or REFINE EXTRA, add the EXPRESS PACK, REFINE SG, or REFINE EXTRA to tank water now and agitate, mixing thoroughly.

Add 1 package of Spray Water pH Adjuster per jug of ASSERT 300 SC Herbicide to your tank water and agitate until dissolved.

Add ASSERT 300 SC Herbicide first to the partially filled tank while agitating.

If using CORDON or PUMA 120 SUPER, or one of the following: MCPA Ester, 2,4-D Ester, ATTAIN, ESTAPROP XT, TURBOPROP, Dichlorprop-D, CURTAIL M, PRESTIGE, SPECTRUM, FRONTLINE, FRONTLINE XL or TROPHY or INFINITY in the tankmix, add now when tank is three-quarters filled while agitating.

Fill tank and agitate, or, recycle for at least five minutes before spraying to ensure thorough mixing.

Continue agitation until spraying is completed.

**MIXING NOTE:** ASSERT 300 SC Herbicide and the dry flowable herbicides, REFINE EXTRA, REFINE SG, or EXPRESS PACK

When tank-mixing one of the above dry flowable herbicides with ASSERT 300 SC Herbicide, make sure the dry flowable is thoroughly dissolved in the water before adding ASSERT 300 SC Herbicide. On repeated tank-loads, if any tank-mix solution remains in the tank, prepare a dry flowable/water slurry and add it to the required water volume in the spray tank prior to adding ASSERT 300 SC Herbicide.

#### **SPRAYER INFORMATION:**

Flat fan spray tips are recommended.

Pressure at nozzle tips should be 275 kPa, lower pressures may result in poor control. Wash sprayer after spraying.

# **FOLLOW CROP RESTRICTIONS:**

The year following application of ASSERT 300 SC Herbicide, plant only these crops:

Brown and Dark Brown Soils:

Spring Wheat Durum Wheat Barley Sunflower Canola – imazethapyr tolerant canola varieties only

Black and Grey Wooded Soils:

Spring Wheat Durum Wheat
Barley Sunflower
Flax Peas

Canola (all varieties)\*

\*If there has been below average rainfall in the year of the Assert 300 SC treatment, and other imidazolinone herbicides (for example, Pursuit, Odyssey, Solo, etc) or soil residual sulfonylurea herbicides (for example, Ally) have been applied in the year preceding the Assert 300 SC application, plant only imazethapyr tolerant canola (for example CLEARFIELD® canola).

Two years following application of ASSERT 300 SC Herbicide:

Spring wheat Durum wheat Barley Sunflowers

Peas Flax

Oats Canary grass

Canola

A field bioassay (a test strip grown to maturity) the year before planting any crop should be conducted for any crop not listed above.

Lentils and sugarbeets have been observed to be particularly sensitive to ASSERT 300

#### SC Herbicide residues in the soil:

The additive effect of soil residues from the use of ASSERT 300 SC Herbicide and other soil residual herbicides on the same land has not been determined. Crop rotation guidelines and minimum rotation intervals are not known and injury to rotational crops other than wheat (excluding durum) may occur, particularly under conditions of below average rainfall. Wherever land will be treated with ASSERT 300 SC Herbicide and has been or will be treated with other imidazolinone herbicides (for example, Pursuit, Odyssey, Solo, etc) or soil residual sulfonylurea herbicides (for example, Ally) or Group 4 herbicides belonging to the pyridine carboxylic acid subgroup (for example, Curtail M, Prestige, etc.) plant only wheat (excluding durum) after both herbicides have been used until a bioassay demonstrates that other crops can be successfully grown. Consult the label of other imidazolinone herbicides (for example, Pursuit, Odyssey, Solo, etc) or soil residual sulfonylurea herbicides (for example, Ally) for additional information regarding bioassays.

# DIRECTIONS FOR USE IN CEREALS: PRAIRIE PROVINCES and PEACE RIVER REGION OF BRITISH COLUMBIA ONLY

ASSERT 300 SC Herbicide, a selective postemergence herbicide for use in cereals, is absorbed through the foliage and roots of wild oat plants and other susceptible weeds. Susceptible plants stop growing soon after spray application. Obvious signs of plant death may not be seen in some plants until 2 weeks later but the competitive effect of these plants will have been removed. Death may not occur for several weeks.

# WILD OAT CONTROL

ASSERT 300 SC Herbicide used alone and in combination should only be applied when the majority of WILD OAT plants are at the 1 - 4 leaf stage of growth.

#### **BROADLEAF WEED CONTROL**

ASSERT 300 SC Herbicide used alone and applied at the cotyledon to six (6) leaf stage of weed growth will control:

Wild mustard

Stinkweed

ASSERT 300 SC Herbicide used alone and applied at the cotyledon to four (4) leaf stage of weed growth provides partial control of and reduces competition from:

Wild buckwheat

Tartary buckwheat

Volunteer canola (EXCEPT imazethapyr tolerant varieties, i.e., varieties with the SMART® trait.)

#### **CROPS**

ASSERT 300 SC Herbicide may be used either alone or in tank-mix combinations on: Spring wheat, durum wheat.

Spring barley.

ASSERT 300 SC Herbicide may cause initial yellowing and temporary stunting on durum wheat but the crop will recover under normal growing conditions and yield will not be affected. Application can be made up to and including the 6-leaf stage of the crop (before the flag leaf).

#### **RATES**

#### **GROUND APPLICATION:**

Spring wheat, durum wheat and spring barley

1 to 4 leaf stage of wild oats:

Apply 1.3 litres of ASSERT 300 SC Herbicide in 50 - 100 litres spray per hectare if majority of wild oats are in the 1-3 leaf stage.

Use 1.6 litres of ASSERT 300 SC Herbicide if wild oats are in 4 leaf stage.

#### **TANK-MIXES**

Spring wheat, durum wheat and spring barley

For fields which contain weeds other than those listed under ASSERT 300 SC Herbicide alone, tankmixing may be required to provide broad spectrum weed control. Use ONLY those broadleaf herbicides listed below. Tank mixes with chemical additives, pesticides or fertilizers not listed on this label may be physically incompatible, may cause unacceptable crop effects or may result in unacceptable weed or pest control. Contact Nufarm Agriculture Inc. at 1-800-868-5444 for more information.

In order to ensure optimum herbicide broadleaf weed control, follow the label recommendations of the herbicide to be used with ASSERT 300 SC Herbicide. Follow the most restrictive precautions, directions, and recropping/rotation limitations that appear on both product labels.

Select the proper ASSERT 300 SC Herbicide application rate given on this label.

READ AND OBSERVE ALL RATES, TIMINGS, MIXING INSTRUCTIONS, PRECAUTIONS		
AND RESTRICTIONS ON THE LABEL OF THE TANK-MIX PARTNER.		
TANKMIX	RATE	NOTES:
PARTNER		
2,4-D ester or	up to 560	For use on spring wheat, durum wheat and barley.
MCPA ester	g/ha	Apply only after the 4 leaf stage of the crop to avoid crop injury.
ATTAIN A +	0.6 L/ha +	For use on spring wheat (including durum) and barley only.
ATTAIN B	1.0 L/ha	Apply only after the 4 leaf stage of crop to avoid crop injury.
INFINITY	0.83 L/ha	For use on spring wheat, durum wheat and spring barley
		only.
		Apply from the 2 to 6 leaf stage of the crop.
CURTAIL M	2 L/ha	For use on spring wheat, durum wheat and spring barley
		only.
		Apply from the 4 to 6 leaf stage of the crop.
ESTAPROP XT	1.2 L/ha	For use on spring wheat, durum wheat, and spring barley
		only.

		Apply only after the 4 leaf stage of crop to avoid crop injury.
EXPRESS	10 g/ha + 0.6	For use on spring wheat, durum wheat, and spring barley
PACK:	L/ha	only.
EXPRESS + 2,4-		Apply when crop is in the full 3-leaf stage.
D LV 700		
PRESTIGE:	0.8 L/ha + 2	For use on spring wheat (including durum) and barley.
PRESTIGE A +	L/ha	Apply from the 3 to 6 leaf stage of the crop.
PRESTIGE B		
REFINE EXTRA	20 g/ha	For use on spring wheat, durum wheat and spring barley
		only.
		Apply from the 2 to 6 leaf stage of the crop. Use the spray
		preparation within 12 hours or product degradation may occur.
REFINE EXTRA	20  g/ha + 350	For use on spring wheat, durum wheat, and spring barley
+ MCPA ESTER	- 560 g/ha	only.
		Apply from the 4 to 6 leaf stage of the crop. Use the spray
		preparation within 12 hours or product degradation may occur.
REFINE SG	30 g/ha	For use on spring wheat, durum wheat and spring barley
		<b>only.</b> Apply from 2 to 6 leaf stage of the crop.
REFINE SG +	30  g/ha + 350	For use on spring wheat, durum wheat and spring barley
MCPA ESTER	- 560 g /ha	only. Apply from 4 to 6 leaf stage of the crop.
TURBOPROP	1.75 L/ha	For use on spring wheat and durum wheat.
		Apply only after the 4 leaf stage of the crop to avoid crop injury.
DICHLORPROP-	1.75 L/ha	For use on spring wheat, durum wheat and spring barley
D		<b>only.</b> Apply only after the 4 leaf stage of the crop to avoid crop
		injury
SPECTRUM:		
SPECTRUM A +	0.1 L/ha +	For use on spring wheat (including durum) and barley only.
SPECTRUM B	1.5 L/ha	Apply from the 2 to 6 leaf stage of the crop.
ED OVER 5 75		
FRONTLINE:	0.1.7.4	
FRONTLINE A	0.1 L/ha +	For use on spring wheat (including durum) and barley only.
+	0.84 L/ha	Apply from the 2 to 6 leaf stage of the crop.
FRONTLINE B		
FRONTLINE XL	1.6 L/ha	For use on spring wheat (including durum) and barley only.
I KOMILINE AL	1.0 L/11a	Apply from the 2 to 6 leaf stage of the crop.
TROPHY:		FF 7
TROPHY A +	0.6 L/ha +	For use on spring wheat (including durum) and barley only.
TROPHY B	1.12 L/ha	Apply from the 2 to 4 leaf stage of the crop.
		5

# RATES OF ASSERT 300 SC HERBICIDE WITH THESE TANKMIXES:

Black and grey wooded soil zones: tank-mix 1.6 L ASSERT 300 SC Herbicide per hectare. Brown and dark brown soil zones: tank-mix 1.3 L ASSERT 300 SC Herbicide per hectare if the majority of wild oats are in the 1-3 leaf stage; 1.6 L ASSERT 300 SC Herbicide per hectare if wild oats are in the 4-leaf stage.

Use a spray volume of 50 – 100 L/ha for tankmix combinations of ASSERT 300 SC Herbicide plus, ESTAPROP XT, TURBOPROP, Dichlorprop-D, 2,4-D ester or MCPA ester. Use a spray volume of 100 L/ha for all other tank-mix combinations

For the additional control of green foxtail, tank mix with CORDON or PUMA 120 SUPER HERBICIDE as shown in the table below. Apply at the 1 - 6 leaf stage of the weed and when weeds are actively growing.

Refer to the CORDON or PUMA 120 SUPER HERBICIDE label for additional recommendations, precautions and restrictions.

TANKMIX	RATE	NOTES:
PARTNER		
CORDON or PUMA	0.29 L/ha	For use on spring wheat and durum wheat only.
120 SUPER	(35 g a.i./ha)	Application can be made from the 2-leaf stage up
HERBICIDE		to and including the 6-leaf stage of the crop.
(120 g/L)		
CORDON or PUMA	0.29 L/ha	For use on barley only.
120 SUPER	(35 g a.i./ha)	Application can be made from the 2-leaf stage up
HERBICIDE		to and including the 6-leaf stage of the crop.
(120  g/L)		
CORDON or PUMA	0.29 L/ha	For use on spring wheat, durum wheat and
120 SUPER	(35 g a.i./ha) +	barley.
HERBICIDE + MCPA	420 g a.e./ha	Apply only after the 4-leaf stage of the crop to
Ester		avoid crop injury, up to and including the 6-leaf
		stage of the crop.
CORDON or PUMA	0.29 L/ha	For use on spring wheat, durum wheat and
120 SUPER	(35 g a.i./ha) +	barley.
HERBICIDE +	15 g a.i./ha	Application can be made from the 2-leaf stage up
REFINE EXTRA or		to and including the 6-leaf stage of the crop. Use
REFINE SG		the spray preparation within 12 hours or product
		degradation may occur.

# RATE OF ASSERT 300 SC HERBICIDE FOR TANKMIXING WITH CORDON or PUMA 120 SUPER HERBICIDE:

All soil zones: tankmix 1.3 L ASSERT 300 SC Herbicide per hectare. Apply the tankmix combination at the rate of 100 litres spray per hectare.

# FOR USE IN THE OKANAGAN VALLEY AND CRESTON FLATS AREAS OF BRITISH COLUMBIA

CROP	PEST	RATE	DIRECTIONS:
Spring wheat and barley	Wild oats	1.3 L/ha	One application per year; post-emergent; ground application; apply when the majority of wild oat plants are in the 1-3 leaf stage; use 1.6 L/ha when the wild oats are in the 4 leaf stage.

# DIRECTIONS FOR USE IN SUNFLOWERS: (PRAIRIE PROVINCES ONLY)

ASSERT 300 SC Herbicide, a selective postemergence herbicide for use in sunflowers is absorbed through the foliage and roots of **wild mustard and stinkweed** plants. Susceptible plants stop growing soon after spray application. Obvious signs of plant death may not be seen in some plants until 2 weeks later but the competitive effect of these plants will have been removed. Death may not occur for several weeks.

#### WILD MUSTARD AND STINKWEED CONTROL

Apply ASSERT 300 SC Herbicide alone at the cotyledon to 6 leaf stage of growth of wild mustard or stinkweed.

#### **CROP**

ASSERT 300 SC Herbicide can be applied to sunflowers not under drought stress, from the 2 - 8 leaf stage of growth (sunflowers must be less than 38 cm high for regular varieties and less than 30 cm high for semi-dwarf varieties, and less than 10 cm for dwarf varieties).

Crop injury in the form of head deformation and stunting can occur from applications made after the 8 leaf stage.

#### **RATES**

ASSERT 300 SC Herbicide should be applied at 0.85 litres of product in 100 litres spray per hectare when the sunflowers are in the 2 - 8 leaf stage.

# DIRECTIONS FOR USE IN ANNUAL RYEGRASS GROWN FOR SEED:

ASSERT 300 SC Herbicide can be applied to annual ryegrass grown for seed, from the 4 to 6 leaf stage of the crop.

# **RATES**

ASSERT 300 SC Herbicide should be applied at 1.3 to 1.6 L/ha in 100 litres of spray solution per hectare. Only one application of ASSERT 300 SC Herbicide to annual ryegrass grown for seed is permitted per year.

Do not use the seed or hay for feed or forage.

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

The **DIRECTIONS FOR USE** for this product for the use(s) described below were developed by persons other than Nufarm Agriculture Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion Program. Nufarm Agriculture Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed below. Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Nufarm Agriculture Inc. harmless from any claims based on efficacy and/or phytotoxicity in connection with the use described below.

BORAGE (Borago officinalis), in all parts of Canada		
Crop Stage	Post-emergent at the 2- to 8-leaf stage of growth	
Weeds Controlled	Wild mustard, stinkweed	
Weed Stage	Post-emergent at the cotyledon to 6-leaf stage of growth	
Rate	0.85 L/ha plus spray water pH adjuster in 100 L/ha spray	
	solution (add 1 package of spray water pH adjuster per jug of	

	ASSERT 300 SC Herbicide – see mixing instructions above	
	for more information).	
Number of Applications	One per year	
Pre-harvest Interval	60 days	
Cautions	Temporary yellowing and stunting may occur with the	
	application of Assert 300 SC on borage. Caution must be	
	followed to reduce sprayer overlaps as excessive damage may	
	result.	
PERENNIAL RYEGRA	SS (Lolium perenne) grown for seed production, in all parts of	
Canada		
Crop Stage	4- to 6- leaves for the newly established stands; up to 1 <sup>st</sup> node	
	for established stands.	
Weeds Controlled	Refer to the list of weeds controlled section of this label.	
Rate	1.3 L/ha to 1.6 L /ha with pH adjuster (supplied sodium	
	bisulphate); 1 bag per jug of Assert in 100 litres of water.	
Number of Applications	1 per calendar year	
Cautions	Do not graze or cut for feed in year of treatment. Sufficient	
	data are not available to support this use.	

ASSERT 300 SC Herbicide - see mixing instructions above

# RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, please note that ASSERT 300 SC Herbicide is a Group 2 herbicide. Any weed population may contain plants naturally resistant to ASSERT 300 SC Herbicide and 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 ASSERT 300 SC 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 and to report suspected resistance, contact Nufarm Agriculture Inc. at 1-800-868-5444 or at www.nufarm.ca.

# **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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