

66330-405

05/17/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Washington, D.C. 20460

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

Jonathan A. Janis  
Arysta LifeScience North America, LLC  
15401 Weston Parkway, Suite 150  
Cary, NC 27513

MAY 17 2012

**Subject:** Adding additional Storage and Disposal language, including minor label clarification edits and changes to the maximum per season use rate.

**Product name:** Raze Herbicide

**EPA Reg. No:** 66330-405

**Application Dated:** February 16, 2012

Dear Mr. Janis

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

A stamped copy of your label is enclosed for your records. This label supersedes all previously accepted labels. You must submit one (1) copy of the final printed label before you release the product for shipment. Products shipped after eighteen (18) months from the date of this letter 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.

If you have any questions, please contact Grant Rowland at 703-347-0254 or at Rowland.Grant@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Kathryn Montague", is written over a circular stamp.

Kathryn Montague  
Product Manager 23  
Herbicide Branch  
Registration Division (7505P)





Arysta LifeScience

# RAZE<sup>®</sup> Herbicide

GROUP	2	HERBICIDE
GROUP	4	HERBICIDE

## Suspension Concentrate Herbicide

For postemergence control of wild oat, green foxtail, kochia and other grass and broadleaf weeds in spring & winter wheat and durum wheat

### ACTIVE INGREDIENTS:

Flucarbazone-sodium\*,

4,5-Dihydro-3-methoxy-4-methyl-5-oxo-*N*-[[2(trifluoromethoxy)phenyl]sulfonyl]-1*H*-1,2,4-triazole-1-carboxamide, sodium salt..... 3.50%

Fluroxypyr 1-methylheptyl ester\*\*,

((4-amino-3, 5-dichloro-6fluoro-2-pyridinyl)oxy) acetic acid, 1-methylheptyl ester ..... 26.28%

Other Ingredients: 70.22%

Total 100.0%

\*38.5 g ai/L or 0.322 lb ai/gal of Flucarbazone-sodium

\*\* 201.0 g ae/L or 1.68 lb ae/gal acid equivalent Fluroxypyr

## 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 this label, find someone to explain it to you in detail)

#### FIRST AID

##### If on skin or clothing:

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

##### If in eyes:

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

#### HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

**Note to Physician:** May pose an aspiration pneumonia hazard. Probable mucosal damage may contraindicate the use of gastric lavage.

**FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE:** Call PROSAR at 1-866-303-6952 or 1-651-632-8946 if calling from outside the U.S.

**FOR CHEMICAL EMERGENCY:** Spill, leak, fire, exposure, or accident call CHEMTREC at 1-800-424-9300 or 1-703-527-3887 if calling from outside of the U.S.

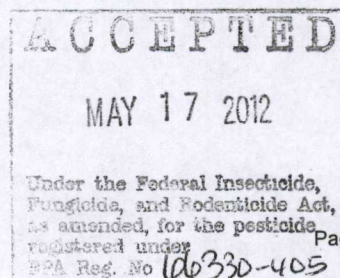
EPA Reg. No. 66330-405

EPA Est. No. \_\_\_\_\_

NET CONTENTS: \_\_\_\_\_

#### Produced for:

Arysta LifeScience North America, LLC  
15401 Weston Parkway, Suite 150 Cary, NC 27513





## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, chewing gum, using tobacco or using the toilet. Wear protective eyewear.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical Resistant Gloves, Category G (such as Barrier Laminate or Viton)
  - o For more options, follow the instructions for Category G on an EPA chemical-resistance category selection chart.
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. 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.

### ENGINEERING CONTROLS STATEMENTS

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### 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.
- 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.

### ENVIRONMENTAL HAZARDS

This product is toxic to fish. 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 apply when weather conditions favor drift or runoff from treated areas as this product may be hazardous to aquatic organisms and non-target plants. Do not contaminate water when disposing of equipment wash waters or rinsate.

Do not allow sprays to drift onto adjacent desirable plants.

#### Important

Read these entire DIRECTIONS FOR USE and WARRANTY AND DISCLAIMER STATEMENT before using RAZE Herbicide.

### PHYSICAL OR CHEMICAL HAZARDS



Do not use or store near heat or open flame.

### **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 interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protections Standard.

**Do not allow worker entry into treated areas during the restricted entry interval (REI) of 24 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 G (such as Barrier Laminate or Viton)
- Shoes plus socks
- Protective eyewear

### **PRODUCT INFORMATION FOR POSTEMERGENCE APPLICATIONS**

RAZE is a selective herbicide for the control of wild oat, green foxtail, Italian ryegrass, windgrass, barnyardgrass, rattail fescue, Persian dandel, yellow foxtail and numerous broadleaf weeds, including kochia, redroot pigweed, wild mustard and bedstraw in spring, durum and winter wheat. RAZE also suppresses numerous other weeds, including cheatgrass and Japanese brome, wild buckwheat, Russian thistle and field bindweed.

RAZE is absorbed by foliage and roots of susceptible weeds, which cease growth soon after application. However, maximum weed control may not be seen for one to two weeks, though susceptible weeds will stop growing and will no longer be competitive. For broader spectrum activity, RAZE may be tank mixed with a broadleaf herbicide listed on this label. See *TANK MIXES* section for recommended products.

RAZE contains active ingredients with two modes of action. Therefore, RAZE will control grass weed biotypes which have developed target site resistance to acetyl CoA carboxylase (ACCase) inhibitors, dinitroanilines and triallates and will control kochia which has developed resistance to acetolactate synthase (ALS) inhibitors. See *RESISTANCE MANAGEMENT* section for additional information.



## USE RESTRICTIONS

- For use only in wheat. Do not allow livestock to graze treated areas or harvest treated forage within 7 days of application.
- Preharvest Interval: Do not apply closer than 14 days before cutting of hay or 60 days before harvesting of grain or straw.
- Do not mix, load or clean spray equipment within 33 feet of well-heads or aquatic systems, including marshes, ponds, ditches, streams, lakes, etc. Do not apply within 50 feet of well-heads or the above mentioned aquatic systems.
- Do not apply postemergence when rain is expected within the hour after application.
- Do not allow this chemical to drift onto other crops. Do not apply this product through any type of irrigation system.
- Do not apply more than 10.6 fl oz/A of RAZE per year.
- Do not make more than one postemergence application of RAZE per year.
- Do not tank mix with herbicide products containing the active ingredient fluroxypyr.
- If applying RAZE Herbicide at the maximum application rate of 10.6 fl oz/A, do not apply any other product containing Flucarbazone-sodium to treated area.
- For Idaho, use only in the counties of Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone. Use in all other counties of Idaho is prohibited.

## MIXING INSTRUCTIONS

Ensure the spray tank is clean. In-line strainers and nozzle screens should be clean and 50 mesh or coarser.

1. Fill the spray tank  $\frac{1}{4}$  to  $\frac{1}{2}$  full with clean water and begin agitation or bypass.
2. Add the appropriate rate of RAZE directly to the spray tank.
3. If a tank mix partner is used add other pesticide.
4. Add adjuvants.
5. Fill the spray tank to the required level.
6. Maintain sufficient agitation during mixing and application of RAZE.

Maintain continuous agitation during mixing, final filling and throughout application. If spraying and agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be re-suspended before spraying is resumed. Settled material may be more difficult to re-suspend than when originally mixed. Agitate spray tank every 12 hours to re-suspend any settled materials. Repeat until spraying can resume and the spray tank is empty.



## **POSTEMERGENCE USE DIRECTIONS** **FOR SPRING, DURUM AND WINTER WHEAT**

### **APPLICATION PROCEDURES**

Best weed control is observed when environmental conditions support vigorous growth of crop and weeds. Research has demonstrated that optimum wheat yield is obtained by early removal of grassy weeds. Apply RAZE to small weeds to maximize wheat's yield potential.

Apply RAZE at 7.0 fl oz/A for control of most grass and broadleaf weeds listed on the label. RAZE can be applied at lower or higher rates under certain conditions. See *RATE CHART* for further information on weed species and herbicide rates.

If PRE-PARE® Herbicide has been applied either preplant or preemergence to the crop, RAZE can be applied sequentially at the rates listed below. Do not exceed a combined total of 0.027 lb ai/A of flucarbazone-sodium per year.

If PRE-PARE is applied at:	Apply RAZE sequentially at:
0.20 oz/A	7.0 fl oz/A
0.25 oz/A	6.0 fl oz/A
0.30 oz/A	5.0 fl oz/A

### **GROUND APPLICATION**

Apply in a spray volume greater than 8 gallons/A at 30 to 50 psi to ensure proper weed coverage. Flat fan nozzles of 80 or 110 degrees are recommended for optimum coverage. Do not use floodjet or control droplet application equipment. Nozzles may be oriented 45 degrees forward to enhance crop penetration and to give better weed coverage.

### **AERIAL APPLICATION**

Apply in water using a minimum spray volume of 3 gallons/A (or 30 liters/ha). For best results, use a minimum of 5 gallons/A (or 50 liters/ha) under dry conditions or heavy weed infestations. Use nozzles that provide 200 to 350 micron size droplets for best results and to insure uniform spray coverage. Aerial applications with RAZE should be made with low drift nozzles at a maximum height of 10 feet above the crop and at a maximum pressure of 30 psi. Do not make aerial applications when wind speed is greater than 10 mph. Do not allow spray to drift onto adjacent crops, as injury or loss may occur.

See the *SPRAY DRIFT MANAGEMENT* section of this label for additional information on how to reduce drift during aerial application.

### **SPRAY DRIFT MANAGEMENT**

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

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not



apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed  $\frac{3}{4}$  the length of the wingspan or rotor.
2. Nozzles must always point backward, parallel with the air stream and never be pointed downwards more than 45 degrees.

When applying RAZE in a tank mix with other herbicides (e.g. 2,4-D, bromoxynil, dicamba, MCPA, sulfonyleurea herbicides) in eastern Washington, observe all applicable Washington State Department of Agriculture herbicide rules.

The applicator must be familiar with and take into account the information covered in the *SPRAY DRIFT MANAGEMENT* section.

### **Information on Droplet Size**

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. 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*).

### **Controlling Droplet Size**

- Volume – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure – Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles – Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation – Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- 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. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

### **Boom Length**

For some use patterns, reducing the effective boom length to less than  $\frac{3}{4}$  of the wingspan or rotor length may further reduce drift without reducing swath width.



**Application Height**

Applications must not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment**

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.)

**Wind**

Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application must be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions**

Applications must not occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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 in 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.

**ENDANGERED SPECIES PROTECTION**

To avoid adverse effects on endangered dicot plant species, the following measures will be required where endangered plant species occur.

This product may have effects on endangered species. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county in which you are applying the product. To obtain Bulletins, no more than six months before using this product, consult <http://www.epa.gov/espp/> or call 1-800-447-3813. You must use the Bulletin valid for the month in which you will apply the product.

One or more of the following conditions must be met for ground applications:

- Apply when there is sustained wind away from native plant communities.
- Use low-pressure nozzles according to manufacturer's specifications that produce only coarse or very coarse droplets.



- Leave a 50 foot untreated buffer between the treatment and native plant communities.

One or more of the following conditions must be met for aerial applications:

- Apply only when there is sustained wind away from native plant communities.
- Leave a 350 foot untreated buffer between the treatment and native plant communities.

### USE RATES AND TIMING OF APPLICATION

Best weed control is observed when environmental conditions support vigorous growth of crop and weeds. Research has demonstrated that optimum wheat yield is obtained by early removal of grassy weeds.

Timing of Postemergence Application to Wheat	
Crop	Growth Stage
Durum, Spring, and Winter Wheat	Apply from 2 leaves to jointing. Winter wheat applications can be made in the fall or spring.

Wheat exposed to water logged or saturated soils or temperature extremes such as hot or freezing weather, drought, low fertility or plant disease immediately prior to or after application could result in unacceptable injury symptoms. Applications to winter wheat going into or coming out of dormancy may be susceptible to injury due to prolonged periods of cold weather and slow wheat growth. Weed control may also be reduced by these same conditions.

Apply RAZE to control grass and broadleaf weeds listed below. See *Rate Chart* for further information on weed species and herbicide rate.



# RATE CHART

Rates of Application for Grass Control (C) or Suppression (S)				
Target Weeds	Weed Growth Stage <sup>4</sup>	Raze Rate		
		7.0 fl oz/A <sup>5</sup>	9.0 fl oz/A	PRE-PARE followed by RAZE <sup>6</sup>
Green Foxtail ( <i>Setaria viridis</i> )	1-4 leaves	C	C	C
Wild Oat ( <i>Avena fatua</i> )	1-4 leaves	C	C	C
Volunteer Tame Oat ( <i>Avena sativa</i> )	1-4 leaves	C	C	C
Barnyardgrass <sup>1</sup> ( <i>Echinochloa crus-galli</i> )	1-4 Leaves	C <sup>2</sup>	C <sup>2</sup>	C
Windgrass ( <i>Apera spica-venti</i> and <i>Apera interrupta</i> )	1-4 Leaves	C	C	C
Cheat (True Cheat) <sup>1</sup> ( <i>Bromus secalinus</i> )	Actively growing		S	C
Japanese Brome <sup>1</sup> ( <i>Bromus japonicus</i> )	Actively growing		S	C
Downy Brome <sup>1</sup> ( <i>Bromus tectorum</i> )	Actively growing		S	S
Italian Ryegrass <sup>1</sup> ( <i>Lolium multiflorum</i> )	1-4 leaf prior to tillering	S	C <sup>2</sup>	S
Rattail Fescue <sup>1</sup> ( <i>Vulpia myuros</i> )	1-4 leaf prior to tillering	S	C <sup>2</sup>	S
Persian Darnel <sup>1</sup> ( <i>Lolium persicum</i> )	1-4 leaf prior to tillering	S	C <sup>2</sup>	S
Yellow Foxtail <sup>1</sup> ( <i>Setaria glauca</i> )	1-4 leaf prior to tillering	S	C <sup>2</sup>	S
Foxtail Barley <sup>1</sup> ( <i>Hordeum jubatum</i> )	1-4 leaf prior to tillering		S	S

<sup>1</sup> Best activity is achieved by applying with a basic blend adjuvant at 1% v/v or 1 quart of non-ionic surfactant per 100 gallons of spray solution (0.25 %v/v) + either liquid nitrogen fertilizer at 1-2 qt/A or ammonium sulfate fertilizer at 1-2 lb/A.

<sup>2</sup> Tank mixes with AUDIT<sup>®</sup> Herbicide or other herbicides containing Tribenuron are required to achieve control of these weeds.

<sup>3</sup> Improved activity is achieved by applying a tank mix of Bromoxynil, 2,4-D Amine or Ester or MCPA Ester.

<sup>4</sup> For suppression of weeds greater than the listed weed growth stage use 10.6 fl oz/A.

<sup>5</sup> Controls light to moderate infestations; for heavy infestations use 9.0 fl oz/A.

<sup>6</sup> Column refers to weeds controlled or suppressed when using PRE-PARE Herbicide prior to crop emergence followed by a sequential application of RAZE Herbicide.



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Rates of Application for Broadleaf Weed Control (C) or Suppression (S)				
Target Weeds	Weed Growth Stage <sup>4</sup>	Raze Rate		
		7.0 fl oz/A <sup>5</sup>	9.0 fl oz/A	PRE-PARE followed by RAZE <sup>6</sup>
Black Mustard ( <i>Brassica nigra</i> )	3 inch	C	C	S
Blue Mustard ( <i>Chorispora tenella</i> )	3 inch	C	C	S
Catchweed bedstraw <sup>3</sup> (cleavers) ( <i>Galium aparine</i> )	3 inch or 2 whorl	C	C	S
Common Chickweed ( <i>Stellaria media</i> )	3 inch	C	C	S
Curly Dock ( <i>Rumex crispus</i> )	3 inch	C	C	S
Field Bindweed ( <i>Convolvulus arvensis</i> )	2 inch	S	S	S
Field Pennycress ( <i>Thlaspi arvense</i> )	3 inch	C	C	S
Flixweed ( <i>Descurania sophia</i> )	3 inch	C	C	S
Hempnettle ( <i>Galeopsis tetrahit</i> )	3 inch	C	C	S
Kochia <sup>3</sup> ( <i>Kochia Scoparia</i> )	3 inch	C	C	S
Ladysthumb ( <i>Polygonum persicaria</i> )	3 inch	C	C	S
Mallow, Common ( <i>Malva neglecta</i> )	2 inch	S	C	S
Nightshade Species ( <i>Solanum species</i> )	2 inch	S	C	S
Pennsylvania Smartweed ( <i>Polygonum pennsylvanicum</i> )	3 inch	C	C	S
Prickly Lettuce <sup>3</sup> ( <i>Lactuca serriola</i> )	2 inch	S	C	S
Ragweed, common ( <i>Ambrosia artemisiifolia</i> )	2 inch	S	S	S
Russian Thistle <sup>3</sup> ( <i>Salsola iberica</i> )	2 inch	S	S	S
Shepherd's Purse ( <i>Capsella bursa-pastoris</i> )	3 inch	C	C	S
Sunflower, common ( <i>Helianthus annuus</i> )	2 inch	S	S	S
Tansy Mustard ( <i>Descurania pinnata</i> )	3 inch	C	C	S
Tumble Mustard ( <i>Sisymbrium altissimum</i> )	3 inch	C	C	S
Volunteer Canola	3 inch	C	C	S



Rates of Application for Broadleaf Weed Control (C) or Suppression (S)				
Target Weeds	Weed Growth Stage <sup>4</sup>	Raze Rate		
		7.0 fl oz/A <sup>5</sup>	9.0 fl oz/A	PRE-PARE followed by RAZE <sup>6</sup>
(conventional) ( <i>Brassica rapa</i> ssp. <i>Canola</i> )				
Volunteer Flax <sup>3</sup> ( <i>Linum usitatissimum</i> )	3 inch	C	C	S
Wild Mustard ( <i>Brassica kaber</i> )	3 inch	C	C	S
Wild Turnip ( <i>Brassica rapa</i> ssp. <i>Slyvestris</i> )	3 inch	C	C	S
Wild Buckwheat <sup>3</sup> ( <i>Polygonum convolvulus</i> )	2 inch	S	S	S
<sup>1</sup> Best activity is achieved by applying with a basic blend adjuvant at 1% v/v or 1 quart of non-ionic surfactant per 100 gallons of spray solution (0.25 %v/v) + either liquid nitrogen fertilizer at 1-2 qt/A or ammonium sulfate fertilizer at 1-2 lb/A. <sup>2</sup> Tank mixes with AUDIT <sup>®</sup> Herbicide or other herbicides containing Tribenuron are required to achieve control of these weeds. <sup>3</sup> Improved activity is achieved by applying a tank mix of Bromoxynil, 2,4-D Amine or Ester or MCPA Ester. <sup>4</sup> For suppression of weeds greater than the listed weed growth stage use 10.6 fl oz/A. <sup>5</sup> Controls light to moderate infestations; for heavy infestations use 9.0 fl oz/A. <sup>6</sup> Column refers to weeds controlled or suppressed when using PRE-PARE Herbicide prior to crop emergence followed by a sequential application of RAZE Herbicide.				



## ADJUVANT USE RATES

RAZE as a standalone or tank mix treatment may be mixed with adjuvants according to the following recommendations. When an adjuvant is to be used with this product, refer to the Chemical Producers and Distributors Association (CPDA) certified adjuvant list.

Specified Adjuvant Use Rates For Durum, Spring and Winter Wheat	
RAZE alone or in tank mixtures	<ul style="list-style-type: none"> <li>• A high quality basic blend at 2-4 qt per 100 gal (0.5-1% v/v) is the preferred adjuvant for RAZE herbicide.</li> <li>• If a basic blend adjuvant is not available use one of the following recommendations:               <ul style="list-style-type: none"> <li>○ non-ionic surfactant at 1-2 qt per 100 gal (0.25-0.5% v/v)</li> <li>○ methylated seed oil (MSO) at 1% v/v.</li> </ul>               (Use a liquid nitrogen fertilizer (28 or 32%UAN) at 1-2 qt/A or ammonium sulfate fertilizer (AMS) at 1-2 lb/A (8.5-17.5 lb/100 gal of spray solution) when using a non-ionic surfactant or methylated seed oil.)             </li> </ul>
RAZE with Emulsifiable Concentrate (EC)-based Herbicides	<ul style="list-style-type: none"> <li>• Follow the adjuvant recommendations listed above unless restricted by the tank mix partner</li> </ul>

## TANK MIXES

For broader spectrum control of broadleaf weeds, RAZE may be mixed with the broadleaf herbicides listed in the following table.

With all tank mix partners, read and follow the use directions, rates, precautions, timing, recropping restrictions, grazing interval restrictions and recommendations on broadleaf herbicide and surfactant labels. The tank mix must be used in accordance with the more restrictive label limitations and precautions for all pesticides used.

## TANK MIX COMPATIBILITY TESTING

Perform a jar test prior to tank mixing to ensure compatibility of RAZE and other pesticides, fertilizers or carriers. Use a clear glass quart jar with lid and mix the tank mix ingredients (including water) in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 30 minutes. If the mixture balls-up, forms flakes, sludge's, gels or forms oily films, layers, or other precipitates, it is not compatible and the tank mix combination should not be used.



## HERBICIDE TANK MIXES

RAZE may be tank mixed with the following herbicides registered for use on wheat, for broader spectrum control or resistance management. Review all herbicide labels for restrictions.

RAZE Herbicide Tank Mix Partners
2,4-D Amine
2,4-D Lo Volatile Ester
AUDIT <sup>®</sup>
Affinity <sup>®</sup> Tank Mix
Affinity BroadSpec
Aim <sup>®</sup> EW
Ally <sup>®</sup>
Ally Extra
Amber <sup>®</sup>
Bromoxynil
Bromoxynil + MCPA
Curtail <sup>®</sup>
Curtail M
Banvel <sup>®</sup> (and other Dicamba brands) <sup>1</sup>
Express <sup>®</sup>
Finesse <sup>®</sup>
Harmony <sup>®</sup> Extra
Harmony GT
Huskie <sup>™</sup>
MCPA Amine or Ester
Orion <sup>®</sup>
Peak <sup>®</sup>
Stinger <sup>®</sup>
<sup>1</sup> Only apply RAZE with a dicamba-containing broadleaf herbicide when targeting control of green foxtail. Control of all other grasses will be reduced.

## ADDITIONAL INFORMATION

### SPRAYER CLEAN-UP

The spray equipment must be cleaned before RAZE is sprayed. Follow the cleanup procedures specified on the labels of the previously applied products. If no directions are provided, follow the steps outlined below.

When multiple loads of RAZE are applied, the interior of the tank should be rinsed with fresh water and then partially filled, and the boom and hoses flushed at the end of each day of spraying. This will prevent the buildup of dried pesticide deposits, which can accumulate in the application equipment.

Clean sprayer using the following procedures:

1. Drain the tank and thoroughly rinse spray tank, boom and hoses with clean water especially all visible deposits.
2. Fill the tank with water and add household ammonia to make a 1% v/v solution (1 gal/100 gal). Flush the hoses, boom and nozzles with the cleaning solution.



Circulate for at least 15 minutes. Flush hoses, boom and nozzles once more and then drain the tank.

3. Clean nozzles and screens in a separate container using the 1% v/v solution of ammonia and water.
4. Repeat Step 2.
5. Rinse tank and flush boom and hoses with clean water.

Do not clean sprayer near desirable vegetation, wells or other water sources:

- Dispose of all rinsate in accordance with pertinent regulations.
- Check tank mix partner label for any additional clean-up procedures.

### RESISTANCE MANAGEMENT

RAZE contains an acetolactate synthase (ALS) inhibiting herbicide and a synthetic auxin (carboxylic acid) herbicide. Any weed population may contain or develop plants naturally resistant to a herbicidal mode of action. Resistant biotypes may eventually dominate the weed population if herbicides with an identical mode of action are used repeatedly in the same field and weed control may fail. Where possible, rotate the use of RAZE with herbicides that have a different mode of action.

Populations of dicamba-tolerant kochia are prevalent in the state of Montana. Use RAZE at 9.0 or 10.6 fl oz/A for dicamba-tolerant kochia populations and rotate to herbicides that do not contain dicamba to minimize selection pressure.

Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. The use of RAZE should conform to resistance management strategies established for the use area. Consult your agricultural advisor for resistance management strategies and recommended pest management practices for your area.

### CROP ROTATION RESTRICTIONS

Interval	Crops
0 Days	Spring and Winter Wheat
4 Months	Durum Wheat
6 Months	STS Soybeans
9 Months	Barley
	Canola
	Dry Edible Beans
	Flax
	Potatoes
	Safflower
	Soybeans
	Sugarbeets
11 Months	Sunflowers
	Corn
24 Months	Field peas
	Lentils
	Mustard

As RAZE is degraded by soil microbes, environmental conditions that decrease microbial activity must be considered when making rotational cropping decisions. These



environmental conditions include prolonged drought and/or cold temperatures within and following the cropping season, as well as soils with both low organic matter (OM, less than 2%) and high pH (greater than 7.5). If these conditions exist, a soil bioassay may be necessary to ensure rotational crop safety.

### STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of pesticide as directed below. In spill or leak incidents, keep unauthorized people away. For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC (800) 424-9300 or (703) 527-3887 if calling from outside of the U.S.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

#### Container Handling:

**Rigid, Non-refillable containers small enough to shake (i.e., with capacities equal to or less than 5 gallons).**

Non-refillable container. Do not reuse or refill this container. Triple rinse or pressure 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  $\frac{1}{4}$  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, if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Once container is rinsed, offer for recycling if available, or puncture and dispose of in a sanitary landfill.

**Rigid Non-refillable containers that are too large to shake (i.e., with capacities greater than 5 gallons or 50 lbs).**

**Non-refillable containers.**



Do not reuse or refill this container. After emptying product from container, either return container to Arysta LifeScience per instructions from Arysta LifeScience North America service center (1-866-761-9397), or rinse and either recycle or dispose of the container as follows: Bottom Discharge IBC (e.g. Schuetz Caged IBC or Snyder Square Stackable).

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

**Top Discharge IBC, Drums, Kegs (e.g. Snyder 120 Next Gen, Bonar B120, Drums, and Kegs).**

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or rinsate collection system. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times. Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill.

**Refillable Containers**

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.

**Refilling or Returning Containers**

If refilling or returning container is planned, end users are not authorized to remove tamper evident cables, one way valves or clean container.

**Recycle or Disposal of Containers**

End users are authorized to remove tamper evident cable as required to remove the product from the container unless the container is equipped with one way valves and refilling or returning is planned. Instructions for container rinsing and either recycling or disposal are as follows:

**Bottom Discharge IBC (e.g. Schuetz Caged IBC or Snyder Square Stackable).**

Pressure rinsing 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 pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

**Top Discharge IBC, Drums, Kegs (e.g. Snyder 120 Next Gen, Bonar B120, Drums and Kegs).**



Triple rinsing 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 triple rinse the containers before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Contact your Ag retailer for container return, disposal and recycling recommendations.

### **Warranty and Disclaimer Statement**

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America, LLC ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. All such risks shall be assumed by the user or buyer.

Arysta warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

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