

84930-22

10-27-2010

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**U.S. ENVIRONMENTAL PROTECTION AGENCY**  
**Office of Pesticide Programs**  
**Registration Division (7505P)**  
**Ariel Rios Building**  
**1200 Pennsylvania Ave., NW**  
**Washington, D.C. 20460**

EPA Reg. Number:

84930-22

Date of Issuance:

OCT 27 2010

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
 (under FIFRA, as amended)

Term of Issuance: Unconditional

Name of Pesticide Product:

ARC SU TFS 75 Herbicide

**Name and Address of Registrant (include ZIP Code):**

Arcana LLC c/o Lighthouse Product Services  
 P.O. Box 26 3937 Cedarwood Lane  
 Timnath, CO 80547 Johnstown, CO 80534

~~Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.~~

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA provided that you:

1. Submit and/or cite all data required for registration review/reregistration of your product when the Agency requires all registrants of similar products to submit data.
2. Make the following label changes:
  - a. Change the EPA Reg. No. to "84930-22".
  - b. Under HAZARDS TO HUMANS AND DOMESTIC ANIMALS, remove the statement "Wear appropriate protective eyewear, such as safety glasses."
  - c. Under PERSONAL PROTECTIVE EQUIPMENT for applicators and other handlers and AGRICULTURAL USE REQUIREMENTS for early entry, add the PPE "Protective eyewear".
  - d. Change the USER SAFETY REQUIREMENTS phrase to "If no such instructions for washables exist".
  - e. It is suggested that the FIRST AID section be placed within a box for prominence.

Continued on Page 2

Signature of Approving Official:

Jim Tompkins  
 Product Manager 25  
 Herbicide Branch  
 Registration Division (7505P)

Date:

OCT 27 2010

- f. Change the ENVIRONMENTAL HAZARDS phrase to “equipment washwaters or rinsate”.
- g. On page 3, change the statement to “This product **must** be used only in accordance with instructions on this label.”
- h. On page 6 under CEREALS, change the heading from “GENERAL INFORMATION” to “**PRODUCT INFORMATION**”.
- i. On page 11 under SOYBEANS, change the direction to “Use this product at up to 1/3 ounce per acre ~~is recommended for use~~ on soybeans designated as “STS”.”
- j. On page 20, change the heading to “**AFTER SPRAYING THIS PRODUCT AND BEFORE SPRAYING CROPS OTHER THAN WHEAT, BARLEY, OAT, TRITICALE, FIELD CORN AND SOYBEANS**”.
- k. On page 20 under Notes, remove “71368-74” from the fifth note.
- l. On page 21 under SPRAY DRIFT MANAGEMENT, remove the phrase “(>150-200 microns)” as it is an improper description of large droplet size according to the ASABE S572.1 standard.
- m. On page 22, change the heading from “PRECAUTIONS” to “**RESTRICTIONS AND PRECAUTIONS**”.
- n. On page 23, change the PESTICIDE DISPOSAL phrase to “**must** be disposed”.
- o. Change the CONTAINER DISPOSAL section to reflect 8 oz, 1 lb, and 5 lb plastic container sizes as indicated on the application form to read as follows. Remove all other container disposal instructions.

**“CONTAINER DISPOSAL: For Plastic Containers:** Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn unless allowed by state and local ordinances.”

- p. Make the following changes to the WARRANTY AND LIABILITY section:
  - i. “The Directions for Use of this product **must** be followed carefully.”
  - ii. “**To the extent consistent with applicable law**, all such risks shall be assumed by Buyer and User...for any claims relating to such factors.”

- iii. **"TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARCANA LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS..."**
- iv. **"TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER...THE REPLACEMENT OF THE PRODUCT."**

The basic confidential statement of formula (CSF) dated August 17, 2010 is acceptable.

A stamped copy of the label is enclosed for your records. Submit one (1) copy of the revised final printed label before you release the product for shipment. Products shipped after eighteen (18) months from the date of this notice or the next printing of the label, whichever occurs first, must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA §6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Enclosure

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# ARC-SU TFS 75

## Herbicide

**DRY FLOWABLE**  
**FOR USE ON WHEAT, BARLEY, OAT, TRITICALE, FALLOW, CORN,**  
**SOYBEANS AND AS A PRE-PLANT OR POST-HARVEST HERBICIDE**

**ACTIVE INGREDIENT:** Thifensulfuron-methyl; Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate..... 75%  
**OTHER INGREDIENTS:** .....25%  
**TOTAL:** ..... 100%

**KEEP OUT OF REACH OF CHILDREN**  
**WARNING - AVISO**  
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)  
**SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS**

**For Chemical Emergency; Spill, Leak, Fire, Exposure, or Accident**  
**Call CHEMTREC Day or Night**  
**Within USA and Canada: 1-800-424-9300**  
**Outside USA and Canada: +1 703-527-3887 (collect calls accepted)**

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm Pacific Time (NPIC Web site: [www.npic.orst.edu](http://www.npic.orst.edu)). Outside of these times call your poison control center at 1-800-222-1222.

EPA Reg. No. 84930-XXXXX

EPA EST NO.:

NET CONTENTS: \_\_\_\_\_ LBS.

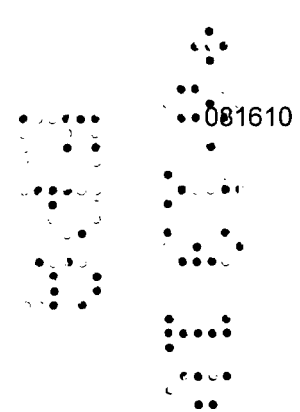
Manufactured for:  
ARCANA LLC  
P.O. Box 26  
Timnath, CO 80547

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

OCT 27 2010

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.

84930-22



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**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
WARNING - AVISO**

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear appropriate protective eyewear, such as safety glasses.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants.
- Socks.
- Chemical-resistant footwear.
- Chemical-resistant gloves, Category A, (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber) all  $\geq 14$  mils.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

**Users Should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. If pesticide gets on skin, wash immediately with soap and water.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**FIRST AID**

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposing of equipment washwaters.

**PESTICIDE HANDLING**

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Assure accurate measurement of pesticides by all operation employees.
- Mix only enough product for the job at hand.
- Avoid over-filling of spray tank.
- Do not discharge excess material on the soil at a single spot in the field/grove or mixing/loading station.
- Dilute and agitate excess solution and apply at labeled rates/uses.
- Avoid storage of pesticides near well sites.
- When triple rinsing the pesticide container, be sure to add the rinsate to the spray mix.

**PRODUCT INFORMATION**

This product is for selective post-emergence control of certain broadleaf weeds in wheat (including durum), barley, oat, triticale, postharvest burndown, pre-plant burndown, fallow, corn and soybeans. This product is a dry flowable granule to be mixed in water or other recommended carrier and applied as a uniform broadcast spray. It is noncorrosive, nonflammable, nonvolatile and does not freeze.

**BIOLOGICAL ACTIVITY AND ENVIRONMENTAL CONDITIONS**

Best results are obtained when this product is applied to young, actively growing weeds. The use rate will depend on weed spectrum and size of weed at time of application. The degree of control and duration of effect are dependent on rate used, sensitivity and size of target weed and environmental conditions at the time of and following application.

This product stops growth of susceptible weeds rapidly. However, typical symptoms of dying weeds (discoloration) may not be noticeable for 1 to 3 weeks after application (2 to 5 weeks for wild garlic)

depending on the environmental conditions and weed susceptibility. Warm, moist conditions following treatment promote the activity of this product, while cold, dry conditions delay the activity. Weeds hardened-off by cold weather or drought stress will be less susceptible.

A vigorous growing crop will aid weed control by shading and providing competition for weeds. However, a dense crop canopy at time of application can intercept spray and result in reduced weed control. Weeds may not be adequately controlled in areas of thin crop stand or seeding skips.

Applications made to weeds that are in the cotyledon stage, larger than the size indicated, or to weeds under stress may result in unsatisfactory control.

This product may injure crops that are stressed from adverse environmental conditions (such as extreme temperatures or moisture), abnormal soil conditions, or cultural practices. In addition, different varieties of the crop may have differing levels of sensitivity to treatment with this product under otherwise normal conditions. Treatment of sensitive crop varieties may injure crops.

Weed control may be reduced if rainfall or snowfall occurs soon after application. Several hours of dry weather are needed to allow this product to be sufficiently absorbed by weed foliage.

To reduce the potential of crop injury in cereals, tank mix this product with 2,4-D (ester formulations perform best – see the TANK MIXTURES section of this label) and apply after the crop is in the tillering stage of growth.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls.
- Chemical-resistant gloves, category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all ≥14 mils.
- Shoes plus socks.

Do not apply this product through any type of irrigation system.

This product should be used only in accordance with instructions on this label.

Arcana LLC will not be responsible for losses or damages resulting from the use of this product in any manner not specifically instructed by Arcana LLC.

This product is for use on wheat, barley, oat, triticale, fallow, corn, soybeans and as a pre-plant and/or post-harvest burndown herbicide in most states. Check with your state extension service or Department of Agriculture before use, to be certain this product is registered in your state.

**CEREALS, FALLOW AND PRE-PLANT BURNDOWN**

**WEEDS CONTROLLED**

Annual knawel  
Annual

sowthistle Black  
mustard

Bushy wallflower/Treacle  
mustard Carolina geranium

Coast fiddleneck  
Common buckwheat  
Common chickweed\*  
Common groundsel  
Common lambsquarters  
Corn chamomile  
Corn spurry  
Cress (mouse-ear)  
Curly dock  
False chamomile  
Field pennycress

Flixweed  
Green smartweed  
Kochia<sup>†</sup>  
Ladysthumb  
London rocket  
Mallow (little)  
Marshelder  
Miners lettuce  
Mouse-ear chickweed  
Pennsylvania smartweed  
Prostrate knotweed  
Redmaids  
Redroot pigweed  
Russian thistle<sup>†\*</sup>  
Scentless

chamomile/mayweed  
Shepherdspurse  
Smallflower buttercup  
Stinking mayweed/dogfennel  
Swinecress  
Tarweed fiddleneck  
Tumble/Jim Hill mustard  
Volunteer lentils  
Volunteer peas  
Volunteer sunflower\*  
Wild buckwheat\*  
Wild chamomile  
Wild garlic\*  
Wild mustard

**PARTIAL CONTROL\*\***

Common cocklebur  
Common sunflower  
Cutleaf evening primrose  
Henbit  
Mallow (common)  
Prickly lettuce\*  
Tansymustard\*  
Wild radish\*

\* See SPECIFIC WEED PROBLEMS in the Cereals section below for more information.

\*\*Partial control: A visual reduction of weed population as well as a significant loss of vigor for individual weed plants. For better results, use 0.5 or 0.6 ounce of this product per acre and include a tank mix partner such as 2,4-D, MCP, bromoxynil (such as Buctril, Bison, Bronate or Bronate Advanced), or dicamba (such as Diablo/Clarity), refer to the TANK MIXTURES section of this label.

†Naturally occurring resistant biotypes of kochia, prickly lettuce and Russian thistle are known to occur. See the TANK MIXTURES and SPECIFIC WEED PROBLEMS sections of this label for additional details.

**FALLOW**

**APPLICATION TIMING**

Apply this product in the spring, summer or fall when the majority of weeds have emerged and are actively growing. (See the CROP ROTATION section of this label for additional information).

**USE RATES**

This product may be used as a fallow treatment for burndown of emerged weeds, in combination with other suitable registered fallow herbicides (See the TANK MIXTURES section of this label for additional information). Apply this product at 0.3 to 0.6 ounce per acre to fallow for control or partial control of the weeds listed below. Sequential treatments of this product may be made provided the total amount of this product applied does not exceed 1.0 ounce per acre.

**TANK MIXTURES IN FALLOW**

This product, when used as a fallow treatment, should be tank mixed with other herbicides that are registered for use in fallow, including glyphosate (such as Credit®), Landmaster II, Fallow Master, RT Master, glyphosate plus 2,4-D (ester formulations work best), glyphosate plus dicamba (such as Diablo/Clarity), 2,4-D (ester formulations work best), or dicamba (such as Diablo/Clarity) alone.

**PRE-PLANT BURNDOWN**

**APPLICATION TIMING**

For burndown of emerged weeds, broadcast applications of this product may be applied before wheat (including durum), barley, oat, triticale, soybeans and field corn plants emerge. Before planting any other crop (such as sugarbeets, canola, rice, or grain sorghum) apply this product as a burndown treatment at least 45 days prior to planting. (See the CROP ROTATION section of this label for additional information.)

Apply this product as burndown treatment in cotton when a majority of weeds have emerged. Allow at least 7 days after application before planting cotton. Allow at least 5 months between application of this product and cotton harvest.

**USE RATES**

This product may be used as a burndown treatment prior to planting any crop; or shortly after planting, but prior to emergence of, wheat (including durum), barley, oat, triticale, soybeans and field corn (See the APPLICATION TIMING section of this label for restriction on planting intervals).

Apply this product at 0.3 to 0.6 ounce per acre for control or partial control of the weeds listed below, except when planting to cotton where this product can be applied at 0.2 to 0.33 ounce per acre. Use the 0.6 ounce per acre rate when weed infestation is heavy and predominantly consists of those weeds listed under the WEEDS PARTIALLY CONTROLLED section of this label, or when application timing and environmental conditions are marginal. Sequential treatments may also be made provided the total amount of this product applied during one season does not exceed 1.0 ounce per acre.

This product should be applied in combination with other suitable registered pre-plant burndown herbicides (See the TANK MIXTURES section of this label for additional information).

**TANK MIXTURES IN PRE-PLANT BURNDOWN APPLICATIONS**

This product may be used as a pre-plant burndown treatment alone or tank mixed with other herbicides that are registered for use as a pre-plant burndown product, including glyphosate (such as Credit®), Landmaster II, Fallow Master, RT Master, glyphosate plus dicamba (such as Diablo/Clarity) or dicamba (such as Diablo/Clarity) alone.

**PRE-PLANT BURNDOWN IN COTTON**

This product may be applied for burndown of emerged weeds prior to the emergence of cotton.



This product may be used as part of a pre-plant burndown treatment, in combination with other suitable registered pre-plant herbicides.

Read and follow all manufacturers' label instructions for the companion herbicide. If those instructions conflict with this label, do not tank mix the herbicide with this product.

Apply this product at 0.2 to 0.33 ounce per acre for control or partial control of the weeds listed on the EPA registered label. Allow at least 7 days between application of this product and planting of cotton. Include a nonionic surfactant, petroleum-based crop oil concentrate, or vegetable-seed oil-based product (methylated seed oils are considered a vegetable seed-based oil).

If another herbicide is tank mixed with this product to increase the broadleaf weed spectrum, select adjuvants based on the adjuvant limitations of the companion herbicide.

### **SPRAY ADJUVANTS**

#### **Nonionic Surfactant (NIS)**

Apply at a rate (concentration) of 0.25 to 0.5% v/v (1 to 2 quarts per 100 gallons of spray solution). Use the higher rate in hot and dry conditions to enhance control.

#### **Crop Oil Concentrate**

Under dry conditions or during cool weather, a petroleum-based crop oil concentrate, or vegetable-seed oil-based product may be used in place of a nonionic surfactant at 1 to 2 gallons per 100 gallons of spray solution (1 to 2% v/v) to enhance weed control. Use a petroleum-based crop oil concentrate with at least 14% emulsifiers/surfactant and 80% oil.

#### **Ammonium Nitrogen Fertilizer**

An ammonium nitrogen fertilizer can be added to a surfactant or a crop oil concentrate to enhance control. Alternatively, a high-quality, sprayable grade of ammonium sulfate (21-0-0) may be used.

### **IMPORTANT PRECAUTIONS**

Seedling disease, nematodes, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, and/or drought may weaken cotton seedlings and increase the possibility of crop injury. Cotton resumes normal growth once favorable growing conditions return.

### **RESTRICTION**

DO NOT apply later than 7 days before planting cotton. Allow at least 5 months between application of this product and cotton harvest.

## **CEREALS**

### **APPLICATION TIMING**

#### ***Wheat (Including Durum), Barley, Triticale and Winter Oat***

Make applications after the crop is in the 2-leaf stage, but before the flag leaf is visible.

#### ***Spring Oat***

Make applications after the crop is in the 3-leaf stage, but before jointing. Do not use on Ogle, Porter or Premier Varieties since crop injury can occur.

### **USE RATES**

In cereals, do not use less than 0.3 ounce this product per acre.

If the predominant weed(s) in the field is (are) one of those listed in WEEDS PARTIALLY CONTROLLED table below, always include a tank mix partner (refer to TANK MIXTURES).

#### ***Wheat, Barley and Triticale***

Apply 0.5 ounce of this product per acre to wheat (including durum), barley or triticale for control or partial control of the weeds listed below.

Use 0.6 ounce of this product per acre when weed infestation is heavy and predominately consists of those weeds listed under partial control, or when application timing and environmental conditions are marginal (refer to the APPLICATION TIMING and GENERAL INFORMATION sections of this label).

Use 0.3 ounce of this product per acre when weed infestation is light and predominately consists of those

weeds listed under weeds controlled, and when optimum application conditions occur.

Sequential treatments of this product may be made, provided the total amount of this product applied to the crop does not exceed 1.0 ounce per acre.

**Oat (Spring and Winter)**

Apply 0.3 to 0.4 ounce of this product per acre for control of the weeds listed in WEEDS CONTROLLED table.

If the predominant weed(s) in the field is(are) one of those listed in the WEEDS PARTIALLY CONTROLLED table below, always include a tank mix partner (refer to TANK MIXTURES).

Do not make more than one application of this product per crop season on oat.

**SPECIFIC WEED PROBLEMS**

Common chickweed and wild buckwheat: For best results, apply a minimum of 0.5 ounce this product per acre plus surfactant when all or the majority of weeds have germinated and are past the cotyledon stage. Weeds should be less than 3 inches tall or across at the time of product application.

**Kochia:** Naturally occurring biotypes resistant to this product are known to occur. For best results, use in a tank mix with Starane, Starane + Salvo, Starane + Sword, dicamba (such as Diablo/Clarity) and 2,4-D or MCP (ester or amine), or bromoxynil-containing products (such as Buctril, Bison, Bronate, Bronate Advanced or Widematch).

This product should be applied in the spring when kochia are less than 2" tall and are actively growing (refer to the TANK MIXTURES section of this label for additional details on rates and restrictions).

**Tansymustard:** For best results, use 0.5 to 0.6 ounce of this product per acre plus 2,4-D or MCPA. Refer to the TANK MIXTURES section of this label for more information.

**Russian thistle, Prickly lettuce:** Naturally occurring biotypes of these weeds resistant to this product are known to occur. For best results, use this product in a tank mix with dicamba (such as Diablo/Clarity) and 2,4-D or MCP (ester or amine), or bromoxynil-containing product (such as Buctril, Bison, Bronate, Bronate Advanced or Rhino) and 2,4-D (3/4 to 1 pint Buctril + 1/4 to 3/8 lb active 2,4-D ester).

This product should be applied in the spring when Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing (refer to the TANK MIXTURES section of this label for additional details on rates and restrictions).

**Wild garlic:** For best results, apply 0.5 to 0.6 ounce of this product per acre plus surfactant when wild garlic plants are less than 12 inches tall with 2 to 4 inches of new growth. For severe infestations, use the 0.6 ounce per acre rate of this product. Control may be reduced when plants are hardened-off by cold weather and/or drought stress. Control is enhanced when applications are made during warm temperatures to actively growing wild garlic plants. Typical symptoms of dying wild garlic plants (discoloration and collapse) may not be noticeable for 2 to 5 weeks.

Thorough coverage of all garlic plants is essential.

Tank mixes of this product plus metribuzin may result in reduced control of wild garlic.

**Wild radish:** For best results, apply 0.5 to 0.6 ounce of this product per acre plus surfactant either in the fall or spring to wild radish rosettes less than 6 inches in diameter. Applications made later than 30 days after weed emergence will result in partial control. Fall applications should be made prior to hardening-off of plants.

**SU / IMITolerant Volunteer Sunflowers:** Control may not be adequate because varieties resistant to SU and IMI products (like Dupont Express, Beyond, Pursuit, Raptor) are under development. For best results, use this product in a tank mix with Starane, Starane + Salvo, Starane + Sword, dicamba (such as Diablo/Clarity) and 2,4-D or MCP (ester or amine), or bromoxynil-containing products (such as Buctril, Bison, Bronate or Bronate Advanced).

**TANK MIXTURES**

Read and follow all manufacturers' label instructions for any companion herbicides, fungicides, and/or insecticides. If those instructions conflict with this label, do not tank mix that product with this product. Read and follow all label instructions on timing, precautions, and warnings for any companion products before using these tank mixtures. Follow the most restrictive labeling.

***With 2,4-D (amine or ester) or MCPA (amine or ester)***

This product may be tank mixed with the amine and ester formulations 2,4-D and MCPA herbicides for use on wheat, barley, oat, triticale or fallow.

For best results in the Red River Valley and adjacent areas of North Dakota and Minnesota, add the ester formulations of 2,4-D or MCPA herbicides to the tank at 3/8 pound active ingredient (such as 3/4 pint of a 4 lb/gal product, 1/2 pint of a 6 lb/gal product). No additional surfactant is needed with this mixture.

For best results, in other areas, add the ester formulations of 2,4-D or MCP herbicides to the tank at 1/4 to 3/8 lb active ingredient (such as 1/2 to 3/4 pint of a 4 lb/gal product, 1/3 to 1/2 pint of a 6 lb/gal product). Nonionic surfactant may be added to the mixture at 1/2 to 1 quart per 100 gallons of spray solution (0.125 to 0.25% v/v); however, adding nonionic surfactant may increase the potential for crop injury, especially at the higher phenoxy rates. Higher rates of 2,4-D or MCP may be used, but do not exceed the highest rate allowed by those respective labels.

***With dicamba (such as Diablo/Clarity)***

This product may be tank mixed with 1/16 to 1/8 pound active ingredient dicamba (such as 2 to 4 fluid ounces Diablo or 2 to 4 fluid ounces Clarity). Use higher rates when weed infestation is heavy. Nonionic surfactant may be added to the mixture at 1/2 to 1 quart per 100 gallons of spray solution (0.125 to 0.25% v/v); however, adding nonionic surfactant may increase the potential for crop injury. Refer to the specific dicamba label for application timing and restrictions. Tank mixes of this product plus dicamba may result in reduced control of some broadleaf weeds.

***With 2,4-D (amine or ester) and Diablo/Clarity***

This product may be applied in a 3-way tank mix with formulations of dicamba and 2,4-D or MCP. Make application of this product plus 1/16 to 1/8 pound active ingredient dicamba (such as 2 to 4 fluid ounces Diablo or 2 to 4 fluid ounces Clarity) plus 1/4 to 3/8 pound active ingredient 2,4-D or MCP ester or amine per acre. Use higher rates when weed infestation is heavy. Nonionic surfactant may be added to the mixture at 1/2 to 1 quart per 100 gallons of spray solution (0.125 to 0.25% v/v); however, adding nonionic surfactant may increase the potential for crop injury. Apply this three-way combination to winter wheat and winter oat after the crop is tillering and prior to jointing (first node).

In spring wheat (including durum) and spring oat, apply after the crop is tillering and before it exceeds the 5-leaf stage. In spring barley, apply after the crop is tillering and before it exceeds the 4-leaf stage.

***With Bromoxynil-containing products (such as Buctril, Bison, Bronate, Bronate Advanced or Rhino).***

This product may be tank mixed with bromoxynil-containing herbicides registered for use on wheat, barley or triticale. For best results, add bromoxynil-containing herbicides to the tank at 3/16 to 3/8 pound active ingredient per acre (such as Bronate or Bison at 3/4 to 1-1/2 pints per acre). Note that tank mixes of this product plus bromoxynil may result in reduced control of Canada thistle.

***With Starane, Starane + Salvo, Starane + Sword***

For improved control of Kochia (2 to 4" tall) this product may be tank mixed with 1/3 to 1-1/3 pints per acre of Starane, 2/3 to 2-2/3 pints per acre of Starane + Salvo, 3/4 to 2-3/4 pints per acre of Starane + Sword. 2,4-D and MCP herbicides (preferably ester formulations) may be tank mixed with this product plus Starane. Consult local practices and the TANK MIXTURES section of this label for additional information.

***With Maverick***

This product can be tank mixed with Maverick herbicide for improved control of weeds in wheat. Refer to the Maverick label for information regarding use restrictions, labeled crops, rotational cropping instructions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the Maverick label conflict with the instructions on the Arcana LLC label.

***With Aim***

This product can be tank mixed with Aim herbicide for improved control of weeds in wheat and barley. Refer to the Aim label for information regarding use restrictions, labeled crops, rotational cropping instructions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will

apply. Do not use the tank mix if any restrictions on the Aim label conflict with the instructions on the Arcana LLC label.

**With Stinger or Cutback or Cutback M or Widematch**

This product can be tank mixed with Stinger or Cutback or Cutback M or WideMatch herbicide for improved control of weeds in wheat and barley. Refer to the Stinger or Cutback or Cutback M or WideMatch labels for information regarding use restrictions, labeled crops, rotational cropping instructions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the Stinger or Cutback or Cutback M or WideMatch labels conflict with the instructions on the Arcana LLC herbicide label.

**With Express or Express XP Herbicide**

This product may be tank mixed with Express or Express XP based on local practices.

**With Ally or Ally XP Herbicide**

This product may be tank mixed with Ally or Ally XP based on local practices.

**With Assert Herbicide or Avenge Herbicide**

This product can be tank mixed with Avenge or Assert. When tank mixing this product with Assert, always include another broadleaf weed herbicide with a different mode of action [for example 2,4-D ester, MCP ester, or bromoxynil (such as Buctril, Bison, Bronate or Bronate Advanced)]. Applications of this product plus Assert may cause temporary crop discoloration, stunting, or injury when heavy rainfall occurs shortly after application.

**With Discover NG**

This product can be tank mixed with Discover NG herbicide for improved control of weeds in spring wheat. Refer to the Discover NG label for information regarding use restrictions, labeled crops, rotational cropping instructions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the Discover NG label conflict with the instructions on this label.

**With Everest**

This product can be tank mixed with Everest herbicide for improved control of weeds in spring wheat. Refer to the Everest label for information regarding use restrictions, labeled crops, rotational cropping instructions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the Everest label conflict with the instructions on the Arcana LLC herbicide label.

**With Hoelon**

A tank mix of Hoelon 3EC herbicide + this product can be applied for annual ryegrass (in the Pacific Northwest only), wild oat and broadleaf weed control in winter and spring wheat, and spring barley. The Hoelon 3EC herbicide rate should be 2-2/3 pints per acre with up to 1/2 ounce per acre of this product in spring and winter wheat.

A three-way tank mix of Hoelon 3EC herbicide + Buctril herbicide + this product can be applied for annual ryegrass (in the Pacific Northwest only), wild oat and broadleaf weed control in winter and spring wheat, and spring barley. The Hoelon 3EC herbicide rate should be 2- 2/3 pints per acre with up to 0.5 ounce per acre of this product in winter wheat (up to 0.4 ounce per acre in spring wheat and spring barley). Buctril herbicide should be used at 1 pint per acre.

This tank mixture should only be used under good soil moisture conditions when wild oats are in the 1 to 4-leaf stage. Reduced control of foxtail is likely when tank mixing Hoelon with this product. When foxtail is the major grassy weed in the field, DO NOT tank mix Hoelon 3EC herbicide + this product. Use sequential treatments. Be sure to follow all use directions, warnings and cautions on the EPA approved Hoelon 3EC and Buctril labels.

**With Achieve**

This product can be tank mixed with Achieve for wild oat control. This tank mix may also include 2,4-D ester, MCPA ester, bromoxynil or bromoxynil/MCPA for greater spectrum of broadleaf control. See Achieve label for specific use directions and restrictions on tank mixes.

To minimize the reduction in wild oat control, use the higher rates of Achieve when using rates of this

product greater than 0.3 ounce per acre.

Note: Green foxtail, yellow foxtail, Persian darnel and other grass weeds will not be controlled by this tank mix.

Read and follow all label instructions on tank mixes, application timing, precautions, and warnings on the Achieve label.

**WITH ACHIEVE AND STARANE HERBICIDES FOR WILD OAT CONTROL IN WHEAT AND BARLEY**

This product can be tank mixed with Achieve 40 DG and Starane herbicides for improved control of wild oat in wheat and barley.

**USE RATES**

For best results, when tank mixed with Achieve and Starane, do not use less than 0.5 ounce this product per acre.

Tank mix this product with 0.62 ounce per acre (0.24 pounds active ingredient per acre) Achieve 40 DG for wild oat control. This tank mix should also include 0.50 pint per acre of Starane for a greater spectrum of broadleaf weed control.

Note: Green foxtail, yellow foxtail, Persian darnel and other grass weeds will not be controlled by this tank mix.

**POSTEMERGENCE APPLICATIONS**

For postemergence applications, apply to young, actively growing weeds after crop emergence. Typically, small weeds (less than 1" in height or diameter) that are actively growing at application are most easily controlled.

Refer to the Achieve 40 DG, Starane, and this product's label for information regarding use restrictions, labeled crops, rotational cropping instructions, sprayer cleanup, use precautions and other information. The most restrictive provisions on any tank mix partner label will apply. Do not use the tank mix if any restrictions on the Achieve or Starane label conflict with instructions on this product's label.

***With Puma***

This product can be tank mixed with Puma 1 EC for control of some annual grass weeds. This tank mix may also include MCPA ester, bromoxynil or bromoxynil/MCPA for greater spectrum of broadleaf control. See Puma 1 EC label for specific use directions and restrictions on tank mixes.

Read and follow all label instructions on the EPA-approved Puma 1 EC label for tank mixes, application timing, precautions, and restrictions. If those instructions conflict with this label, do not tank mix the product with this herbicide.

***With Tiller***

This product can be tank mixed with Tiller for green foxtail, foxtail millets and volunteer corn control. Refer to the Tiller label for information regarding use restrictions, labeled crops, rotational cropping instructions, sprayer cleanup, use precautions and other information. The most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the Tiller label conflict with the instructions on the Arcana LLC herbicide label.

***With Other Grass Control Products***

This product can be tank mixed with grass control products. Antagonism generally does not occur. However, Arcana LLC recommends that you first consult your state experiment station, university, or extension agent, Agricultural dealer, or Arcana LLC representative as to the potential for antagonism before using the mixture. If no information is available, limit the initial use of this product and the grass product to a small area.

***With Fungicides***

This product may be tank mixed or used sequentially with fungicides registered for use on cereal grains.

***With Insecticides***

This product may be tank mixed or used sequentially with insecticides registered for use on cereal grains. However, under certain conditions (drought stress, cold weather, or if the crop is in the 2 to 4-leaf stage), tank mixes or sequential applications of this product with organophosphate insecticides (such as Lorsban) may produce temporary crop yellowing or, in severe cases, crop injury. The potential for crop injury is greatest when wide fluctuations in day/night temperatures occur just prior to or soon after application. Test

these mixtures in a small area before treating large areas.

Do not apply this product within 60 days of crop emergence where an organophosphate insecticide has been applied as an in-furrow treatment because crop injury may result.

Do not use this product plus Malathion because crop injury will result.

**With Liquid Nitrogen Solution Fertilizer**

Liquid nitrogen fertilizer solutions may be used as a carrier in place of water. Run a tank mix compatibility test before mixing this product in fertilizer solution.

This product must first be slurried with water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the product is added. Use of this mixture may result in temporary crop yellowing and stunting.

If using low rates of liquid nitrogen fertilizer in the spray solution (less than 50% of the spray solution volume), the addition of surfactant is necessary. Add surfactant at 1/2 pint to 1 quart per 100 gallons of spray solution (0.06 to 0.25% v/v) based on local practices.

When using high rates of liquid nitrogen fertilizer in the spray solution, adding surfactant increases the risk of crop injury. Consult your agricultural dealer, consultant, fieldsman, or Arcana LLC representative for specific instructions before adding an adjuvant to these tank mixtures.

If 2,4-D or MCPA is included with this product and the fertilizer mixture, ester formulations tend to be more compatible (see manufacturer's label). Additional surfactant may not be needed when using this product in tank mix with 2,4-D ester or MCP ester and liquid nitrogen fertilizer solutions. Consult your agricultural dealer, consultant, field advisor, or Arcana LLC representative for specific instructions before adding an adjuvant to these tank mixtures.

Note: In certain areas east of the Mississippi River unacceptable crop response may occur with use of straight or dilute nitrogen fertilizer carrier solutions where cold temperatures or widely fluctuating day/night temperatures exist. In these areas consult your agricultural dealer, consultant, field advisor, or Arcana LLC representative for specific instructions before using nitrogen fertilizer carrier solutions.

Liquid nitrogen fertilizer solutions that contain sulfur can increase crop response. Do not use low rates of liquid fertilizer as a substitute for a surfactant.

Do not use with liquid fertilizer solutions with a pH less than 3.0.

**SOYBEANS**

**APPLICATION TIMING (POST EMERGENCE)**

This product may be applied to soybeans any time after the first trifoliolate has expanded fully. Apply no later than 60 days before harvest. Early-season soybean injury may result from tank-mix applications with other registered herbicides. Injury may manifest itself as stunting (seen as a reduction in leaf size or internode length), yellowing leaves and/or red veins, and necrosis in the leaves and petioles. The potential for soybean injury is most pronounced with applications made during hot, humid conditions, under widely fluctuating weather or temperature conditions, or with applications to soybeans under stress.

**USE RATES IN SOYBEANS**

Make a single application of this product at a rate of 0.083 (1/12) ounce per acre for selective post-emergence broadleaf weed control on conventional soybean varieties.

This product at up to 1/3 ounce per acre is recommended for use on soybeans designated "STS". Severe injury or death of soybeans will result if any soybeans not designated as STS are treated with more than 1/12 ounce of this product. Multiple applications of this product may be applied to STS soybeans provided no more than a total of 1/3 ounce is applied per season.

**SPRAY ADDITIVES**

Applications of this product in soybeans must include a nonionic surfactant or crop oil concentrate, and an ammonium nitrogen fertilizer. See SPRAY ADJUVANTS.

**WEEDS CONTROLLED**

When applied to soybeans as directed, this product will control the following weeds:

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WEEDS CONTROLLED	MAXIMUM SIZE (INCHES) AT APPLICATION
Annual Smartweeds	6
Lambsquarters	4
Pigweed	12
Rough (red root)	8
Other species	
Velvetleaf	6
Wild Mustard	up to 4" in diameter

PARTIAL CONTROL*	MAXIMUM SIZE (INCHES) AT APPLICATION
Cocklebur	6
Jimsonweed	4
Wild Sunflower	6

\*Partial Control: A visual reduction of weed population as well as a significant loss of vigor for individual weed plants.

See WEEDS CONTROLLED in the CEREALS, FALLOW AND PRE-PLANT BURNDOWN section for a listing of weeds controlled using applications of 1/3 ounce of this product in STS soybeans.

**TANK MIXTURES IN SOYBEANS**

This product may be tank mixed with full or reduced rates of other products registered for use in soybeans. However, Arcana LLC will not warrant crop safety or weed control of this product's tank mixtures with any other pesticide or spray adjuvant except as specified in this label or other Arcana LLC supplemental labeling or technical bulletins.

Do not tank mix this product with organophosphate insecticides, or apply this product within 14 days before or after an application of an organophosphate insecticide, as severe crop injury may occur.

**With Post-emergence Grass Herbicides**

This product may be tank mixed with post-emergence grass herbicides such as ASSURE II herbicide. With post-emergence grass herbicides, surfactant rate (concentration) should be 1 to 2 pints per 100 gallons of spray solution (0.125% to 0.25% v/v concentration). Use of a higher rate of nonionic surfactant, particularly under hot, humid conditions, may result in temporary crop injury. Do not use crop oil concentrate when tank mixing this herbicide with post-emergence grass herbicides unless specified on other Arcana LLC supplemental labeling. Include a nonionic surfactant with the tank mix of this product and post-emergence grass herbicides such as ASSURE II herbicide.

**With Glyphosate**

This herbicide may be tank mixed with glyphosate for control of certain broadleaf weeds in Credit® or Roundup Ready X "STS stacked trait" soybeans. For tank mixtures of this product plus glyphosate herbicide, always read and follow all use directions, restrictions, and precautions on the EPA approved labels. When tank mixing, the most restrictive labeling applies.

**Adjuvants**

When tank mixing this product with glyphosate, it is recommended to add ammonium sulfate (AMS) at 4.25 to 17 pounds per 100 gallons of spray mixture. See the glyphosate manufacturer's label for specific ammonium nitrogen instructions. When velvetleaf is present, ammonium sulfate is required at a minimum rate of 2 pounds per acre.

The addition of surfactant at 0.125 to 0.25% v/v (1 to 2 pints per 100 gallons spray mixture) to this product plus glyphosate tank mixes will improve weed control when glyphosate products are used that do not contain built-in adjuvant systems. Glyphosate products differ in their adjuvant contents. Glyphosate products such as Glyphomax or Credit® allow for addition of surfactants. See the manufacturer's specific surfactant instructions.

**SEQUENTIAL APPLICATIONS IN SOYBEANS**

Before making applications of this product to soybeans previously treated with other herbicides, ensure that the soybeans are free from stress (herbicide or environmental) and actively growing.

**TANK MIX WITH PURSUIT DG HERBICIDE FOR POSTEMERGE BROADLEAF WEED CONTROL IN SOYBEANS FOR USE IN THE STATE OF NORTH DAKOTA**

This product is recommended for postemerge control of the broadleaf weeds listed below when applied to soybeans in a tank mix with PURSUIT DG Herbicide in the State of North Dakota.

This tank mix is labeled for the control of broadleaf weeds only. Do not apply this tank mix through any type of irrigation system.

**HOW TO USE**

A tank mix of 1/12 ounce per acre of this product plus 1.08 ounce per acre PURSUIT DG is recommended for postemerge control of the broadleaf weeds listed in the table below. Best results are obtained when this product plus PURSUIT DG tank mix is applied to weeds that are young (after the first true leaves have expanded, but before they exceed the size indicated in the table below) and actively growing. Applications made to weeds that are in the cotyledon stage, larger than the size indicated below, or to weeds under stress (weather, herbicide, or other) may result in unsatisfactory control.

**ADJUVANTS**

Postemergent applications of this product tank mixed with PURSUIT DG must include the addition of a nonionic surfactant and ammonium nitrogen fertilizer.

- A nonionic surfactant must be included at the rate of 1 pint per 100 gallons of solution (0.125% v/v concentration). Do not use DASH or SUNIT-II 2
- Use a high quality liquid nitrogen fertilizer such as 28-0-0 at a rate of 4 to 8 pints per acre, or 10-34-0 at a rate of 2 to 4 pints per acre. Use the lower rate for spray volumes less than 15 gallons per acre. Alternately, a high quality, sprayable grade of ammonium sulfate (21-0-0) may be used at a rate of 2 to 4 pounds per acre.

**Broadcast Application:** Use flat-fan nozzles at 25 to 60 psi. Do not use flood, hollow-cone, rain drop, whirl chamber or controlled droplet applicator (CDA) type nozzles as unacceptable crop injury, excessive spray drift, or poor weed control may result. Use 10 to 25 gallons of water per acre. For proper spray coverage, adjust the boom and nozzle height according to the specifications listed by the nozzle manufacturer.

**Band Application:** For band application, use proportionately less spray mixture. To avoid crop injury, carefully calibrate the band applicator not to exceed the labeled rate. Carefully follow the manufacturer's instructions for nozzle types (flat fan nozzles preferred), nozzle orientation, distance of nozzles from the crop and weeds, spray volumes, calibration, and spray pressure.

**Aerial Application:** Use nozzle types and arrangements that will provide for optimum spray distribution and maximum coverage at 5 to 10 GPA. Do not apply during a temperature inversion condition, when winds are gusty, or when other conditions will favor poor coverage and/or off target spray movement. Use a minimum of 5 gallons of water per acre. Consult the respective product labels for special directions for aerial application.

**ROTATIONAL CROP GUIDELINES**

Any crop may be planted 45 days after an application of this product. Refer to the PURSUIT DG labels for guidelines on planting rotational crops following its use. Follow the maximum time interval listed on the respective labels prior to planting a rotational crop. The most restrictive time interval shall apply.

**RESTRICTIONS AND LIMITATIONS (Partial List)**

Refer to the PURSUIT DG label for additional use directions, use restrictions, and precautions. The most restrictive provision on either label will apply.

Sequential applications of this product following postemerge PURSUIT DG treatments are not



recommended because:

- Crop injury from sequential postemerge applications of this product following PURSUIT DG is greater than from the use of either product applied alone. The first application interferes with the soybean plant's ability to metabolize the second herbicide treatment. Sequential applications may result in severe crop injury.
- Any weeds not controlled by the PURSUIT DG application will be stressed at the time of the sequential treatment. This will result in unsatisfactory weed control, particularly for stress-sensitive weeds such as lambsquarters.
- Weeds that have recovered from a PURSUIT DG application will typically be larger than labeled size by the time soybeans may be safely treated with an application of this product. This will result in unsatisfactory weed control.

This product plus PURSUIT DG treatments may be tank mixed with DuPont ASSURE II Herbicide to control volunteer corn and shattercane. PURSUIT DG will reduce the activity of ASSURE II on all other grasses. For broad spectrum grass control, apply ASSURE II 1 day before, or 7 days after PURSUIT DG treatments. Refer to the ASSURE II label for recommended application rates, weed sizes, and restrictions.

Applications within 1 hour of rain may reduce weed control.

Cultivation before, during, or within 7 days after the application may put the weeds under stress by pruning roots. Root pruning may reduce weed control. The best time to cultivate is approximately 14 days after application.

Do not allow spray from either ground or aerial equipment to drift onto adjacent crops or land, as injury to other plants may occur.

Do not tank mix with organophosphate insecticides, or apply within 14 days before or after an application of an organophosphate insecticide as severe crop injury may occur.

To avoid subsequent injury to crops other than soybeans, thoroughly clean all mixing and spray equipment immediately following application. Refer to the respective labels for cleanout procedures. Follow the more restrictive cleanout instruction.

Do not graze animals on green forage or stubble. Do not utilize hay or straw for animal feed or bedding.

<b>WEEDS CONTROLLED</b>	<b>SIZE (HEIGHT IN INCHES)</b>
Cocklebur	2 to 4
Lambsquarters	2 to 4
Nightshade black	2 to 4
Eastern black	1 to 3
Hairy	1 to 3
Pigweed	1 to 3
Rough (redroot)	2 to 12
Other pigweed species	2 to 8
Waterhemp species	2 to 8
Smartweeds, annual	2 to 6
Velvetleaf	2 to 6
Wild mustard	up to 4 (diameter)

**WHEN TO APPLY**

Apply after the first trifoliolate of the soybean plant has fully expanded. Applications of this product plus PURSUIT DG tank mixes must be made before soybeans have begun to flower. There should be an interval of at least 85 days between an application of PURSUIT DG and soybean harvest.

The soybeans should be free from stress and actively growing at the time of application. Stress may be caused by abnormally hot or cold weather, growing conditions such as drought or water-saturated soil,

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disease, soil nutrient deficiencies such as iron chlorosis, or injury from nematodes, insects, or prior herbicide applications.

Applications of this product plus PURSUIT DG may shorten stem internodal length and cause temporary crop injury. Crop response may be increased when applications are made to soybeans that are under stress.

**GLYPHOSATE TANK MIX FOR WEED CONTROL IN ROUNDUP READY\***

**SOYBEANS DIRECTIONS FOR USE**

This product at 0.083 oz per acre may be tank mixed with glyphosate for control of certain broadleaf weeds in Roundup Ready soybeans.

For tank mixes of this product plus glyphosate herbicide, always read and follow all use directions, restrictions, and precautions on the EPA approved labels. When tank mixing, the most restrictive labeling applies.

The tank mix of this product plus glyphosate herbicide is for use on soy beans designated Roundup Ready. Severe injury or death of soybeans will result if any soybeans not designated as Roundup Ready are treated with these tank mixes.

**APPLICATION INFORMATION**

**Timing to Crop**

This product plus glyphosate herbicide tank mix may be applied any time after the first trifoliolate has expanded fully before soybeans are harvested.

**Rate and Weed Size**

For improved control of common lambsquarters and/or wild buckwheat, tank mix 0.083 oz of this product per acre. For best results, apply to small, actively growing weeds.

**Adjuvants**

When tank mixing this product with glyphosate, it is recommended to add ammonium sulfate (AMS) at 4.25 to 17 lb per 100 gallons of spray mixture. See the glyphosate manufacturer's label for specific ammonium nitrogen instructions. When velvetleaf is present, ammonium sulfate is required at a minimum rate of 2 lb per acre.

The addition of surfactant at 0.125 to 0.25% v/v (1 to 2 pints per 100 gallons spray mixture) to this product plus glyphosate tank mixes may improve weed control. Glyphosate products differ in their adjuvant contents. See the manufacturer's specific surfactant instructions.

**Precautions**

Early-season soybean injury may result from applications of this tank mix. Injury may manifest itself as stunting (seen as a reduction in leaf size or internode length), yellowing leaves and/or red veins, and necrosis in the leaves and petioles. The potential for soybean injury is most pronounced with applications made during hot, humid conditions, under widely fluctuating weather or temperature conditions, or with applications to soybeans under stress.

**FIELD CORN**

Do not apply to sweet corn, popcorn or field corn grown for seed.

Do not apply this product through any type of irrigation systems.

Do not graze or feed forage or grain from treated field corn to livestock within 30 days of application.

**APPLICATION INFORMATION**

This product may be applied to 2 to 6-leaf field corn (1 to 5 collars, up to 16 inches tall) at a rate of 0.083 (1/12) ounce per acre. Do not apply to field corn taller than 16 inches or 5 collars, whichever is more restrictive.

This product may be applied as a tank mixture with labeled rates of atrazine and glyphosate. Do not tank mix with other corn herbicides unless specified on this label or technical bulletins.

Apply this product to field corn hybrids with a Relative Maturity (RM) of 88 days or more, including "food grade" (yellow dent, hard endosperm), waxy and high-oil corn. Not all field corn hybrids of less than 88 days RM, not all white corn hybrids or Hi-Lysine hybrids have been tested for crop safety, nor does Arcana LLC

have access to all seed company data. Consequently, injury arising from the use of this product on these types of corn is the responsibility of the user. Consult with your seed supplier before applying this product to any of these corn types.

Do not make more than one application per season.

**TIMING TO WEEDS**

Apply to weeds whose first true leaves are expanded but before weeds exceed the sizes listed below.

When applied as directed, this product will control the following weeds:

<b>WEED</b>	<b>Maximum Size (Inches)</b>
Velvetleaf	2 to 6
Pigweed species	2 to 12
Lambsquarters	2 to 4
Annual smartweeds	2 to 6
Wild mustard	Up to 4" in diameter

**FOR POSTEMERGENCE CONTROL OF CERTAIN BROADLEAF WEEDS IN FIELD CORN  
USE ONLY IN THE STATES OF CT, DE, IN, MA, MD, ME, MI, NH, NC, NJ, NY, OH, PA, RI, VA, VT, AND WV**

This product is recommended for postemergence control of certain broadleaf weeds in field corn.

Do not apply this product through any type of irrigation system.

Do not graze or feed forage or grain from treated field corn to livestock within 30 days of application.

Do not apply to fields treated with Counter insecticide applied at planting or over-the-row at cultivation as severe crop injury may result.

**RESTRICTION**

This product is limited to ground application only in the State of New York. Do not apply by air in New York.

**APPLICATION INFORMATION**

This product may be applied to 2 to 6-leaf field corn (1 to 5 collars, up to 12 inches tall) at a rate of 1/12 ounce per acre. Do not apply to field corn taller than 12 inches or 5 collars, whichever is more restrictive.

This product may be applied as a tank mixture with labeled rates of atrazine and glyphosate. Do not tank mix with other corn herbicides unless specified on this product's label.

When tank mixing this product with glyphosate for applications to be made to Roundup Ready corn hybrids, it is recommended to add ammonium sulfate (AMS) at 4.25 to 17 pounds per 100 gallons of spray mixture.

Glyphosate products differ in their adjuvant contents. Therefore, the addition of surfactant at 0.125 to 0.25% v/v (1 to 2 pints per 100 gallons of spray mixture) to some 71368-74 plus glyphosate tank mixes will improve weed control when glyphosate products are used that do not contain built-in adjuvant systems.

Glyphosate products allow for addition of surfactants. See the manufacturer's specific surfactant instructions.

Apply this product to field corn hybrids with a Relative Maturity (RM) of 88 days or more, including "food grade" (yellow dent, hard endosperm), waxy and High-Oil corn. Not all field corn hybrids of less than 88 days RM, not all white corn hybrids nor Hi-Lysine hybrids have been tested for crop safety, nor does Arcana LLC have access to all seed company data. Consequently, injury arising from the use of this product on these types of corn is the responsibility of the user. Consult with your seed supplier before applying this product to any of these corn types.

Apply with ground equipment set to deliver 10 to 40 GPA. Use only flat fan nozzles operating at 20 to 40 PSI. Do not make more than one application per season.

Apply in 10 to 40 gallons of water per acre. Always add either nonionic surfactant at 0.125 to 0.25% v/v (1/2 to 1 quart per 100 gallons) or crop oil concentrate at 1% v/v (1 gallon per 100 gallons) plus either ammonium nitrogen solution such as 28% UAN (2 to 4 quarts per acre) or ammonium sulfate (2 to 4 pounds

per acre).

**ADJUVANTS**

Always add either nonionic surfactant at 0.25% v/v (1 quart per 100 gallons) or crop oil concentrate at 1% v/v (1 gallon per 100 gallons) plus either ammonium nitrogen solution such as 28% UAN (2 to 4 quarts per acre) of ammonium sulfate (2 to 4 pounds per acre).

When tank mixing this product with glyphosate, it is recommended to add ammonium sulfate (AMS) at 4.25 to 17 pounds per 100 gallons of spray mixture. See the glyphosate manufacturer's label for specific ammonium nitrogen instructions. When velvetleaf is present, ammonium sulfate is required at a minimum rate of 2 pounds per acre.

The addition of surfactant at 0.125 to 0.25% v/v (1 to 2 pints per 100 gallons of spray mixture) to this product plus glyphosate tank mixes will improve weed control when glyphosate products are used that do not contain built-in adjuvant systems. Glyphosate products differ in their adjuvant contents. Glyphosate products such as Glyphomax or Credit® allow for addition of surfactants. See the manufacturer's specific surfactant instructions.

**SOIL INSECTICIDE INTERACTIONS**

This product may interact with certain insecticides previously applied to the crop. Crop response varies with field corn type, insecticide used, insecticide application method, and soil type.

This product may be applied to corn previously treated with Fortress, Aztec, Force or non-organophosphate (OP) soil insecticides regardless of soil type.

- DO NOT APPLY THIS PRODUCT to corn previously treated with Counter 15G.
- Applications of this product to corn previously treated with Counter 20CR, Lorsban or Thimet may cause unacceptable crop injury, especially on soils of less than 4% organic matter.
- Applications of this product to corn previously treated with Lorsban, or other organophosphate insecticides not listed above, may result in temporary crop injury.

**POST HARVEST**

**APPLICATION TIMING**

This product may be used as a burndown treatment to crop stubble when the majority of weeds have emerged and are actively growing. (See the CROP ROTATION section of this label for additional information).

**USE RATES**

Apply this product at 0.3 to 0.6 ounce per acre to crop stubble after harvest. Use the 0.6 ounce per acre rate when weed infestation is heavy and predominantly consists of those weeds listed under the WEEDS PARTIALLY CONTROLLED section of this label or when application timing and environmental conditions are marginal. (See the APPLICATION TIMING section of this label for restriction on planting intervals.) This product should be applied in combination with other suitable registered burndown herbicides (see the TANK MIXTURES section of this label for additional information).

Sequential treatments of this product may also be made provided the total amount of this product applied during one fallow/pre-plant cropland season does not exceed 1.0 ounce per acre.

**TANK MIXTURES IN POST HARVEST APPLICATIONS**

This product may be used as a post harvest treatment to crop stubble, and should be tank mixed with other herbicides that are registered for use in fallow.

**GENERAL USE AND APPLICATION DIRECTIONS - ALL CROPS AND USES**

**GROUND APPLICATION**

For best performance, select nozzles and pressure that deliver MEDIUM spray. Nozzles that deliver COARSE spray droplets may be used to reduce drift, provided spray volume is increased to maintain coverage on small weeds. For optimal product performance and minimal spray drift, adjust the spray boom to the lowest possible spray height recommended in manufacturers' specifications.

Overlaps or starting, stopping, slowing, and turning while spraying may result in crop injury.

**WHEAT, BARLEY, OAT, TRITICALE, POST-HARVEST BURNDOWN, PRE-PLANT BURNDOWN AND**

**FALLOW:** For flat-fan nozzles, use a spray volume of at least 5 gallons per acre (GPA). For flood nozzles on 30" spacings, use at least 10 GPA, flood nozzles no larger than TK1 0 (or the equivalent), and a pressure of at least 30 psi. For 40" nozzle spacings, use at least 13 GPA; for 60" spacings use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings. Raindrop RA nozzles are not recommended for this product's applications, as weed control performance may be reduced. Use screens that are 50-mesh or larger.

**CORN AND SOYBEANS: Broadcast Application**

- Use 10 to 25 gallons of water per acre.

Ensure that equipment is set up to avoid applying an excessive rate directly over the rows and into the corn plant whorl. Overlaps or starting, stopping, slowing, and turning while spraying may result in crop injury. Under heavy weed pressure or dense crop foliage, increase minimum spray volume to 15 to 25 gallons per acre.

**Band Application**

For band applications, use proportionately less spray mixture.

To avoid crop injury, carefully calibrate the band applicator to not exceed the labeled rate.

Carefully follow the manufacturer's instructions for nozzle type (flat fans), orientation, distance of nozzles from the crop and weeds, spray volumes, calibration and spray pressure.

**PRE-PLANT/PRE-EMERGENCE BURNDOWN APPLICATIONS OF HARMONY GT HERBICIDE TO FIELDS PLANTED TO FIELD CORN OR SOYBEANS**

This product may be applied as a pre-plant or pre-emergence burndown treatment for additional control of certain broadleaf weeds in fields planted to field corn or soybeans.

**PRE-PLANT/PRE-EMERGENCE BURNDOWN APPLICATIONS**

For burndown of emerged weeds, broadcast applications of this product may be applied anytime before field corn and soybean plants emerge. This product may be used in combination with other suitable pre-plant/pre-emergence herbicides registered for use in field corn and soybeans.

Apply this product at 0.3 to 0.6 ounce per acre for improved control of many broadleaf weeds.

Read and follow all manufacturers' label instructions for companion herbicides. If those instructions conflict with this label, do not tank mix the herbicide with this product.

**SPRAY ADDITIVES**

Consult your agricultural dealer, applicator, or Arcana LLC representative for a listing of recommended surfactants. Antifoaming agents may be used if needed. Unless otherwise specified, add a non-ionic surfactant having at least 80% active ingredient at 1 to 2 quarts per 100 gallons of spray solution (0.25 to 0.5% v/v). Refer to TANK MIXTURES section of this label for specific adjuvant instructions when this product is used in a tank mix. Do not use low rates of liquid nitrogen fertilizer solution as a substitute for surfactant.

**AERIAL APPLICATION**

Do not apply during a temperature inversion, when winds are gusty, or when conditions favor poor coverage and/or off-target spray movement.

This product is restricted to ground application ONLY in the State of New York. Do not apply by air in the state of New York.

In wheat, barley, oats, triticale, post-harvest burndown, pre-plant burndown and fallow use 2 to 5 gallons per acre; use at least 3 gallons per acre in Idaho, Oregon and Utah.

In corn and soybeans, use a minimum of 5 gallons per acre.

When applying this product by air in areas adjacent to sensitive crops, use solid stream nozzles oriented straight back. Adjust the swath to avoid spray drift damage to sensitive crops downwind and/or use ground equipment to treat the border edge of fields. See the Spray Drift Management section of this label.

**SPRAY ADJUVANTS**

Always include a spray adjuvant with applications of this product. In addition to a spray adjuvant, an ammonium nitrogen fertilizer may be used. Do not use low rates of liquid nitrogen fertilizer solution as a substitute for surfactant. Antifoaming agents may be used if needed.

Consult your Ag dealer or applicator, fact sheets and technical bulletins prior to using an adjuvant system. If

another herbicide is tank mixed with this product, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients (40CFR 1001).

**Nonionic Surfactant (NIS)**

- Apply 0.06 to 0.50% volume/volume (1/2 to 4 pints per 100 gallons of spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12. See the TANK MIXTURES section of this label for additional information.

**Crop Oil Concentrate (COC) - Petroleum or Modified Seed Oil (MSO)**

- Apply at 1% v/v (1 gallon per 100 gallons of spray solution) or 2% under arid conditions. MSO adjuvants may be used at 0.5% v/v if specified on Arcana LLC product literature or service policies.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

**Special Adjuvant Types**

- Combination adjuvant products may be used at doses that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- In addition to the adjuvants specified above, other adjuvant types may be used if they provide the same functionality and have been evaluated and approved by Arcana LLC product management. Consult separate Arcana LLC technical bulletins for detailed information before using adjuvant types not specified on this label.

**Ammonium Nitrogen Fertilizer**

- Use 2 quarts per acre of a high-quality urea ammonium nitrate (UAN), such as 28%N or 32%N, or 2 pounds per acre of a spray- grade ammonium sulfate (AMS). Use 4 quarts per acre UAN or 4 pounds per acre AMS under arid conditions.

**CROP ROTATION**

Wheat, barley, oat, triticale, soybeans and field corn may be replanted anytime after the application of this product. Any other crop may be planted 45 days after the application of this product.

**GRAZING**

Do not graze or feed forage or hay from treated areas to livestock (harvested straw may be used for bedding and/or feed).

**MIXING INSTRUCTIONS**

Do not use with spray additives that alter the pH of the spray solution below pH 5.0 or above pH 9.0, as rapid product degradation can occur. Spray solutions of pH 6.0 to 8.0 allow for optimum stability of this product.

- 1.Fill the tank 1/4 to 1/3 full of water.
- 2.While agitating, add the required amount of this product.
- 3.Continue agitation until the product is fully dispersed, at least 5 minutes.
- 4.Once this product is fully dispersed, maintain agitation and continue filling tank with water. This product should be thoroughly mixed with water before adding any other material.
- 5.As the tank is filling, add tank mix partners (if desired) then add the required volume of spray adjuvant. Always add spray adjuvant last. Antifoaming agents may be used. Do not use with spray additives that alter the pH of the spray solution below pH 6.0 as rapid product degradation can occur. Spray solutions of pH 7.0 and higher allow for optimum stability of this product.
- 6.If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
- 7.Apply this product spray mixture within 24 hours of mixing to avoid product degradation.
- 8.If this product and a tank mix partner are to be applied in multiple loads, pre-slurry this product in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of this product.

**SPRAY EQUIPMENT**

For specific application equipment, refer to the manufacturer's instructions for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc.

Be sure to calibrate air or ground equipment properly before application. Select a spray volume and delivery

system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better coverage when crop canopy is dense. Avoid swath overlapping, and shut off spray booms while starting, turning, slowing, or stopping, to avoid injury to the crop. Do not make applications using equipment and/or spray volumes or during weather conditions that might cause spray to drift onto nontarget sites. For additional information on spray drift refer to the SPRAY DRIFT MANAGEMENT section of this label. Continuous agitation is required to keep this product in suspension.

#### **SPRAYER CLEANUP**

The spray equipment must be cleaned before this product is sprayed. Follow the cleanup procedures specified on the labels of the previously applied products. If no directions are provided, follow the six steps outlined in the AFTER SPRAYING THIS PRODUCT section of this label.

#### **AT THE END OF THE DAY**

It is recommended that during periods when multiple loads of this product are applied, at the end of each day of spraying the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits which can accumulate in the application equipment.

#### **AFTER SPRAYING HARMONY GTXP AND BEFORE SPRAYING CROPS OTHER THAN WHEAT, BARLEY, OAT, TRITICALE, FIELD CORN AND SOYBEANS**

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of this product as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gallon of household ammonia\* (contains 3% active ingredient) for every 100 gallons of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) recommended 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.

\* Equivalent amounts of an alternate-strength ammonia solution or a Arcana LLC-approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your Ag dealer, applicator, or Arcana LLC representative for a listing of approved cleaners.

#### **Notes:**

1. **CAUTION:** Do not use chlorine bleach with ammonia because dangerous gases will form. Do not clean equipment in an enclosed area.
2. Steam-cleaning aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When this product is tank mixed with other pesticides, all cleanout procedures for each product should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products should be followed as per the individual product labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of this product and applications of other pesticides to 71368-74-sensitive crops during the same spray season, it is recommended that a sprayer be dedicated to this product to further reduce the chance of crop injury.

#### **SPRAY DRIFT MANAGEMENT**

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

## **AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.**

### **IMPORTANCE OF DROPLET SIZE**

The most effective way to reduce drift potential is to apply large droplets (>150 to 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. **APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS!** See Wind, Temperature and Humidity, and Temperature Inversions sections of this label.

### **Controlling Droplet Size - General Techniques**

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles.

### **Controlling Droplet Size - Aircraft**

- Number of Nozzles - Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- Nozzle Orientation - Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- Nozzle Type - Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- Boom Length - The boom length should not exceed 3/4 of the wing or rotor length - longer booms increase drift potential.
- Application Height - Application more than 10 feet above the canopy increases the potential for spray drift.

### **BOOM HEIGHT**

Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

### **WIND**

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. **AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.**

Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.



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### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

### **AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS**

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring. Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the SPRAY EQUIPMENT section of this label to determine if use of an air assist sprayer is recommended.

### **RESISTANCE**

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes. See the Weeds Controlled section of this label for additional information on managing herbicide resistant weed biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide practices available in your area.

### **INTEGRATED PEST MANAGEMENT**

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

### **PRECAUTIONS**

Injury to or loss of desirable trees or vegetation may result from failure to observe the following:

Do not apply, drain or flush equipment on or near desirable trees or other plants or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants.

Injury to or loss of adjacent sensitive crops and vegetation may result from failure to observe the following:

Take all necessary precautions to avoid all direct or indirect contact (such as spray drift) with non-target plants or areas.

Carefully observe all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than wheat, barley, oat, triticale, corn, or soybeans.

Wheat, barley, oat, triticale, corn and soybean varieties may differ in their response to various herbicides. Arcana LLC recommends that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use of this product to a small area.

For wheat, barley, oat, and triticale, under certain conditions such as heavy rainfall, prolonged cold weather

(daily high temperature less than 50°F.), or wide fluctuations in day/night temperatures prior to or soon after this product's application, temporary discoloration and/or crop injury may occur. To reduce the potential of crop injury, tank mix this product with 2,4-D (ester formulations perform best— see the TANK MIXTURES section of this label) and apply after the crop is in the herring stage of growth.

This product should not be applied to corn, oat, wheat, barley, triticale or soybeans that are stressed by severe weather conditions, drought (including low levels of subsoil moisture), low fertility, water-saturated soil, disease, or insect damage, as crop injury may result. Risk of injury is greatest when the cereal crop is in the 2 to 5-leaf stage. Severe winter stress, drought, disease, or insect damage following application also may result in crop injury.

Do not apply to wheat, barley, oat or triticale crops underseeded with another crop.

For ground applications applied to weeds when dry, dusty field conditions exist, control of weeds in wheel track areas may be reduced.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Waste resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:**

**For Plastic Containers:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**For Fiber Sacks:** Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency contact CHEMTREC 1-800-424-9300.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ARCANA LLC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ARCANA LLC and Seller harmless for any claims relating to such factors.

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