

83222-27

02-18-2010

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U.S. Environmental Protection Agency  
Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:  
83222-27

Date of Issuance:  
FEB 18 2010

Term of Issuance: Unconditional

Name of Pesticide Product:  
Cherokee Extra DF

NOTICE OF PESTICIDE:

Registration  
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

J. Oliver Products, LLC  
3187 Robertson Gin Rd.  
Hernando, MS 38632

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 section 3(c)(7)(A) provided you agree in writing to:

1. Add an appropriate EPA Establishment number to the label.
2. Change the Registration Number from 83222-XX to **83222-27**
3. Add appropriate Net Contents information to the label.

Signature of Approving Official:

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

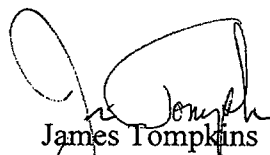
Date:

FEB 18 2010

4. Add the following bullets to the User Safety Recommendations Box:
  - a. - Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing
  - b. - 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.
5. Revise the heading "GENERAL INFORMATION" to "USE INFORMATION" on page 3 and 5
6. Revise "The use rate will depend on weed spectrum...." to "The specified use rate with depend on weed spectrum..."
7. Revise "should be applied in combination with other suitable registered fallow herbicides" to "may be applied in combination...." on page 4
8. Revise "should be tank mixed with other herbicides" to "may be tank mixed with other herbicides" on page 4
9. On page 6, revise the heading CEREALS to "CEREALS (wheat (including durum), barley, triticale and oat)
10. On page 12, revise the heading "Precautions" to "Use Restrictions and Precautions"
11. On page 13, revise "DuPont recommends that....." to "It is recommended that...."

The basic formulation CSF [dated November 20, 2009] of the product referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act is acceptable. The basic CSF will be added to your file.

You will submit one (1) copy of your final printed labeling before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). A stamped copy of labeling is enclosed for your records. If you have any questions, please contact Hope Johnson at 703-305-5410.



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

# CHEROKEE EXTRA DF

## Herbicide

DRY FLOWABLE

FOR USE ON WHEAT (INCLUDING DURUM), BARLEY, OAT, TRITICALE, AND FALLOW.

**ACTIVE INGREDIENTS:**

Thifensulfuron-methyl	
Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate .....	50%
Tribenuron-methyl	
Methyl 2-[[[N-(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]benzoate .....	25%

<b>OTHER INGREDIENTS:</b> .....	25%
<b>TOTAL:</b> .....	100%

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION - PRECAUCION**

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 Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300  
 For Medical Emergencies Only, Call (877) 325-1840

EPA REG. NO. 83222-XX  
 EPA EST. NO.

ACCEPTED  
 with COMMENTS  
 in EPA Letter Dated

FEB 18 2010

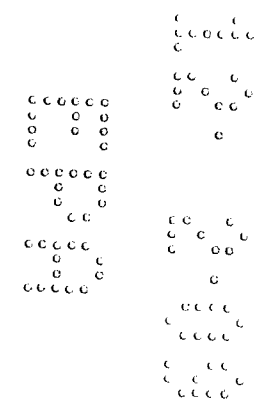
Under the Federal Insecticide,  
 Fungicide, and Rodenticide Act  
 as amended, for the pesticide  
 registered under EPA Reg. No.

**NET CONTENTS**

Manufactured For:

J. Oliver Products, Inc.  
 3187 Robertson Gin Road  
 Hernando, MS 38632

83222-27



**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION - PRECAUCION**

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical resistant to this product are listed below. If you want more options follow the instructions for Category A on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves, Category A, (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber) all .14 mils.
- Shoes plus socks.

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

<b>USER SAFETY RECOMMENDATIONS</b>	
<b>Users Should:</b>	
<ul style="list-style-type: none"> <li>• Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.</li> </ul>	

<b>FIRST AID</b>	
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>HOT LINE NUMBER</b>	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.</p>	

**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 when cleaning equipment or disposing of equipment washwaters or rinsate.

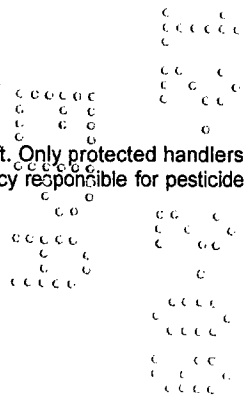
**PESTICIDE HANDLING**

- Calibrate sprayers only with clean water away from the well site.
- Make scheduled checks of spray equipment.
- Ensure that all operation employees accurately measure pesticides.
- 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.

**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.

### GENERAL INFORMATION

This product is a dry flowable granule that is used for selective post-emergence weed control in wheat (including durum), barley, oat, triticale and fallow. The best control is 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 and duration of control may depend on the following:

- weed spectrum and infestation intensity
- weed size at application
- environmental conditions at and following treatment

This product is noncorrosive, nonflammable, nonvolatile, and does not freeze. This product should be mixed in water and applied as a uniform broadcast spray.

### BIOLOGICAL ACTIVITY AND ENVIRONMENTAL CONDITIONS

This product is absorbed primarily through the foliage of plants, rapidly inhibiting the growth of susceptible weeds. One to 3 weeks after application to weeds (2 to 5 weeks for wild garlic), leaves of susceptible plants appear chlorotic, and the growing point subsequently dies.

This product provides the best control in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not be as satisfactory. However, a crop canopy that is too dense at application can intercept spray and reduce weed control.

The herbicidal action of this product may be affected in crops stressed from adverse environmental conditions (such as extreme temperatures or moisture), abnormal soil conditions, cultural practices, or variations in crop variety. In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed. In addition, weeds hardened-off by drought stress are less susceptible to this product.

### WEEDS CONTROLLED - ALL USES

Annual knawel	Curly dock	Redroot pigweed	
Annual sowthistle	False chamomile	Russian thistle*	
Black mustard	Field chickweed	Scentless chamomile/mayweed	
Blue/Purple mustard	Field pennycress	Shepherd's-purse	
Broadleaf dock	Filaree (redstem, Texas)	Slimleaf lambsquarters	
Bur buttercup	Flixweed	Smallflower buttercup	
Bushy wallflower/Treacle mustard	Green smartweed	Smallseed falseflax	
Clasping pepperweed	Kochia†	Stinking chickweed	
Coast fiddleneck	Ladysthumb	Stinking mayweed /Dogfennel	
Common buckwheat	Lanceleaf sage*	Swinecress	
Common chickweed	London rocket	Tansymustard	
Common cocklebur*	Marshelder	Tarweed fiddleneck	c c c c c c
Common groundsel	Mayweed chamomile	Tumble/Jim Hill mustard	c
Common lambsquarters	Miners lettuce	Volunteer lentils	c c c c c
Common radish	Narrowleaf lambsquarters	Volunteer peas	c c c c c c c c
Common ragweed*	Nightflowering catchfly	Volunteer sunflower	c c c c c c c c
Common sunflower	Pennsylvania smartweed	Wild buckwheat*	c c c c c c
Corn chamomile	Pineappleweed	Wild chamomile	c c c c c c
Corn gromwell*	Prickly lettuce*	Wild garlic*	c c c c c c
Corn spurry	Prostrate knotweed	Wild mustard	c c c c c c
Cowcockle	Prostrate pigweed	Wild radish*	c c c c c c
Cress (mouse-ear)	Redmaids		c c c c c c

**WEEDS PARTIALLY CONTROLLED\*\***

Canada thistle*	Mallow (common, little)
Carolina geranium	Nightshade (cutleaf, hairy)
Catchweed bedstraw	Vetch*
Cutleaf evening primrose	

\* 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, MCPA, 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**

This product may be used as a fallow treatment, in the spring or fall when the majority of weeds have emerged and are actively growing.

**USE RATES**

Apply this product at 0.3 to 0.6 oz per acre to fallow. Two applications of this product may be made provided the total amount applied does not exceed 1.0 oz per acre per crop season.

This product should be applied in combination with other suitable registered fallow herbicides such as Landmaster II, Fallow Master, Credit plus 2,4-D (ester formulations work best), Credit plus Diablo/Banvel SGF/Clarity, 2,4-D, Diablo/Diablo SGF/Clarity.

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

**PREPLANT BURNDOWN****USE RATES****Wheat (including durum), Barley, Triticale and Oat**

Apply this product at 0.3 to 0.6 oz per acre as a burndown treatment to wheat (including durum), barley, triticale, and oat to control emerged weeds prior to, or shortly after planting (prior to emergence). Make applications when the majority of weeds have emerged and are actively growing.

**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 burn-down 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 0.3 to 0.5 oz per acre for control or partial control of the weeds listed on this label. Allow at least 14 days between application of this product and planting of cotton. Include a non-ionic 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 0.25-0.5% v/v (1-2 qt per 100 gal 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 1-2 gallon/100 gal of spray solution (1-2% 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 increases the possibility of crop injury. Cotton resumes normal growth once favorable growing conditions return.

**RESTRICTION:** DO NOT apply later than 14 days before planting cotton.

**Cotton**

Apply this product at 0.3 to 0.5 oz per acre as a burndown treatment to cotton. Allow at least 14 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.

**Sugarbeets, Winter Rape and Canola**

Apply this product at 0.3 to 0.6 oz per acre as a burndown treatment to sugarbeets, winter rape and canola. Allow at least 60 days between application of this product and planting of sugarbeets, winter rape and canola.

**Any other crop (such as corn, rice, grain sorghum or soybeans)**

Apply this product at 0.3 to 0.6 oz per acre as a burndown treatment to any other crop (such as corn, rice, grain sorghum or soybeans). Allow at least 45 days between application of this product and planting of any other crop (such as corn, rice, grain sorghum or soybeans).

Sequential treatments of this product may also be made provided the total amount of product applied during one fallow/pre-plant cropland season does not exceed 1.0 oz per acre; for example, 0.5 oz in the fall followed by 0.5 oz in the spring. Use the 0.6 oz per acre rate when weed infestation is heavy and predominantly consists of those weeds listed under PARTIAL CONTROL, or when application timing and environmental conditions are marginal. (See APPLICATION TIMING Section for restriction on planting intervals.)

**PREPLANT APPLICATION FOR BROADLEAF WEED AND WILD GARLIC CONTROL PRIOR TO PLANTING CORN,  
COTTON, RICE, GRAIN SORGHUM OR SOYBEANS**

In the states of AL, AR, DE, GA, IA, IN, IL, KY, LA, MD, MO, MS, NC, OH, PA, SC, TN, TX and VA, this product may be applied prior to planting corn, cotton, rice, grain sorghum or soybeans for the control of certain broadleaf weeds and wild garlic. This product may be applied from late fall through early spring.

Do not apply within 45 days prior to planting the above listed crops. Do not use this product through any type of irrigation equipment.

**GENERAL INFORMATION**

This product provides postemergence activity for short term control or partial control of labeled weeds. Degree of control and duration of effect are dependent on rate used, sensitivity and size of target weed, environmental conditions at the time of and following application, and spray coverage.

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. However, typical symptoms of dying weeds (discoloration) may not be noticeable for 1-3 weeks after application (2-5 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, drought stress or too wet conditions will be less susceptible.

Some naturally occurring weed biotypes\* resistant to this product are known to exist. If weeds listed on this label are not satisfactorily controlled, respray problem areas in a timely and effective manner using a broadleaf herbicide having a different mode of action.

\*Biotypes are naturally occurring individuals of the species, which have a slightly different make-up. Resistant biotypes may look exactly the same as susceptible biotypes. Herbicide-resistant biotypes are able to survive a use rate several times higher than needed to control susceptible biotypes.

**APPLICATION TIMING**

Apply this product at least 45 days prior to planting corn, cotton, rice, grain sorghum or soybeans. Annual broadleaf weeds should be past the cotyledon stage, actively growing, but less than 4 inches tall or across. See SPECIFIC WEED PROBLEMS for information on vetch (hairy, common), wild garlic and wild radish.

**WEED CONTROL Application Rates:**

Apply this product at 0.5 - 0.6 oz per acre to control emerged weeds. Use 0.6 oz per acre rate when weed infestation is heavy and predominantly consists of those weeds listed under PARTIAL CONTROL or when application timing and environmental conditions are marginal. Reduce the application rate to 0.5 ounces for fields to be planted to cotton.

Sequential treatments of this product to control emerged weeds may also be made provided the total amount of this product applied during one fallow cropland season does not exceed 1.0 oz per acre; for example, 0.5 oz in the fall followed by 0.5 oz in the spring. At least one of the sequential treatments should include a tank mix partner herbicide having a different mode of action than this product.

Foliar absorption is the primary means of this product uptake by plants; therefore, thorough coverage of all target weeds is essential.

Conditions which are conducive to healthy, actively growing plants optimize this product's weed control performance. Ideal conditions include warm temperatures and adequate soil moisture before, during and immediately after application.

**TANK MIXTURES IN PRE-PLANT BURNDOWN**

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, such as Landmaster II, Fallow Master, Credit plus Diablo/Diablo SGF/Clarity, or Diablo/Diablo SGF/Clarity alone.

Read and follow all manufacturers' label instructions for the companion herbicide. If those instructions conflict with this label, follow the most restrictive labeling (such as planting interval after application), or do not tank mix the herbicide with this product.

## CEREALS

### USE RATES

Do not use less than 0.3 oz of this product per acre.

#### Wheat (including Durum), Barley and Triticale

Apply this product at 0.3 to 0.6 oz per acre to wheat (including durum), barley or triticale. Two applications of this product may be made provided the total amount applied does not exceed 1.0 oz per acre per crop season.

Use 0.3 to 0.4 oz of this product per acre for light infestation of the weeds listed under Weeds Controlled. Conditions at application should be optimum for effective treatment of these weeds.

Use 0.5 oz of this product per acre for heavy infestation of the weeds listed under Weeds Partially Controlled.

Use 0.6 oz of this product per acre for heavy infestation of the weeds listed under Weeds Partially Controlled when application timing and environmental conditions are marginal (refer to Environmental Conditions and Biological Activity for best performance).

This product may be used as postemergence applications to triticale anytime after crop is in the 2-3 leaf stage but before the flag leaf is visible. Follow the postemergence use rate instructions listed for wheat.

Other suitable herbicides, fungicides, and insecticides registered for use on triticale may be tank mixed or used sequentially with these products providing the recommended application timing is the same. Read and follow all manufacturers' label instructions for the tank mix partner prior to use. The most restrictive provisions on either label apply.

#### Oat (Spring and Winter)

Apply this product at 0.3 to 0.4 oz per acre for control of the weeds listed in Weeds Controlled table. Do not make more than one application of this product per crop season on oat.

### APPLICATION TIMING

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

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 as crop injury can occur.

Since this product has very little or no soil activity, it controls only those weeds that have germinated; therefore, apply this product when all or most of the weeds have germinated. Annual broadleaf weeds should be past the cotyledon stage, actively growing, and less than 4 tall or wide. Wild garlic plants should be less than 12 tall with 2 to 4 of new growth. See Specific Weed Problems for more information.

Rainfall immediately after treatment can wash this product off of weed foliage, resulting in reduced weed control. Several hours of dry weather are needed to allow this product to be sufficiently absorbed by weed foliage.

### SPECIFIC WEED PROBLEMS - CEREALS

**Canada thistle:** For control in wheat, barley and triticale, use 0.6 oz per acre plus surfactant when all thistles are 4 to 8 with 2 to 6 of new growth. Make the application in the spring. Control will be improved by using this product in combination with 2,4-D (refer to TANK MIXTURES).

For control in oat, use 0.4 oz of this product per acre plus 2,4-D (refer to TANK MIXTURES).

**Common cocklebur, Common ragweed, Lanceleaf sage:** In wheat, barley and triticale, apply this product at 0.4 to 0.5 oz per acre in combination with 2, 4-D at rates from 1/4 to 3/8 lb active ingredient (ester formulations work best) when weeds are small and actively growing. When using 1/4 lb active ingredient of 2, 4-D, be sure to add surfactant at the rate of 1/4 to 1/2 quart per 100 gallons of spray solution (0.06 to 0.125% v/v--use the higher rate under stress conditions).

For control in oat, use 0.4 oz of this product per acre plus 2,4-D. Refer to the Tank Mixtures sections of this label for additional details.

**Corn gromwell, Wild buckwheat:** For control in wheat, barley and triticale, use 0.5 to 0.6 oz of this product per acre plus surfactant. For control in oat, use 0.4 oz of this product per acre plus 2,4-D, MCPA or Buctril (refer to TANK MIXTURES).

**Kochia, Russian thistle, Prickly lettuce:** Naturally occurring resistant biotypes of these weeds are known to occur. For best results, use this product in a tank mix with dicamba (such as Diablo/Diablo SGF/Clarity) and 2, 4-D; or Bromoxynil (such as Buctril) and 2,4-D (3/4 - 1 pt Buctril + 1/4 - 3/8 lb active ingredient 2, 4-D ester). This product should be applied in the spring when weeds are less than 2 tall or 2 across and are actively growing. Refer to the Tank Mixtures section of this label for additional details.

**Vetch (common and hairy):** For control in wheat, barley and triticale, use 0.5 to 0.6 oz of this product per acre plus surfactant when vetch is less than 6 in length. For severe infestations of vetch, or when vetch is greater than 6 in length, use this product in combination with 2,4-D or MCPA (refer to the Tank Mixtures section of this label).

For control in oat, use 0.4 oz of this product per acre plus 2,4-D or MCPA (refer to TANK MIXTURES).

**Wild garlic:** For control in wheat, barley and triticale, use 0.5 to 0.6 oz of this product per acre plus surfactant when wild garlic plants are less than 12 tall with 2 to 4 of new growth. For severe infestations, use the 0.6 oz per acre rate of this product. Plants hardened-off by cold weather and/or drought stress may be more difficult to control. Thorough spray coverage of all garlic plants is essential. Typical symptoms of dying garlic plants may not be noticeable for 2 to 5 weeks.

For control in oat, use 0.4 oz of this product per acre plus 2,4-D or MCPA (refer to TANK MIXTURES).



**Wild radish:** For best results in wheat, barley and triticale, apply 0.4 to 0.6 oz 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. For increased control of severe wild radish infestations, or wild radish emerged greater than 30 days, apply this product at 0.3 oz per acre in combination with MCPA at 1/4 lb active ingredient per acre. Surfactant is required when tank mixing with MCPA, add 1 quart per 100 gallons of spray solution (0.25% vol/vol). Fall applications should be made prior to hardening off of plants.

For control in oat, use 0.4 oz of this product per acre plus 2,4-D or MCPA (refer to TANK MIXTURES).

#### **TANK MIXTURES - CEREALS**

This product may be tank mixed with other suitable registered herbicides to control weeds listed as suppressed, weeds resistant to this product or weeds not listed under Weeds Controlled. 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.

This product can also be mixed with registered fungicides, insecticides, or liquid fertilizer for use on wheat, barley, triticale, oat, or fallow.

#### **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, triticale and oat.

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 lb active ingredient (such as 3/4 pt of a 4 lb/gal product, 1/2 pt 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 MCPA herbicides to the tank at 1/4 to 3/8 lb active ingredient (such as 1/2 - 3/4 pt of a 4 lb/gal product, 1/3 - 1/2 pt of a 6 lb/gal product). Surfactant may be added to the mixture at 1/2 to 1 qt per 100 gal of spray solution (0.125 to 0.25% v/v); however, adding surfactant may increase the potential for crop injury, especially at the higher phenoxy rates.

Higher rates of 2,4-D or MCPA may be used, but do not exceed the highest rate allowed by those respective labels. Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using these tank mixtures.

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

This product may be tank mixed with 1/16 to 1/8 lb active ingredient dicamba (such as 2-4 fluid oz Diablo, 4-8 fluid oz Diablo SGF, 2-4 fluid oz Clarity). Use higher rates when weed infestation is heavy. Surfactant may be added to the mixture at 1/2 to 1 qt per 100 gal of spray solution (0.125 to 0.25% v/v); however, adding 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. Make application of this product + 1/16 to 1/8 lb active ingredient dicamba (such as 2 - 4 fluid oz Diablo, 4 - 8 fluid oz Diablo SGF, 2 - 4 fluid oz Clarity) + 1/4 - 3/8 lb active ingredient 2,4-D Ester or Amine per acre. Use higher rates when weed infestation is heavy. Surfactant may be added to the mixture at 1/2 to 1 qt per 100 gal of spray solution (0.125 to 0.25% v/v); however, adding surfactant may increase the potential for crop injury. Consult the specific 2,4-D label, dicamba label, or local recommendations for more information and restrictions.

Apply this 3-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 (such as Buctril, Bronate, Bronate Advanced, or Rhino)**

This product may be tank mixed with bromoxynil containing herbicides registered for use on wheat, barley, triticale, or fallow. For best results, add bromoxynil containing herbicides to the tank at 3/16 to 3/8 lb active ingredient per acre (such as Bronate or Buctril at 3/4 - 1-1/2 pt per acre).

Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using these tank mixtures. Follow the most restrictive labeling. Tank mixes of this product plus Buctril may result in reduced control of Canada thistle.

#### **With Express or Express XP Herbicide**

This product may be tank mixed with Express or Express XP based on local recommendations. Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using this tank mixture.

#### **With Ally or Ally XP Herbicide**

This product may be tank mixed with Ally or Ally XP based on local recommendations. Read and follow all label instructions on timing, precautions, and warnings for these herbicides before using this tank mixture.

#### **With Starane**

For improved control of Kochia (2-4" tall), Russian thistle, mustard species, and wild buckwheat, This product may be tank mixed with 1/3 to 1-1/3 pints per acre of Starane. Refer to the most restrictive provisions on either label will apply. Do not use the tank mix if any restrictions on the Starane label conflict with recommendations on this herbicide label.

Other suitable registered herbicides, fungicides, and insecticides registered for use on small grains or fallow may be tank mixed or used sequentially with this mixture. Read and follow all manufacturers' label instructions for the companion herbicide. The most restrictive provisions on either label will apply.

**With Starane + Salvo**

This product can be tank mixed with Starane + Salvo herbicides for improved control of broadleaf weeds in wheat, barley, fallow and oats.

For improved control of Kochia (2-4" tall), Russian thistle, mustard species and wild buckwheat, this product may be tank mixed with 2/3 to 2-2/3 pints per acre of Starane + Salvo. Refer to this product's label, and the Starane and Salvo labels for information regarding use restrictions, labeled crops, rotational cropping recommendations, 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 Starane or Salvo label conflict with instructions on this product's herbicide label.

**With Starane + Sword**

This product can be tank mixed with Starane + Sword herbicides for improved control of broadleaf weeds in wheat, barley, fallow and oats.

For improved control of Kochia (2-4" tall) Russian thistle, mustard species and wild buckwheat, this product may be tank mixed with 3/4 to 2-3/4 pints per acre of Starane + Sword. Refer to this product's label, and the Starane and Sword labels for information regarding use restrictions, labeled crops, rotational cropping recommendations, 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 Starane or Sword label conflict with instructions on this product's label.

Other suitable registered herbicides, fungicides, and insecticides registered for use on cereal grains or fallow may be tank mixed or used sequentially with this mixture. Read and follow all manufacturers' label instructions for the companion herbicide. The most restrictive provisions on either label will apply.

**With Aim**

This product can be tank mixed with Aim herbicide for improved control of weeds in wheat, barley and triticale.

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

This product can be tank mixed with Stinger, Cutback, Cutback M or Widematch herbicides for improved control of weeds in wheat, barley and triticale.

**With Other Broadleaf Herbicides**

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

**With Hoelon Herbicide**

This product may be used in combination with Hoelon 3EC and Buctril herbicides in accordance with the Hoelon 3EC label. For best results, use the three-way tank mix of this product at 0.4 oz per acre plus Hoelon 3EC at 2 2/3 pt per acre plus Buctril at 1 1/2 pt per acre. Apply only to winter wheat. This tank mix should only be used under good soil conditions when wild oat is in the 1-4 leaf stage. If conditions are not ideal for the performance of Hoelon 3EC, wild oat control may be reduced. Be sure to follow all warnings and cautions on the Hoelon 3EC and Buctril labels.

**With Assert Herbicide or Avenge Herbicide**

This product can be tank mixed with Avenge or Assert. When tank mixing with Assert, always include another broadleaf weed herbicide with a different mode of action (for example: 2,4-D ester, MCPA ester, Buctril, or Bronate). Tank-mixed 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.

**With Everest**

This product can be tank mixed with Everest herbicide for improved control of weeds in spring wheat.

**With Maverick**

This product can be tank mixed with Maverick herbicide for improved control of weeds in wheat.

**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 IEC label for specific use directions and restrictions on tank mixes.

**With other grass control products**

Tank mixtures of this product and grass control products may result in poor grass control. Company X recommends that you first consult your state experiment station, university, or extension agent, Agricultural dealer, or Company X 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 Insecticides**

This product may be tank mixed or used sequentially with insecticides (or fungicides) registered for use on cereal grains. However, under certain conditions (drought stress, or if the crop is in the 2-4 leaf stage), tank mixes or sequential applications of this product with organophosphate insecticides (such as parathion) may produce temporary crop yellowing or, in severe cases, crop injury. Test these mixtures in a small area before treating large areas.

Do not use this product plus Malathion, as 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 1/4 qt -1 qt per 100 gal of spray solution (0.06 - 0.25% v/v) based on local recommendations.

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

If 2,4-D or MCPA is included with this product and fertilizer mixture, ester formulations tend to be more compatible (See manufacturer's label). Additional surfactant is not needed when using this product in tank mix with 2,4-D ester or MCPA ester and liquid nitrogen fertilizer solutions.

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 Company X representative for a specific recommendation before using nitrogen fertilizer carrier solutions.

**Liquid nitrogen fertilizer solutions that contain sulfur can increase crop response.**

**Do not use low rates of liquid nitrogen fertilizer solution as a substitute for a surfactant.**

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

**SPRINKLER CHEMIGATION WITH THIS PRODUCT AND BRONATE FOR POSTEMERGENCE WEED CONTROL IN WINTER & SPRING WHEAT & SPRING BARLEY IN IDAHO**

**HOWTO USE**

Use 0.4 to 0.5 oz of this product per acre in combination with 3/4 to 1 1/2 pint Bronate per acre. Apply to wheat, barley and triticale after the 3-leaf stage but before the flag leaf is visible. Make only one chemigation application of this tank mixture per crop year.

For best results, apply to broadleaf weeds up to the 4-leaf stage, or 2 inches in height or 1 inch in diameter, whichever comes first. Consult this product and Bronate package labels for list of weeds controlled/suppressed.

**SPRINKLER IRRIGATION APPLICATION**

Apply this tank mix through sprinkler irrigation systems including center pivot, lateral move, side (wheel) roll, solid set or hand move irrigation systems only. Do not apply these herbicides through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for this product's application to any public water system. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The sprinkler chemigation system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

**SPECIFIC REQUIREMENTS FOR APPLICATION THROUGH SPRINKLER IRRIGATION SYSTEMS**

1. In center pivot and continuous lateral move systems, this product + Bronate should be applied continuously for the duration of the water application. In solid set systems, application of the tank mix should be made during the last 30 to 45 minutes of the irrigation set.
2. Set the sprinkler system to deliver approximately 0.5 inch or less of water per acre for best product performance.
3. Fill the supply tank with half of the water amount desired, add this product and agitate it well. Add the Bronate and then add the remaining water amount with agitation. Bronate requires a dilution with at least 4 parts water to 1 part Bronate.
4. Agitation is recommended in the pesticide supply tank when applying this tank mix.
5. The use of a surfactant is not recommended with this tank mix application.
6. Inject this product + Bronate solution at least 8 feet ahead of a right angle turn of irrigation pipe to insure adequate mixing. Allow sufficient time for the herbicide mixture to be flushed through the lines before turning off irrigation water.
7. Follow both this product and Bronate label instructions for spray tank cleanout both before and after application. Flush lines with clean water following application.

8. Do not apply when wind speed favors drift beyond the area intended for treatment. Avoiding spray drift is the responsibility of the applicator.

#### **MIXING INSTRUCTIONS**

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 the 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 nonionic surfactant. Always add surfactant last. 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 6.0-8.0 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 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.

#### **PRODUCT MEASUREMENT**

This product is measured using the product volumetric measuring cylinder. The degree of accuracy of this cylinder varies by  $\pm 7.5\%$ . For more precise measurement, use scales calibrated in ounces.

#### **CROP ROTATION - ALL USES**

Wheat (including durum), Barley, Triticale and Oat may be replanted anytime after the application of this product.

Cotton can be planted 14 days after the application of this product. Sugarbeets, Winter Rape, and Canola can be planted 60 days after the application of this product. Any other crop may be planted 45 days after the application of this product.

#### **SURFACTANTS - ALL USES**

Unless otherwise specified, add a DuPont recommended nonionic surfactant having at least 80% active ingredient at 1 to 2 qt per 100 gal of spray solution (0.25 to 0.5% v/v -refer to TANK MIXTURES for specific adjuvant instructions when this product is used in a tank mix).

For pre-plant burndown in Cotton, include a nonionic surfactant, petroleum based crop oil concentrate, or a 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.

Consult your agricultural dealer, applicator, or DuPont representative for a listing of recommended surfactants. Antifoaming agents may be used if needed.

Do not use low rates of liquid nitrogen fertilizer solution as a substitute for surfactant.

#### **GROUND APPLICATION - ALL USES**

For optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles.

For flat-fan nozzles, use a spray volume of at least 5 gal per acre (GPA).

For flood nozzles on 30" spacings, use at least 10 GPA, flood nozzles no larger than TK10 (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 product applications, as weed control performance may be reduced.

Use screens that are 50-mesh or larger.

#### **AERIAL APPLICATION - ALL USES**

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage at 2 to 5 GPA. Use at least 3 GPA in Idaho, Oregon, or Utah.

Do not apply this product by air in the state of New York.

See the Spray Drift Management section of this label.

#### **GRAZING**

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

#### **SPRAY EQUIPMENT**

For specific application equipment, refer to the manufacturer's recommendations 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 Spray Drift Management section of 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 After Spraying This Product.

#### **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 THIS PRODUCT AND BEFORE SPRAYING CROPS OTHER THAN WHEAT, BARLEY, TRITICALE AND OAT**

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 gal of household ammonia\* (contains 3% active) for every 100 gal 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 min. 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 DuPont-approved cleaner can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions. Consult your Ag dealer, applicator, or DuPont representative for a listing of approved cleaners.

#### **Notes:**

1. CAUTION: Do not use chlorine bleach with ammonia as 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 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 labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of this product and applications of other pesticides to product-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 - 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 ft 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 GUSTY AND 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.

#### **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.

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 recommendations 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 adjacent sensitive crops, 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.
- 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, triticale or oat.

This product is only registered on wheat, barley, oat, triticale and fallow. Do not use on any other crop.

The total rate of this product for wheat (including durum), barley and triticale cannot exceed 1.0 ounce product per acre applied to any one crop during one growing season.

The total rate of this product for oat (spring and winter) cannot exceed 0.4 ounces product per acre applied to any one crop during one growing season.

Varieties of wheat (including durum), barley and triticale may differ in their response to various herbicides. DuPont 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 to a small area.

Under certain conditions such as heavy rainfall, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after product 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 Tank Mixtures) and apply after the crop is in the tillering stage of growth.

This product should not be applied to wheat, barley, triticale or oat that is stressed by severe weather conditions, drought, low fertility, water-saturated soil, disease, or insect damage, as crop injury may result. Risk of injury is greatest when 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, triticale or oat crops underseeded with another crop.

Dry, dusty field conditions may result in reduced control in wheel track areas.

Do not harvest sooner than 45 days after the last application of this product.

### 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: Nonrefillable container.** Do not reuse or refill this container. **Plastic Containers-** 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 1/4 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. Offer for recycling or reconditioning, if available, 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 bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then offer for recycling if available or dispose of bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Refillable container (250 gallon & bulk):** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**Container Disposal for Bulk Containers:** When this container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase or to a designated location named at time of purchase of this product. The container must only be refilled with this pesticide product. **DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.** Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact Company X at XXX-XXX-XXXX. If not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

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.

### WARRANTY DISCLAIMER

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