[Carton Label]

GROUP 2 HERBICIDE

# NUFARM SPIKE® 75 HERBICIDE

# **75% Water Dispersible Granules**

### AGRICULTURAL

FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND THE PEACE RIVER REGION OF BRITISH COLUMBIA ON WHEAT (SPRING AND DURUM), BARLEY, SUMMER FALLOW, AND AS A PRESEEDING HERBICIDE ON FIELDS TO BE PLANTED TO WHEAT (SPRING AND DURUM) AND BARLEY, ONLY

ACTIVE INGREDIENT: Tribenuron-methyl ... 75%

WARNING: CONTAINS THE ALLERGENS MILK AND SULFITES

**CAUTION - EYE AND SKIN IRRITANT** 

READ THE LABEL AND ENCLOSED BOOKLET BEFORE USING

REGISTRATION NO.: 30376 PEST CONTROL PRODUCTS ACT

NET CONTENTS: (5 - Bulk) grams

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

SPIKE is a registered trademark of Nufarm Agriculture Inc.

#### PRECAUTIONS:

- KEEP OUT OF REACH OF CHILDREN.
- CAUTION: EYE AND SKIN IRRITANT
- DO NOT APPLY BY AIR.
- MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.
- AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
- DO NOT CONTAMINATE ANY BODY OF WATER
- WEAR SUITABLE CHEMICAL RESISTANT GLOVES AND GOGGLES OR FACE SHIELD DURING MIXING AND LOADING.
- MAY IRRITATE SKIN AND EYES. WHEN USING, DO NOT EAT, DRINK OR SMOKE.
- WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING. REMOVE CONTAMINATED CLOTHING IMMEDIATELY AFTER USE.

NOTE: If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at <a href="https://www.croplife.ca">www.croplife.ca</a>.

#### **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.

# **EMERGENCY TELEPHONE NUMBERS:**

For spills or transportation accidents, Chemtrec, 1-800-424-9300.

For health or environmental emergencies, Prosar, 1-877-325-1840.

For product and use information, Nufarm Agriculture Inc., 1-800-868-5444.

### STORAGE:

Store product in original container in a secure, dry area, away from fertilizer, seed, food or feed. Not for use or storage in or around the home. Keep container tightly closed.

# **DISPOSAL:**

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

3. 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.

GROUP 2 HERBICIDE

# NUFARM SPIKE® 75 HERBICIDE

# **75% Water Dispersible Granules**

#### AGRICULTURAL

FOR SALE FOR USE IN THE PRAIRIE PROVINCES AND THE PEACE RIVER REGION OF BRITISH COLUMBIA ON WHEAT (SPRING AND DURUM), BARLEY, SUMMER FALLOW, AND AS A PRESEEDING HERBICIDE ON FIELDS TO BE PLANTED TO WHEAT (SPRING AND DURUM) AND BARLEY, ONLY

ACTIVE INGREDIENT: Tribenuron-methyl ... 75%

WARNING: CONTAINS THE ALLERGENS MILK AND SULFITES

CAUTION – EYE AND SKIN IRRITANT

READ THE LABEL AND ENCLOSED BOOKLET BEFORE USING

REGISTRATION NO.: 30376 PEST CONTROL PRODUCTS ACT

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

SPIKE is a registered trademark of Nufarm Agriculture Inc.

#### PRECAUTIONS:

- KEEP OUT OF REACH OF CHILDREN.
- CAUTION: EYE AND SKIN IRRITANT
- DO NOT APPLY BY AIR.
- MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN.
- AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
- DO NOT CONTAMINATE ANY BODY OF WATER
- WEAR SUITABLE CHEMICAL RESISTANT GLOVES AND GOGGLES OR FACE SHIELD DURING MIXING AND LOADING.
- MAY IRRITATE SKIN AND EYES. WHEN USING, DO NOT EAT, DRINK OR SMOKE.
- WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING. REMOVE CONTAMINATED CLOTHING IMMEDIATELY AFTER USE.

NOTE: If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at www.croplife.ca.

#### **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.

# **EMERGENCY TELEPHONE NUMBERS:**

For spills or transportation accidents, Chemtrec, 1-800-424-9300. For health or environmental emergencies, Prosar, 1-877-325-1840.

For product and use information, Nufarm Agriculture Inc., 1-800-868-5444.

### **IMPORTANT INFORMATION - READ BEFORE USING**

Injury to or loss of desirable trees, shrubs, flowers, vegetables, fruits or other 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 crops.

#### DO NOT APPLY BY AIR.

Do not apply in high winds.

Carefully observe sprayer clean-up instructions, as spray tank residue may damage crops other than spring wheat, durum or barley. Thoroughly clean all traces of tank mix from application equipment immediately after use. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately). Wash away any spray mixture from the outside of spray tank, nozzle or spray rig.

A MINIMUM RECROPPING INTERVAL OF 2 MONTHS SHOULD BE LEFT BETWEEN THE APPLICATION OF THIS PRODUCT AND SEEDING OF THE NEXT CROP. After 2 months, the following crops can be seeded: canola, flax, lentils, alfalfa.

DO NOT APPLY **NUFARM SPIKE® 75 HERBICIDE** WITH A CARRIER OTHER THAN WATER OR ANY ADDITIVE OTHER THAN THOSE INDICATED ON THIS LABEL. Other carriers may accelerate breakdown of this product and reduce its effectiveness.

#### **DIRECTIONS FOR USE**

#### **GENERAL INFORMATION**

**NUFARM SPIKE 75 HERBICIDE** provides control of certain broad-leaved weeds in spring planted wheat (including durum) and barley.

Warm, moist growing conditions promote active weed growth and enhance the activity of **NUFARM SPIKE 75 HERBICIDE** by allowing maximum foliar uptake and contact activity. Weeds hardened off by environmental stress such as cold weather, drought stress or excessive heat may not be adequately controlled or suppressed, and regrowth may occur. **NUFARM SPIKE 75 HERBICIDE** may only be applied using ground spray equipment. For best results, ensure thorough spray coverage of target weeds.

**NUFARM SPIKE 75 HERBICIDE** rapidly stops growth of susceptible weeds. However, typical symptoms (discolouration) of dying weeds may not be noticeable for 1 to 3 weeks after application, depending on growing conditions and weed susceptibility. Degree of control and duration of effect depend on weed sensitivity, weed size, spray coverage and growing conditions. Activity of the herbicide mixture may be delayed by cold, dry conditions after application.

## FOR WEED CONTROL IN SPRING WHEAT (INCLUDING DURUM) AND BARLEY

# **NUFARM SPIKE 75 HERBICIDE + 2,4-D Ester Tank Mix**

Apply **NUFARM SPIKE 75 HERBICIDE** at 10 grams per hectare with 2,4-D Ester at 420 grams acid equivalent per hectare (0.6 L/ha 2,4-D ester LV-700).

#### WEEDS CONTROLLED

Annual sunflower
Ball mustard
Canada thistle (top growth control)
Cow cockle

Flixweed (fall rosettes and spring seedlings)

Hare's-ear mustard

Indian mustard

Kochia (2-10 leaf)

Lamb's-quarters

Narrow-leaved hawk's-beard (fall rosettes and spring seedlings)

Prickly lettuce

Redroot pigweed

Russian pigweed

Russian thistle

Shepherd's-purse (fall rosettes and spring seedlings)

Stinkweed (fall rosettes and spring seedlings)

Sweetclover

Thyme-leaved spurge

Tumble mustard

Wild mustard

Wild radish

Wormseed mustard

### **WEEDS SUPPRESSED**

Wild buckwheat\*\*

\*\* 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.

#### WHEN TO APPLY

Apply the tank mix from the full 3-leaf stage to just before the flag leaf (shot blade) stage of wheat (including durum) and barley, prior to head emergence. Do not apply after head has emerged.

For best results apply to young, emerged actively growing weeds that are less than 10 cm tall or across, and before the crop canopy closes. Weeds that emerge after treatment will not be controlled.

For wild buckwheat, apply to ACTIVELY GROWING wild buckwheat in the 1 to 3 leaf stage. Under dry conditions, suppression may be reduced. Plants larger than the 3 leaf stage may regrow after treatment. **NOTE**: If rain occurs soon after application control may be reduced. At least 4-6 hours of dry weather is needed to allow **NUFARM SPIKE 75 HERBICIDE** to be absorbed by weed foliage. Environmental conditions that slow the drying of the spray mixture on the foliage such as high relative humidity, cool air temperatures or cloud cover, may increase the time required.

## **NUFARM SPIKE 75 HERBICIDE + 2,4-D ESTER + ASSERT\* TANK MIX**

For control of WILD OATS and control or suppression of broadleaf weeds in spring (including durum) wheat and barley, apply the tank mix as follows:

TANK MIX PARTNER	RATE	
NUFARM SPIKE 75 HERBICIDE	10 g/ha	
ASSERT	1.3 to 1.6 L/ha	

2,4-D Ester LV-700	0.6 L/ha
,	·

Use the low rate of ASSERT when the majority of wild oats are in the 1 to 3-leaf stage and the higher rate if wild oats are in the 4-leaf stage. Apply when the crop is in the full 3-leaf stage.

# NUFARM SPIKE 75 Herbicide + 2,4-D ESTER + COUGAR\* 120 EC Herbicide TANK MIX:

For control of GREEN FOXTAIL (WILD MILLET) and control or suppression of broadleaf weeds in spring (including durum) wheat and barley, apply the tank mix as follows:

TANK MIX PARTNER	RATE	
NUFARM SPIKE 75 Herbicide	10 g/ha	
COUGAR 120 EC Herbicide	385 mL/ha	
2,4-D Ester LV-700	0.6 L/ha	

Apply this tank mix from the full 3-leaf stage to the 6-leaf + 3 tiller stage of wheat (including durum) and the full 3-leaf stage to the 5-leaf + 2 tiller stage of barley.

For green foxtail control, apply at the 1-6 leaf (up to emergence of the 3rd tiller) stage.

## NUFARM SPIKE 75 Herbicide + 2,4-D ESTER + CORDON® Herbicide TANK MIX:

For control of GREEN FOXTAIL (WILD MILLET) and control or suppression of broadleaf weeds in spring (including durum) wheat and barley, apply the tank mix as follows:

TANK MIX PARTNER	RATE	
NUFARM SPIKE 75 Herbicide	10 g/ha	
CORDON Herbicide	385 mL/ha	
2,4-D Ester LV-700	0.6 L/ha	

Apply this tank mix from the full 3-leaf stage to the 6-leaf + 3 tiller stage of wheat (including durum) and the full 3-leaf stage to the 5-leaf + 2 tiller stage of barley.

For green foxtail control, apply at the 1-6 leaf (up to emergence of the 3rd tiller) stage

# NUFARM SPIKE 75 HERBICIDE + 2,4-D ESTER + PUMA\*120 SUPER TANK MIX:

For control of GREEN FOXTAIL (WILD MILLET) and control or suppression of broadleaf weeds in spring (including durum) wheat and barley, apply the tank mix as follows:

TANK MIX PARTNER	RATE
NUFARM SPIKE 75 HERBICIDE	10 g/ha
PUMA 120 SUPER	385 mL/ha
2,4-D Ester LV-700	0.6 L/ha

Apply this tank mix from the full 3-leaf stage to the 6-leaf + 3 tiller stage of wheat (including durum) and the full 3-leaf stage to the 5-leaf + 2 tiller stage of barley.

For green foxtail control, apply at the 1-6 leaf (up to emergence of the 3rd tiller) stage.

# FOR WEED CONTROL IN SPRING WHEAT (EXCLUDING DURUM) AND SPRING BARLEY

## NUFARM SPIKE 75 HERBICIDE + 2,4-D ESTER + BANVEL\* Herbicide or BANVEL II Herbicide TANK MIX:

For control of sulfonylurea resistant KOCHIA and control or suppression of broadleaf weeds on the **NUFARM SPIKE 75 HERBICIDE** label in spring (excluding durum) wheat and barley, apply the tank mix as follows:

TANK MIX PARTNER	RATE
NUFARM SPIKE 75 HERBICIDE	10 g/ha
BANVEL or BANVEL II HERBICIDE	110 mL/ha
2,4-D Ester LV-700 (or acid equivalent)	0.6 L/ha (or 420 g/ha acid equivalent)

Apply the tank mix from the full 3-leaf stage to the 6-leaf + 3 tiller stage of wheat (excluding durum) and barley and to kochia plants that are 2.5 – 10 cm in height. Expect superior results when kochia is small.

# NUFARM SPIKE 75 HERBICIDE + LEXONE\* DF HERBICIDE (METRIBUZIN) + MCPA AMINE TANK MIX:

Apply **NUFARM SPIKE 75 HERBICIDE** at 10 grams per hectare tank mixed with LEXONE DF Herbicide at 134 grams per hectare and MCPA Amine 500 at 0.56 L/ha.

## **WEEDS CONTROLLED**

Canada thistle (top growth control)
Common chickweed (including sulfonylurea tolerant populations)
Hemp-nettle
Lamb's-quarters
Stinkweed
Volunteer canola
Wild mustard

#### WEEDS SUPPRESSED

Annual sow thistle\*\*

Wild buckwheat\*\*

\*\* 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.

## WHEN TO APPLY

Apply from the full 3-leaf stage to 5-leaf stage of spring wheat (excluding durum) and spring barley. Do not apply after heads have emerged. Do not use on the Klondike variety of barley. Crop must be planted 5 cm deep and not underseeded to forages.

For best results apply to young, emerged actively growing chickweed that is less than 10 cm tall or across and before the crop canopy closes. Weeds that emerge after treatment will not be controlled.

**NOTE**: If rain occurs soon after application control may be reduced. At least 4-6 hours of dry weather is needed to allow the tank mixture to be absorbed by weed foliage. Environmental conditions that slow the drying of the spray mixture on the foliage such as high relative humidity, cool air temperatures or cloud cover, may increase the time required.

Do not apply within 60 days of harvest. Do not graze or feed crop to livestock within 30 days of

application.

# FOR CONTROL OF FLIXWEED AND STINKWEED (FALL ROSETTES AND SPRING SEEDLINGS) IN SUMMERFALLOW

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

# NUFARM SPIKE 75 HERBICIDE + 2,4-D ESTER TANK MIX:

Apply **NUFARM SPIKE 75 HERBICIDE** at 10 g/ha with 2,4-D Ester at 420 g/ha (0.6 L 2,4-D Ester LV-700).

Apply the tank mix in the spring after emergence, up to the early flowering stage of the target weeds. Only weeds that have emerged at the time of application will be controlled.

# 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 **NUFARM SPIKE 75 HERBICIDE** can be seeded to spring wheat (including durum) or barley a minimum of 24 hours after application.

# Apply NUFARM SPIKE 75 HERBICIDE at 10 grams per hectare, tank mixed with one of the following companion herbicides and adjuvant (where required) in a total spray volume of 55-110 L/ha.

Companion	Application	Application	Weeds Controlled	Weeds
Herbicide	Rate	Stage		Suppressed **
GLYFOS*	1.25 L/ha	Up to 8 cm	Canada fleabane,	
			Common	
CHEMINOVA			ragweed, Narrow- leaved	
GLYPHOSATE*	1.25 L/ha		hawk's beard	
Roundup*	1.25 L/ha			
Transorb				
Roundup				
Weathermax*	0.83 L/ha			
	A distribution			
Roundup Dry	450 g ae/ha***			
T 1 1 * 600	4.0.1			
Touchdown* 600	1.0 L/ha			
Tavah davus iO	1 25 L/ba			
Touchdown iQ	1.25 L/ha	Lin to 15	Dandalian Dayyay	
		Up to 15	Dandelion, Downy	
		cm	brome, Flixweed	
			Giant foxtail, Green	
			foxtail, Hemp nettle,	

			Kochia, Lady's thumb, Lamb's-quarters, Persian darnel, Redroot pigweed, Russian thistle, Stinkweed, Volunteer barley, Volunteer canola (including glyphosate- tolerant varieties), Volunteer flax, Volunteer wheat, Wild mustard, Wild oats	
		Up to 3-leaf	Wild buckwheat, Cow cockle	
		Rosette		Canada thistle
GLYFOS, CHEMINOVA GLYPHOSATE, Roundup	0.75 L/ha 0.35% v/v	Any stage	Volunteer canola (including glyphosate tolerant varieties)	
Original or Roundup Transorb, plus Agral* 90 or		Seedlings and rosettes (nonflowering)		Narrow-leaved hawk's beard
LIBERATE		Up to 10cm	Kochia, Lamb's-quarters,	Redroot pigweed,
		Up to 8 cm	Green foxtail, Lady's thumb, Stinkweed, Volunteer barley, Volunteer wheat, Wild mustard, Wild oats (1-3-leaf) Wild buckwheat (1-3 leaf)	Russian thistle
GLYFOS, CHEMINOVA GLYPHOSATE, Roundup Original or Roundup Transorb, plus Agral 90 or LIBERATE	1.0 L/ha 0.35 % v/v	Rosettes (nonflowering)	Dandelion (top growth)	Canada thistle (top growth)

\*\*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.

\*\*\* Roundup Dry is expressed as rate of active per hectare, rather than rate of product per hectare.

Fields treated with **NUFARM SPIKE 75 HERBICIDE** + GLYFOS, CHEMINOVA GLYPHOSATE, Roundup or Touchdown can be seeded with spring wheat (including durum) or barley a minimum of 24 hours after application.

#### **MIXING INSTRUCTIONS:**

- 1. Add one-third of the necessary volume of water to the spray tank.
- 2. With the agitator running, add the required amount of NUFARM SPIKE 75 HERBICIDE.
- 3. When **NUFARM SPIKE 75 HERBICIDE** is in suspension, add the required amount of the appropriate tank mix partners.
- 4. Specific Tank Mix Instructions:

<u>NUFARM SPIKE 75 HERBICIDE + 2,4-D Ester</u>: once **NUFARM SPIKE 75 HERBICIDE** is completely in suspension, add the required amount of 2,4-D Ester while maintaining agitation. Do not add a surfactant.

NUFARM SPIKE 75 HERBICIDE + 2,4-D Ester + ASSERT Herbicide: once NUFARM SPIKE 75 HERBICIDE is completely in suspension, add the required amount of Spray Water pH Adjuster and agitate until dissolved. Add the required amount of ASSERT\* Herbicide while maintaining agitation. Add 2,4-D Ester. Addition of a surfactant is not required.

**NUFARM SPIKE 75 HERBICIDE** + 2,4-D Ester + BANVEL Herbicide or BANVEL II Herbicide: add 2,4-D Ester last. A surfactant is not required with this mixture.

**NUFARM SPIKE 75 HERBICIDE** + 2,4-D Ester + COUGAR 120 EC Herbicide: add the required amount of COUGAR 120 EC Herbicide last. A surfactant is not required with this mixture.

NUFARM SPIKE 75 HERBICIDE + 2,4-D Ester + CORDON Herbicide: add the required amount of CORDON Herbicide last. A surfactant is not required with this mixture.

**NUFARM SPIKE 75 HERBICIDE** + 2,4-D Ester + PUMA 120 SUPER Herbicide: add the required amount of PUMA\* 120 SUPER Herbicide last. A surfactant is not required with this mixture.

NUFARM SPIKE 75 HERBICIDE + GLYFOS, CHEMINOVA GLYPHOSATE, Roundup Original or Roundup Transorb or Roundup Dry or Roundup Weathermax or Touchdown iQ or Touchdown 600: Add the required amount of GLYFOS, CHEMINOVA GLYPHOSATE, Roundup Original or Roundup Transorb or Roundup Dry or Touchdown 600 while maintaining agitation. Once components are in suspension, if required, add AGRAL 90 or LIBERATE at 3.5 L per 1000 L of spray solution (0.35% v/v).

- 5. Add the rest of the water. If an antifoam agent is required, add this last.
- 6. Use a minimum spray volume of 55 L/ha.
- 7. For repeat tank loads, reduce the material remaining in the tank to 10% of the original volume or less before proceeding with step 1. If this is not possible, pre-slurry **NUFARM SPIKE 75 HERBICIDE** in a small amount (5-10 L) of water before adding to the tank.

Continuous agitation is required to keep **NUFARM SPIKE 75 HERBICIDE** in suspension. If the spray preparation is left standing without agitation, thoroughly agitate to resuspend the mixture before spraying. Use spray preparation within 24 hours or product degradation may occur.

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

## MINIMUM RECROPPING INTERVAL AND CROP ROTATION GUIDELINES:

A minimum recrop interval of 2 months should be left between the application of this product and seeding of the next crop. The following crops can be seeded two months after application of **NUFARM SPIKE 75 HERBICIDE** + 2,4-D Ester: canola, flax, lentils, and alfalfa. Do not plant any crop other than spring wheat or barley in the season when the **NUFARM SPIKE 75 HERBICIDE** + LEXONE DF Herbicide + MCPA tank mix is applied.

# **EQUIPMENT-SPRAY VOLUMES:**

Apply the spray mixture uniformly with properly calibrated ground equipment only. Ensure thorough coverage and a uniform spray pattern. Flat fan nozzles are recommended (minimum 55 litres spray volume per hectare). Use 50 mesh filter screens or larger (metal or nylon).

Continuous agitation is required to keep the spray materials in suspension. Apply uniformly and avoid overlapping. Shut off spray boom while starting, turning, slowing or stopping to prevent crop injury from over application. Reduce drift with high water volume, low pressure, coarse sprays and drop nozzles.

#### **SPRAYER CLEANUP:**

It is difficult to remove all traces of 2,4-D Ester and MCPA Amine from a sprayer. A sprayer used to apply these herbicides should not be used to spray crops sensitive to these herbicides. The following clean-out procedure will remove traces of **NUFARM SPIKE 75 HERBICIDE**, LEXONE DF Herbicide, GLYFOS, CHEMINOVA GLYPHOSATE, Roundup formulations and Touchdown 600 from the sprayer.

- 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 can cause eye, nose, throat and lung irritation. Do not clean equipment in an enclosed area.

## **RESISTANCE-MANAGEMENT RECOMMENDATIONS:**

For resistance management, **NUFARM SPIKE 75 HERBICIDE** is a Group 2 herbicide. Any weed population may contain or develop plants naturally resistant to **NUFARM SPIKE 75 HERBICIDE** and other Group 2 herbicides. The resistance 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 **NUFARM SPIKE 75 HERBICIDE** or other Group 2 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from different group when such use is permitted
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Nufarm Agriculture Inc. at 1-800-868-5444 or at www.nufarm.ca.

# **USE PRECAUTIONS:**

Licensed wheat and barley varieties have shown acceptable tolerance to **NUFARM SPIKE 75 HERBICIDE**. Consult **NUFARM AGRICULTURE INC.** prior to use on unlicensed varieties for crop tolerance information. Do not apply to irrigated land where tail water will be used to irrigate other crop land.

Do not contaminate irrigation water.

Use a maximum of 10 grams of **NUFARM SPIKE 75 HERBICIDE** per hectare per year.

Do not use on highly variable soils that have large gravelly or sandy areas, eroded knolls or calcium deposits.

**NUFARM SPIKE 75 HERBICIDE** applied to spring wheat, durum wheat or barley that is stressed by severe conditions such as drought, low fertility, saline soils, waterlogged soils (soils at or near field capacity), disease or insect damage may result in crop injury. Drought, disease or insect damage following application may also result in crop injury, grade or yield loss.

Do not apply to spring wheat, durum wheat or barley 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.

Under certain conditions such as prolonged cool weather temperature or wide fluctuations in day/night temperatures just prior to or soon after treatment, temporary yellowing and/or crop stunting may occur.

OVERSPRAY OR DRIFT TO IMPORTANT WILDLIFE HABITATS SUCH AS SHELTERBELTS, WETLANDS, SLOUGHS OR DRY SLOUGH BORDERS, OR WOODLOTS, SHOULD BE AVOIDED. LEAVE A 15 METER BUFFER ZONE BETWEEN THE LAST SPRAY SWATH AND THE EDGE OF ANY OF THESE HABITATS.

Control of weeds growing in wheel tracks may be reduced if **NUFARM SPIKE 75 HERBICIDE** is applied under dry, dusty conditions.

#### **STORAGE:**

Store products in original containers only, away from fertilizer, seeds, 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 requirements.
- 3. 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.

\* Products are trademarks of their respective companies.