

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

October 27, 2015

Ms. Cheryl R. Wagner Agent for Rotam Agrochemical Company Ltd. Rotam Agrochemical Company Ltd. c/o Wagner Regulatory Associates, Inc. P.O. Box 640 Hockessin, DE 19707

Subject: Notification per PRN 98-10 – Update to Storage and Disposal section

Product Name: Rimsulfuron 25% SG EPA Registration Number: 83100-40

Application Date: 10/08/2015 Decision Number: 510302

Dear Ms. Wagner:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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If you have any questions, you may contact Lisa Pahel at 703-347-0459 or via email at pahel.lisa@epa.gov.

Sincerely,

Heather Garvie, Product Manager 24

Fungicide and Herbicide

Hoather a Hamie

Registration Division (7505P)

Office of Pesticide Programs

GROUP

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HERBICIDE

# Rimsulfuron 25% SG

## **Water Soluble Granule**

For Weed Control in Field Corn, Citrus Fruit, Stone Fruit, Tree Nuts, Pome Fruit, Grapes, \*Blueberry (High and Low Bush), Caneberry (Raspberry, Blackberry), Potatoes, Potatoes Grown for Seed, Field-Grown Tomatoes, Preplant Weed Control in Cotton and Soybeans, Rangeland Restoration, Non-Crop Sites including Industrial Sites, Roadsides, Highway Medians, Utility Substations, Non-Cropland Wildlife Habitats.

\*NOT FOR USE ON BLUEBERRIES, CANEBERRIES, PREPLANT BURNDOWN IN COTTON AND SOYBEAN IN THE STATE OF CALIFORNIA.

# KEEP OUT OF REACH OF CHILDREN CAUTION

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	Call a poison control center or doctor immediately for treatment advice. Have a person	
SWALLOWED:	sip a glass of water if able to swallow.	
	<ul> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> </ul>	
	<ul> <li>Do not give anything to an unconscious person.</li> </ul>	
IF ON SKIN:	N SKIN:  • Take off contaminated clothing.	
<ul> <li>Rinse skin with plenty of water for 15 to 20 minutes.</li> </ul>		
	<ul> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	

# HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24-Hour Medical Emergency Assistance (Human or Animal) call: **1-800-222-1222**. For Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) call CHEMTREC: **1-800-424-9300**.

[See [complete] [additional] [First Aid] [Precautionary Statements] [and] Directions For Use inside booklet.]

EPA Reg No. 83100-40

**EPA Est. No. XXXXX-XX** 

## **NET CONTENTS:**

# Manufactured By [For]:

Rotam Agrochemical Company Ltd. 26/F E-Trade Plaza 24 Lee Chung Street Chai Wan, Hong Kong

# NOTIFICATION

83100-40

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

10-27-2015

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# PRECAUTIONARY STATEMENTS HAZARD TO HUMANS AND DOMESTIC ANIMALS KEEP OUT OF REACH OF CHILDREN

**CAUTION:** Harmful if swallowed. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

# 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
- · shoes plus socks
- chemical resistant gloves from category A such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber ≥14

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.

# **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

- Wash hands thoroughly with soap and water after handling and 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 and wash contaminated clothing before reuse.
- 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.

### **ENGINEERING CONTROL 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, Part 170, Section 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

# **ENVIRONMENTAL HAZARDS**

Do not apply directly to water, 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.

# AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and 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 Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 4 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
- shoes plus socks
- chemical resistant gloves (such as Natural Rubber, Selection Category A)

# NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses. Use on non-crop sites and turf (unimproved) are not within the scope of the Worker Protection Standard. Do not enter or allow worker entry into treated areas until sprays have dried.

# **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with the terms of this label.

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 in your State responsible for pesticide regulation.

#### PRODUCT INFORMATION

Use **Rimsulfuron 25% SG** only in accordance with instructions on this label or in separate published labeling. Rotam will not be responsible for losses or damage resulting from the use of this product in any manner not specifically instructed by Rotam. **Rimsulfuron 25% SG** is a water-soluble granule formulation that selectively controls certain grass and broadleaf weeds in pome fruit, citrus fruit, tree nut, stone fruit, and grape crops that have been established for at least one full growing season, and in blueberries and caneberries. **Rimsulfuron 25% SG** selectively controls certain grass and broadleaf weeds in potatoes, potatoes grown for seed, field-grown tomatoes (direct-seeded and transplant), and field corn. **Rimsulfuron 25% SG** restores rangeland infested with invasive weed species and along roadsides and highway medians, at industrial plant sites, utility substations, and other non-agricultural or non-cropland sites. Apply **Rimsulfuron 25% SG** 30 days or more pre-plant to cotton or soybeans for winter vegetation management.

**Rimsulfuron 25% SG** has post-emergence and residual (pre-emergence to weeds) activity. Rainfall or sprinkler irrigation is needed within 2 weeks of application to activate **Rimsulfuron 25% SG** in the soil. For the most effective weed control, rainfall or sprinkler irrigation is needed within 5 to 7 days after application to move **Rimsulfuron 25% SG** into the soil.

Optimum post-emergence control is reached when **Rimsulfuron 25% SG** is applied to young, actively growing weeds. The degree and duration of control depends on:

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

Check with your state extension service or Department of Agriculture before use to be certain **Rimsulfuron 25% SG** is registered in your state.

#### **TANK MIXTURES**

To broaden the weed control spectrum and/or extend the residual effectiveness of **Rimsulfuron 25% SG**, tank mix **Rimsulfuron 25% SG** with other registered herbicides affecting a different site of action (mode of action) and/or adjuvants registered for use on the crops listed on **Rimsulfuron 25% SG** labeling. Refer to the label(s) of the tank mix partners for any additional use instructions or restrictions. **Do not use Rimsulfuron 25% SG in a spray solution with additives that buffer the pH to below 4.0 or above 8.0 to avoid degradation of Rimsulfuron 25% <b>SG.** 

## **Tank Mix Compatibility Testing**

Perform a jar test prior to tank mixing to ensure compatibility of **Rimsulfuron 25% SG** and other pesticides. Use a clear quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately ½ hour. If the mixture balls-up, forms flakes, sludge, gel, oily film or layers, or other precipitates, do not use it because it is not compatible.

See section: "ADDITIONAL USE INFORMATION - ALL CROPS AND USES" for additional information.

#### USES

BURNDOWN AND RESIDUAL CONTROL OF CERTAIN ANNUAL GRASS AND BROADLEAF WEEDS WHEN APPLIED PRE-EMERGENCE AND POST-EMERGENCE TO FIELD CORN

# **APPLICATION INFORMATION FOR FIELD CORN**

Rimsulfuron 25% SG is a selective herbicide for burndown and residual control of certain annual grass and broadleaf weeds when applied pre-emergence and post-emergence to field corn. Apply Rimsulfuron 25% SG to "Roundup Ready" corn in tank mix combinations with glyphosate herbicides such as Glyfos® or Glyfos® X-TRA to add residual control for later emerging weeds. Residual weed control is dependent on rainfall or sprinkler irrigation for herbicide activation.

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If cultivation is necessary because of soil crusting, soil compaction, or weed germination before rain or irrigation occurs, use shallow tillage such as a rotary hoe to lightly incorporate **Rimsulfuron 25% SG** and make certain corn seeds are below the tilled area.

Use **Rimsulfuron 25% SG** in a planned sequential application herbicide program followed by an in-crop application of **Rimsulfuron 25% SG** and/or other post-emergence-applied corn herbicides. Refer to the label of the respective sequential partner for specific use directions.

Allow at least 4 weeks between pre-emergence applications of **Rimsulfuron 25% SG** and post-emergence applications of **Rimsulfuron 25% SG**. Make sequential applications after the corn has reached the 2-collar stage and before the corn exceeds the maximum application height listed on the respective product labels.

Apply **Rimsulfuron 25% SG** to field corn hybrids with a relative maturity (RM) of 77 days or more, including "food grade" (yellow dent, hard endosperm), waxy, and High-Oil corn. Not all field corn hybrids of less than 77 RM and not all white corn hybrids or Hi-Lysine hybrids have been tested for crop safety, nor does Rotam have access to all seed company data. Consequently, injury arising from the use of **Rimsulfuron 25% SG** on these types of corn is the responsibility of the user. Consult with your seed supplier before applying **Rimsulfuron 25% SG** to any of these corn types. Seed company publications indicate "Warning", "Crop Response Warning", or "Sensitive" notations for the use of some ALS herbicides on corn hybrids of 77 RM or higher. As noted in the seed company publications, use sulfonylurea herbicides such as **Rimsulfuron 25% SG** with caution on these hybrids.

#### **Field Corn Restrictions:**

- Do not apply to field corn grown for seed or to popcorn or sweet corn.
- Do not apply pre-emergence to coarse-textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter.
- Do not apply by air in the States of California and New York.

### **FALLOW (BURNDOWN)**

#### **Use Rates**

Apply 1-2 ounces per acre of Rimsulfuron 25% SG.

# **Application Timing**

Apply **Rimsulfuron 25% SG** as a fallow treatment in the spring or fall when the majority of weeds have emerged and are actively growing. Field corn may be planted to this treated area at any time.

## **Tank Mixtures in Fallow**

Use **Rimsulfuron 25% SG** as a fallow treatment and tank mix with other herbicides that are registered for use in fallow. Read and follow all instructions on this label and the labels of any tank mix partner before using any other herbicide in mixtures with **Rimsulfuron 25% SG**. If the directions on the tank mix partner label conflict with this **Rimsulfuron 25% SG** label, do not use in a tank mixture with **Rimsulfuron 25% SG**.

## **PRE-EMERGENCE TO FIELD CORN**

# **Pre-Emergence Rates**

Apply 0.5-2.0 oz. product per acre **Rimsulfuron 25% SG** before corn emergence. Apply 1-1 $\frac{1}{2}$  oz. per acre for most applications.

# **Application Timing**

Apply **Rimsulfuron 25% SG** pre-emergence or pre-plant to corn. Applications of **Rimsulfuron 25% SG** made before weed emergence will provide residual control of labeled weeds. Control of emerged weeds require the addition of spray adjuvants as noted below.

## POST-EMERGENCE TO FIELD CORN

# **Post-Emergence Rates**

Apply 0.5-2 oz. per acre **Rimsulfuron 25% SG** as a post-emergence broadcast application. Apply 1 oz. per acre for most applications.

# **Application Timing**

**To crop:** Apply **Rimsulfuron 25% SG** to corn that is up to 12 inches tall. Do not apply to corn taller than 12 inches or exhibiting 6 or more leaf collars, whichever is more restrictive. Post-emergent applications of **Rimsulfuron 25% SG** will provide contact control of labeled weeds and limited residual control of later emergence.

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**To weeds:** Apply tank mixtures of **Rimsulfuron 25% SG** with glyphosate or glufosinate herbicides after weeds emerge and before they reach the maximum size listed on the glyphosate and glufosinate herbicide labels.

#### **Post-Emergence Restrictions**

 Do not apply more than 1.0 oz. active ingredient (4 oz. product) rimsulfuron per acre during the crop year from all sources. This includes combinations of pre-emergence and post-emergence applications of Rimsulfuron 25% SG or other rimsulfuron-containing products.

#### **SPRAY ADJUVANTS**

Apply **Rimsulfuron 25% SG** to control emerged weeds with a nonionic surfactant and an ammonium nitrogen fertilizer. If applied in a tank mix combination with a glyphosate herbicide product such as Glyfos® X-TRA or a glufosinate product such as Liberty® that contains a built-in adjuvant system, do not add surfactant. Use a crop oil concentrate in place of nonionic surfactant for burndown applications of **Rimsulfuron 25% SG** made before crop emerges. Products must contain only EPA-exempt ingredients (40 CFR 910 or 40 CFR 920).

## Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- Use MSO adjuvants 0.5% v/v (0.5 gallon per 100 gallons spray solution) if specifically noted on adjuvant product labeling.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

## **Nonionic Surfactant (NIS)**

- Apply at 0.25% v/v (1 qt. per 100 gals. spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12

# **Ammonium Nitrogen Fertilizer**

- Use 2 qts. per acre of a high-quality urea ammonium nitrate (UAN) such as 28%N or 32%N, or 2 lbs. per acre of a spray-grade ammonium sulfate (AMS).
- Do not use liquid nitrogen fertilizer as the total carrier solution after crop emergence.

#### **Special Adjuvant Types**

- Use of combination adjuvant products at doses that provide the required amount of NIS and ammonium nitrogen fertilizer is allowed. Consult product labeling for use rates and restrictions.
- Do not use any other adjuvant rates or mixtures with **Rimsulfuron 25% SG** unless instructed to do so on Rotam labeling.

#### WEEDS CONTROLLED/SUPPRESSED IN FIELD CORN

Pre-Emergence Control		
Grass Weeds	Broadleaf Weeds	
Barnyardgrass	Carpetweed*	
Bluegrass, annual*	Chamomile, false	
Crabgrass, large*	Cocklebur*	
Foxtail (bristly, giant, green, yellow)	Filaree, Redstem	
Panicum, fall*	Henbit	
Signalgrass, broadleaf*	Jimsonweed*	
Wheat, Volunteer	Kochia (ALS-sensitive)	
Wild Oat*	Lambsquarters, common	
	Morningglory, ivyleaf*	
	Mustard (birdsrape, black)	
	Nightshade* (hairy, black)	
	Palmer, amaranth*	
	Pigweed (prostrate, redroot, smooth)	
	Purslane, common	
	Ragweed, common*	
	Russian thistle, seedling*	
	Smartweed, Pennsylvania*	
	Velvetleaf*	

Post-Emergence Control  Grass Weeds (1-2")  Broadleaf Weeds (1-3")		
Barley, volunteer	Alfalfa, volunteer^	
Barnyardgrass	Canada, thistle*	
Bluegrass, annual	Chickweed, common	
Crabgrass, large (1/2")	Cocklebur*	
Cupgrass, woolly (1")	Dandelion (6" diameter)	
Foxtail (bristly, giant, green, yellow)	Henbit	
Johnsongrass, seedling*	Kochia	
Millet, wild-proso*	Lambsquarters, common*	
Panicum, fall	Morningglory, ivyleaf*	
Quackgrass*	Mustard (birdsrape, black, wild)	
Ryegrass, Italian*	Nightshade, hairy*	
Shattercane (4")	Pigweed, (prostrate, redroot, smooth)	
Signalgrass, broadleaf*	Purslane, common*	
Stinkgrass*	Ragweed, common*	
Wheat, volunteer	Shepherd's purse	
Wild oat*	Smartweed, Pennsylvania*	
Yellow nutsedge*	Wild radish	
•	Velvetleaf*	

## **TANK MIXTURES**

Tank mix **Rimsulfuron 25% SG** with full or reduced rates of other products registered for use in corn. Read and follow all manufacturers' label instructions for the companion herbicide. If the instructions conflict with this **Rimsulfuron 25% SG** label, do not use a tank mixture with **Rimsulfuron 25% SG**.

## **Pre-Emergence to Corn**

# For Additional Control of Grass and Broadleaf Weeds

Tank mix **Rimsulfuron 25% SG** with full or reduced rates of pre-emergence grass and broadleaf herbicides such as atrazine, Metolachlor, S-Metolachlor, "Harness", "Outlook", "Balance PRO", and "Lumax" to provide added residual activity or burndown activity on emerged weeds. Consult tank mix partner labeling for rate and soil-type restrictions.

# **Post-Emergence Application to Corn**

## **Tank Mixtures with Glyphosate**

Tank mix **Rimsulfuron 25% SG** with glyphosate herbicides if applications are made to corn hybrids containing the "Roundup Ready" gene. Consult with your seed supplier to confirm the corn hybrid is "Roundup Ready" before making any herbicide application containing glyphosate herbicides.

When used in a tank mixture with glyphosate herbicides, 1 oz. **Rimsulfuron 25% SG** will deliver improved burndown and/or residual activity on the following weeds, as compared to glyphosate used alone:

and/or residual activity on the following	weeds, as compared to glyphosate used	alone:
Alfalfa, volunteer*	Johnsongrass, seedling	Sandbur (field, longspine)
Barley, volunteer	Kochia	Shepherd's purse
Barnyardgrass	Lambsquarters, common	Signalgrass, broadleaf
Bluegrass, annual	Millet, wild-proso	Smartweed, Pennsylvania
Canada thistle	Morningglory, ivyleaf	Stinkgrass
Chamomile, false	Mustard (birdsrape, black, wild)	Velvetleaf
Chickweed, common	Nightshade, hairy	Wheat, volunteer
Cocklebur	Panicum, fall	Wild buckwheat
Crabgrass	Pigweed (prostrate, redroot, smooth)	Wild oat
Dandelion (6" diameter)	Purslane, common	Wild radish
Filaree, redstem	Quackgrass	Yellow nutsedge
Foxtail (bristly, giant, green, yellow)	Ragweed, common	
Henbit	Ryegrass, Italian	
* Except in California.		

# **Tank Mixtures with Glufosinate**

Tank mix **Rimsulfuron 25% SG** with glufosinate herbicides if applications are made to corn hybrids containing the "Liberty Link" gene. Consult with your seed supplier to confirm the corn hybrid is "Liberty Link" before applying any herbicide containing glufosinate.

[Brackets throughout label indicate optional graphics or instructional language.]

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When used in tank mixtures with glufosinate herbicide, 0.75 oz. **Rimsulfuron 25% SG** will deliver improved burndown and/or limited residual activity on the following weeds, as compared to glufosinate used alone:

Foxtail (giant, yellow)

Lambsquarters, common

Pigweed, redroot

Velvetleaf

#### For Additional Control of Kochia

Tank mix **Rimsulfuron 25% SG** with  $\frac{1}{2}$  pint per acre of "Starane" for improved control of kochia. Use higher rates within the specified rate range if weed infestation is heavy. Refer to the specific "Starane" label for application timing and restrictions. Tank mix **Rimsulfuron 25% SG** with "Starane" and additional  $\frac{1}{16}$  to  $\frac{1}{2}$  lb. active ingredient dicamba (such as 2 to 4 fluid oz. of "Banvel" or "Clarity") for broader spectrum weed control.

#### For Additional Control of Broadleaf Weeds

Tank mix **Rimsulfuron 25% SG** with 2 pints per acre of "Lumax" or 2 ½ pints per acre of "Lexar" for improved burndown or residual control of several broadleaf weeds including common waterhemp, common ragweed, common lambsquarters, and velvetleaf. When applying mixtures of **Rimsulfuron 25% SG** plus "Lumax" or "Lexar", use a nonionic surfactant. Refer to "Lumax" or "Lexar" labels for additional information regarding application timing, tank mixtures, adjuvants, and rotational crops.

#### For Additional Control of Broadleaf Weeds

Tank mix **Rimsulfuron 25% SG** 0.5 to 0.75 fluid ounces per acre of "Impact" plus atrazine at 0.375 to 1.5 pounds active per acre for improved burndown or residual control of several broadleaf weeds including common waterhemp, common ragweed, common lambsquarters, and velvetleaf. When applying mixtures of **Rimsulfuron 25% SG** plus "Impact" at 0.5 fluid ounces per acre, use methylated seed oil. Refer to "Impact" label for additional information regarding application timing, tank mixtures, adjuvants, and rotational crops.

#### **BROADLEAF WEED PRECAUTIONS:**

- Rimsulfuron 25% SG can interact with certain insecticides previously applied to the crop. Crop response varies with field corn type, insecticide used, insecticide application methods, and soil type.
- Rimsulfuron 25% SG can be applied to corn previously treated with non-organophosphate soil insecticides regardless of soil type.
- Allow at least 60 days between a pre-emergence or pre-plant application of Rimsulfuron 25% SG and application
  of organophosphate insecticide.
- Crop injury may occur following an application of Rimsulfuron 25% SG if there is a prolonged period of cold weather and/or in conjunction with wet soils.

# **BROADLEAF WEED RESTRICTIONS:**

- Do not apply Rimsulfuron 25% SG within 45 days of crop emergence where an organophosphate insecticide
  was applied as in-furrow treatment.
- Do not tank mix Rimsulfuron 25% SG with foliar-applied organophosphate insecticides such as "Lorsban", malathion, parathion, etc.
- Do not tank mix Rimsulfuron 25% SG with "Basagran".
- Do not graze, feed forage, grain or fodder (stover) from treated areas to livestock within 30 days of Rimsulfuron 25% SG application.
- Do not irrigate Rimsulfuron 25% SG into coarse soils at planting time when soils are saturated.
- Do not apply Rimsulfuron 25% SG or drain or flush application equipment on or near desirable trees or other
  plants, or in 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.
- Do not allow spray mixture to drift or contract desirable plants.
- Do not contaminate any body of water.
- Do not use application equipment until it has been thoroughly cleaned.
- Do not treat frozen soil.
- Do not apply through any type of irrigation system.
- Do not use flood or furrow irrigation to apply Rimsulfuron 25% SG.

## **CHEMIGATION**

Do not apply **Rimsulfuron 25% SG** through any type of irrigation system in field corn.

#### **GROUND APPLICATION**

Use a minimum of 15 gallons of water per acre (GPA) to ensure thorough coverage of weeds and the best performance. Use a minimum of 10 GPA for light, scattered stands of weeds. Select nozzles and pressure that deliver MEDIUM spray droplets as indicated by ASABE Standard S572.1. Nozzles that deliver COARSE spray droplets can be used to reduce drift, provided spray volume is increased to maintain coverage on small weeds. For optimal product performance and minimal spray drift, adjust the spray boom to the lowest possible spray height suggested in manufacturer's specifications. Ensure that equipment is set up to avoid applying an excessive rate directly over the rows and into the corn plant whorl. Overlaps or starting, stopping, slowing, and turning while spraying may result in crop injury.

#### **AERIAL APPLICATION**

## Aerial application is prohibited in the states of California and New York.

Use MEDIUM or COARSE nozzles that will provide optimum spray distribution and maximum coverage at a minimum of 5 GPA. Do not apply during a temperature inversion, when wind speed is less than 3 mph or above 10 mph, or when conditions favor poor coverage and/ or off-target spray drift. (See "Additional Use Information" section of this label.)

# COTTON/SOYBEAN - PRE-PLANT ONLY

Not for use in California.

#### **APPLICATION INFORMATION**

#### Rate

Apply 1.0 oz. per acre Rimsulfuron 25% SG.

#### **Timing to Crop**

Apply **Rimsulfuron 25% SG** pre-plant after fall harvest through early spring 30 days or more prior to planting, whenever the ground is not frozen, to control emerged weeds and to provide limited residual control of early-emerging spring weeds.

### **Burndown Tank Mixtures**

Use **Rimsulfuron 25% SG** as a pre-plant residual burndown treatment and tank mix with other herbicides that are registered for pre-plant in cotton/soybean, including glyphosate, paraquat, glufosinate, 2,4-D LVE, and dicamba. Read and follow all instructions on this label and the labels of any tank mix partner before using in mixtures with **Rimsulfuron 25% SG**. If the instructions on the tank mix label conflict with this **Rimsulfuron 25% SG** label, do not use in a tank mixture with **Rimsulfuron 25% SG**. Always follow directions of the most restrictive label.

# **Sequential Application – Soybeans**

Use **Rimsulfuron 25% SG** in a sequential herbicide program in soybean. Apply **Rimsulfuron 25% SG** for burndown and residual weed control 30 days or more prior to planting. Refer to the product labels for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to application.

## **Additional Control of Grass and Broadleaf Weeds**

Tank mix Rimsulfuron 25% SG with full or reduced rates of pre-plant herbicides registered for cotton and soybean.

# **SPRAY ADJUVANTS**

To control of emerged weeds, apply **Rimsulfuron 25% SG** with an appropriate adjuvant. If applied in a tank mix combination with a glyphosate herbicide product such as Glyfos® X-TRA or a glufosinate product such as Liberty® that contains a built-in adjuvant system, no additional surfactant needs to be added. Product must contain only EPA-exempt ingredients.

# Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- $\bullet$  Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- Use MSO adjuvants at 0.5% v/v (0.5 gallon per 100 gallons spray solution) if specifically noted on adjuvant product labeling.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

# Nonionic Surfactant (NIS)

• Apply at 0.25% v/v (1 qt. per 100 gallons spray solution).

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• Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

#### **Ammonium Nitrogen Fertilizer**

In addition to a spray adjuvant, an ammonium nitrogen fertilizer may be used.

• Use 2 qts. per acre of a high-quality urea ammonium nitrate (UAN) such as 28%N or 32%N, or 2 lbs. per acre of a spray-grade ammonium sulfate (AMS).

#### **Special Adjuvant Types**

- Combination adjuvant products can be used at doses that provide the required amount of NIS and ammonium nitrogen fertilizer. Consult product labeling for use rates and restrictions.
- Do not use any other adjuvant rates or mixtures with **Rimsulfuron 25% SG** unless instructed to do so on Rotam labeling.

## **Mixing Instructions**

#### **Fertilizer Carrier Instructions**

Mix **Rimsulfuron 25% SG** with water or pre-dissolve in water and add to liquid fertilizer for pre-emergence application. When using liquid fertilizer as the carrier, always pre-slurry **Rimsulfuron 25% SG** in water before adding fertilizer solutions. Add the **Rimsulfuron 25% SG** slurry to the final complete liquid fertilizer mixture – do not add **Rimsulfuron 25% SG** during the fertilizer mixing process.

Always maintain good agitation while adding the **Rimsulfuron 25% SG** slurry to liquid fertilizers and maintain good agitation until sprayed. When using liquid fertilizer as the carrier, conduct a compatibility test with all components prior to mixing.

Do not use with spray additives or liquid fertilizer carriers 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 Rimsulfuron 25% SG

# **Ground Application**

Use a minimum of 15 gallons of water per acre (GPA) to ensure thorough coverage of the weeds and the best performance. Use a minimum of 10 GPA for light, scattered stands of weeds. For best performance, select nozzles and pressure that deliver MEDIUM spray droplets as indicated by ASABE Standard S572.1. Nozzles that deliver COARSE spray droplets may be used to reduce drift, provided spray volume is increased to maintain coverage on small weeds.

For optimal product performance and minimal spray drift, adjust the spray boom to the lowest possible spray height recommended in manufacturers' specifications.

#### **Aerial Application**

Use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage at a minimum of 5 GPA

Do not apply during a temperature inversion, when winds are gusty, or when conditions favor poor coverage and/or off target spray movement. (See "Additional Use Information" section of this label.)

#### **Cotton/Soybean Precautions**

- Allow at least 3 weeks between pre-emergence applications of Rimsulfuron 25% SG and post-emergence applications of rimsulfuron containing products.
- Rimsulfuron 25% SG may interact with certain insecticides applied to soybean, cotton, or corn. Crop response varies with field crop, insecticide used, insecticide application method, and soil type.
- Rimsulfuron 25% SG may be applied to crops previously treated with "Fortress", "Aztec", or "Force" insecticides or other non-organophosphate (OP) soil insecticides regardless of soil type.
- Preplant/Pre-emergence applications of **Rimsulfuron 25% SG** where an application of "Nufos" or "Thimet" is planned may cause unacceptable crop injury, especially on soils of less than 4% organic matter.
- Thoroughly clean application equipment immediately after use. (See "Sprayer Cleanup" section of this label for instructions.)
- Crop injury may occur following an application of **Rimsulfuron 25% SG** if there is a prolonged period of cold weather and/or in conjunction with wet soils.

## Cotton/Soybean Restrictions

- Do not plant cotton or soybean fewer than 30 days following an application of Rimsulfuron 25% SG
- Do not apply more than a total of 1.0 ounce active ingredient (4 ounces product) rimsulfuron per acre per crop year from all sources.
- Do not apply pre-emergence to crops planted into coarse-textured soils (sand, loamy sand, or sandy loam) with less than 1% organic matter.
- Do not apply through any type of irrigation system
- Do not graze, feed forage, grain, or fodder (stover) from treated areas to livestock within 30 days of Rimsulfuron 25% SG application.
- Do not tank mix **Rimsulfuron 25% SG** with bentazon ("Basagran").
- Do not apply to frozen soil.
- Do not contaminate any body of water.
- Do not apply Rimsulfuron 25% SG or drain or flush application equipment on or near desirable trees or other
  plants, 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 allow spray to drift or contact desirable plants (See "Spray Drift" section of this label for instructions)
- Do not use on lawns, walks, driveways, tennis courts, or similar areas.

## RIMSULFURON 25% SG ROTATIONAL CROP GUIDELINES (COTTON, FIELD CORN, SOYBEAN)

The following rotational intervals must be observed when using Rimsulfuron 25% SG:

1 OZ. MAXIMUM USE RATE	
Rotation Crop	Interval (Months)
Field Corn, Potatoes	Anytime
Cotton, Soybeans, Tomato	1
Cereals, Winter (wheat)	3
Cereals, Spring (wheat, oats, barley)	9
Alfalfa*†, Beans (dry and snap), Canola†, Corn (pop or sweet), Cucumber, Flax, Peas, Rice**, Red Clover†, Sorghum†, Sunflower, Sugarbeets†	10
Crops Not Listed	18

- On sprinkler irrigated fields in Idaho, Utah, and Northern Nevada it is best to use deep fall tillage such as plowing prior to planting alfalfa. Product degradation may be less on furrow-irrigated soils and may result in some crop injury.
   18 months in the Red River Valley region of ND and MN. In all other areas, the rotation intervals must be extended to 18
- 18 months in the Red River Valley region of ND and MN. In all other areas, the rotation intervals must be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the growing season.
- \*\* For soils with pH less than 6.5

2 OZ. MAXIMUM USE RATE	
Rotation Crop	Interval (Months)
Corn (field), Potatoes, Optimum GAT Soybeans	Anytime
Tomato	1
STS Soybeans***, Cereals, Winter (wheat)	4
Cereals, Spring (wheat, oats, barley)	9
Beans (dry and snap), Corn (pop or sweet), Cotton†,	10
Cucumber, Flax, Soybeans, Sunflower	
Crops Not Listed	18

<sup>†</sup> The rotation interval must be extended to 18 months if drought conditions prevail after application and before the rotation crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the growing season.

**NOTE:** Do not use **Rimsulfuron 25% SG** in a tank-mix or sequential application program with other soil residual ALS-inhibiting herbicides as the combined effects of these herbicides on the planting of subsequent crops have not been thoroughly investigated and injury to the following rotation crop may occur.

# ROTATIONAL CROP GUIDELINES FOR SPECIFIC COUNTIES OF OREGON AND WASHINGTON

Field corn grown under sprinkler irrigation with a minimum of 18" of water per season. This rotation interval is for sand, loamy sand, and sandy loam soils having not more than 1.5% organic matter where a minimum of 18" of sprinkler

<sup>\*\*</sup> Sulfonylurea Tolerant Soybean.

 $[Brackets\ throughout\ label\ indicate\ optional\ graphics\ or\ instructional\ language.]$ 

irrigation is used on the previous corn crop. Injury to the rotated crop may occur if less than 18" of irrigation is used on the previous field corn crop. For tank mixtures, follow the most restrictive rotational crop guideline.

The following rotational intervals should be observed when using **Rimsulfuron 25% SG** on field corn in Oregon and Washington:

Rotation Crop	Interval (Months)
Alfalfa, Grass, pasture, hay, seed, mint	4
Carrots, Cucumber, Onions	10
Peas	8

#### For Rotation to Alfalfa:

Rimsulfuron 25% SG in field corn not to exceed 1 ounce per use season in the following Washington counties: Adams, Grant, Douglas and Lincoln.

**Rimsulfuron 25% SG** in field corn not to exceed 1.5 ounces per acre per use season in the following Washington counties: Benton, Franklin, Klickitat, Walla Walla and Yakima.

**Rimsulfuron 25% SG** in field corn not to exceed 1.5 ounces per acre per use season in the following Oregon counties: Morrow and Umatilla.

## For Rotation to Onions and Carrots:

**Rimsulfuron 25% SG** in field corn not to exceed 1.5 ounces per acre per use season in the following Washington counties: Adams, Grant, Douglas and Lincoln.

Rimsulfuron 25% SG in field corn not to exceed 2.0 ounces per acre per season in the following Washington counties: Benton, Franklin, Klickitat, Walla Walla and Yakima.

Rimsulfuron 25% SG in field corn not to exceed 2.0 ounces per acre per season in the following Oregon counties: Morrow and Umatilla.

## For Rotation to Grass Crops Grown for Seed, Hay or Pasture:

**Rimsulfuron 25% SG** in field corn not to exceed 1.5 ounces per acre per use season in the following Washington counties: Adams, Grant, Douglas and Lincoln.

**Rimsulfuron 25% SG** in field corn not to exceed 2.0 ounces per acre per use season in the following Washington counties: Benton, Franklin, Klickitat, Walla Walla and Yakima.

Rimsulfuron 25% SG in field corn not to exceed 2.0 ounces per acre per use season in the following Oregon counties: Morrow and Umatilla.

## For Rotation to Peas and Mints:

Rimsulfuron 25% SG in field corn not to exceed 1.5 ounces per acre per use season in all areas.

# CITRUS FRUIT, TREE NUTS, POME FRUIT, STONE FRUIT, GRAPES

## **APPLICATION INFORMATION**

Apply **Rimsulfuron 25% SG** as a uniform broadcast application to the orchard or vineyard floor or as a uniform band application directed at the base of the trunk or vine.

For broadcast applications, make a single application of 4 ounces per acre per year of **Rimsulfuron 25% SG**. For improved weed management, apply **Rimsulfuron 25% SG** in tank mixture with other registered pre-emergence herbicides.

When applied as a banded treatment (50% band or less), make two applications of **Rimsulfuron 25% SG** in a year. However, **do not apply more than 4 ounces per acre on a broadcast application basis per year.** Unless otherwise specified on this label, allow a minimum of 30 days between applications.

To help ensure uniform coverage, use a minimum of 10 gallons of spray solution per acre. Nozzle selection must meet manufacturer's spray volume and pressure instructions for pre-emergence or post-emergence herbicide applications.

Apply with ground application equipment only. Do not apply Rimsulfuron 25% SG by air.

Apply only to crops that have been established for one full growing season and are in good health and vigor.

For optimum results, apply when the soil is moist at the time of application, and ½ inch of rainfall or sprinkler irrigation occurs within 2 weeks after application. Time the application(s) to take advantage of normal rainfall patterns and cool temperatures. Moisture for activation should occur within 2-3 weeks after application.

**Rimsulfuron 25% SG** can be applied by certain chemigation methods, such as micro-sprinkler. However, do not apply by overhead, flood, or drip irrigation. Avoid direct or indirect spray contact with crop foliage or fruit, except undesirable suckers

Do not use **Rimsulfuron 25% SG** in a spray solution with a pH of below 4.0 or above 8.0 with spray additives that buffer the pH to below 4.0 or above 8.0, since degradation of **Rimsulfuron 25% SG** may occur.

PRE-HARVEST INTERVAL (PHI)

DDE HADVECT INTEDVAL (DHI)
PRE-HARVEST INTERVAL (PHI)
3 days
•
7 days
14 days
14 days
•
14 days

# WEEDS CONTROLLED

Susceptible weeds are controlled for 60 to 90 days after application of **Rimsulfuron 25% SG**. Rainfall or irrigation is needed for herbicide activation. Length of control is a function of moisture for activation, soil temperature, soil texture, and amount of moisture after application.

When weeds are present at application, include a labeled burndown herbicide, such as glyphosate (Glyfos X-TRA or generic glyphosate), paraquat, or glufosinate, with an appropriate adjuvant. **Rimsulfuron 25% SG** will help provide post-emergence control of the weeds listed in this label. For best results, make post-emergence applications to young, actively growing weeds and include a spray adjuvant.

Residual weed control is reduced when **Rimsulfuron 25% SG** is applied where heavy crop trash and/or weed residue exists.

Weed control is reduced when applications of **Rimsulfuron 25% SG** are made to weeds under stress from drought, excessive water, temperature extremes, disease, or low humidity.

PRE-EMERGENCE WEED CONTROL		
Grass Weeds	Broadleaf Weeds	
Barnyardgrass (Echinochloa crus-galli)	Chamomile, false (Matricaria maritima)	
Crabgrass, large (Digitaria sanguinalis)	Dandelion, common (seedling) (Taraxacum officinale)	
Foxtail, giant (Setaria faberi)	Filaree, redstem (Erodium cicutarium)	
Foxtail, green (Setaria viridis)	Fleabane, hairy (Conyza bonariensis)	
Foxtail, yellow (Setaria pumila)	Groundsel, common (Senecio vulgaris)	
Quackgrass (Elymus repens)	Henbit (Lamium amplexicaule)	
Wheat, volunteer (Triticum aestivum)	Kochia (Kochia scoparia)	
	Mallow, common (Malva neglecta)	
	Marestail/horseweed (Conyza canadensis)	

Mustard, birdsrape (Brassica rapa)	
Mustard, black (Brassica nigra)	
Pigweed, redroot (Amaranthus retroflexus)	
Pigweed, smooth (Amaranthus hybridus)	
Puncturevine (Tribulus terrestris)	
Purslane, common (Portulaca oleracea)	
Spurge, prostrate (Chamaesyce prostrata)	
Spurge, spotted (Chamaesyce maculata)	
Broadleaf Weeds/Sedges	
Cocklebur (Xanthium spp.)	
Dandelion, common (established) (Taraxacum officinale)	
Lambsquarters, common (Chenopodium album)	
Nightshade, black (Solanum nigrum)	
Nightshade, hairy (Solanum sarrachoides)	
Nutsedge, yellow (Cyperus esculentus)	
Pigweed, prostrate (Amaranthus blitoides)	
Ragweed, common (Ambrosia artemisiifolia)	

POST-EMERGENCE PARTIAL WEED CONTROL		
Grass Weeds (1-2 inches)	Broadleaf Weeds (1-3 inches)	
Barley, volunteer (Hordeum vulgare)	Chamomile, false (Matricaria maritima)	
Barnyardgrass (Echinochloa crus-galli)	Chickweed, common (Stellaria media)	
Bluegrass, annual (Poa annua)	Henbit (Lamium amplexicaule)	
Crabgrass, large (1/2 inch) (Digitaria sanguinalis)	Kochia (Kochia scoparia)	
Foxtail, bristly (Setaria verticillata)	Mustard, black (Brassica nigra)	
Foxtail, giant (Setaria faberi)	Mustard, wild (Sinapsis arvensis)	
Foxtail, green (Setaria viridis)	Pigweed, redroot (Amaranthus retroflexus)	
Foxtail, yellow (Setaria pumila)	Pigweed, smooth (Amaranthus hybridus)	
Panicum, fall (Panicum dichotomiflorum)	Puncturevine (Tribulus terrestris)	
Wheat, volunteer (Triticum aestivum)	Purslane, common (Portulaca oleracea)	
	Shepherd's purse (Capsella bursa-pastoris)	
	Wild Radish (Raphanus raphanistrum)	

Grass Weeds	Broadleaf Weeds
Johnsongrass, seedling (Sorghum halepense)	Cocklebur (Xanthium spp.)
Millet, wild-proso <i>(Panicum miliaceum)</i>	Dandelion, common (>6 inches in diameter) (Taraxacum
Oat, wild <i>(Avena fatua)</i>	officinale)
Quackgrass (Elymus repens)	Lambsquarters, common (Chenopodium album)
Stinkgrass (Eragrostis cilianensis)	Mallow, common (Malva neglecta)
	Nightshade, hairy (Solanum sarrachoides)
	Nutsedge, yellow (Cyperus esculentus)
	Pigweed, prostrate (Amaranthus blitoides)
	Ragweed, common (Ambrosia artemisiifolia)
	Smartweed, Pennsylvania (Polygonum pensylvanicum)
	Thistle, Canada (Cirsium arvense)
	Velvetleaf (Abutilon theophrasti)
‡ Weed partial control is a reduction in weed competition (	reduced population and/or vigor) as visually compared to an untreated
area. The degree of partial control varies with the rate us treatment.	sed, the size of weeds, and the environmental conditions following

# SPECIFIC WEED PROBLEMS

COMMON DANDELION AND MALLOW: Rimsulfuron 25% SG provides excellent pre-emergence control of common dandelion and mallow germinating from seed. Make a second application in high rainfall areas or where sprinkler irrigation is used to extend residual control throughout the growing season. If application is made post-emergence to

these weeds, add a suitable burndown herbicide such as Glyfos X-TRA or paraquat. Small and medium-sized plants (up to 6 inches in diameter) are controlled by post-emergence applications of **Rimsulfuron 25% SG** plus a burndown herbicide; however, plants that are larger than 6 inches in diameter may only be suppressed and may require a second application 4 to 6 weeks later.

MARESTAIL/HORSEWEED AND FLEABANE: Where marestail (horseweed) and fleabane are the target weeds, apply pre-emergence for best results. This may require a fall application to help prevent fall-germinating seedlings from becoming established during the winter. A foliar active herbicide with activity on fleabane and marestail/horseweed (such as paraquat, glyphosate (such as Glyfos X-TRA®), and glufosinate) must be tank mixed with Rimsulfuron 25% SG for best control and resistance management. After fall application, a second application in the spring may be required to provide extended weed control in the summer. If Rimsulfuron 25% SG is applied to control marestail/horseweed and fleabane, include another soil-residual herbicide as a tank mix or rotational partner to aid in resistance management.

**PUNCTUREVINE:** Apply early in the spring when you can expect rainfall or overhead irrigation to move **Rimsulfuron 25% SG** into the weed root zone before puncturevine germinates. Puncturevine emerges over a long period of time and late-season germinations may not be controlled.

**YELLOW NUTSEDGE: Rimsulfuron 25% SG** suppresses yellow nutsedge. For optimum results, use the highest rate within the specified rate range based on width of your spray band and make two applications. For applications made post-emergence to nutsedge, always add the appropriate rate of glyphosate (such as Glyfos X-TRA®) and an effective adjuvant if required. On soils with high organic matter (6% or higher) always apply post-emergence to weeds since pre-emergence applications are not as effective on these soils.

# Application Timing - Yellow Nutsedge

**Pre-emergence plus Early Post-emergence:** Make the pre-emergence application when rainfall or overhead irrigation will move **Rimsulfuron 25% SG** into the nutsedge root zone prior to nutsedge emergence. Make a second application when emerging nutsedge is 2-4 inches tall.

**Post-Emergence plus Post-Emergence:** Make first application when emerging nutsedge is 2-4 inches tall. Repeat application 14 days later. **Note:** If yellow nutsedge is greater than 6 inches tall at the first application, weed control is greatly reduced.

**ANNUAL SUMMER GRASS Weeds (such as Barnyardgrass, Green Foxtail, and Crabgrass):** If sprinkler irrigation is used, a fall or early spring application of **Rimsulfuron 25% SG** will not provide season-long control of summer grasses like foxtail, barnyardgrass, and crabgrass. For optimum results, use **Rimsulfuron 25% SG** with a suitable tank mix herbicide such as oryzalin or pendimethalin. Make a second application to provide extended control of summer grasses.

#### **USE PRECAUTIONS**

- Direct sprays to minimize spray contact with fruit or foliage.
- Draining or flushing equipment on or near desirable trees or other plants, or in areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots may injure these plants. Trees or desirable plants whose roots extend into a treated crop use area may be injured.
- For best results, maintain spray tank solution at pH 5 to 7.
- If the selected companion herbicide has a ground or surface water advisory, consider the advisory when using the companion herbicide.

# **USE RESTRICTIONS**

- Do not spray adjacent crops or desirable plants as injury may occur.
- Do not apply to frozen or snow-covered soil. Crop injury may occur from applications made to poorly drained soils.

**Diuron-Containing Products (Washington and Oregon):** On coarse-textured soils where crops are grown under sprinkler irrigation, do not use diuron-containing products (such as Karmex® XP or Direx® 4L) as a tank-mix partner with **Rimsulfuron 25% SG** between June 1<sup>st</sup> and September 30<sup>th</sup>. Tank mix **Rimsulfuron 25% SG** with diuron products can be used in the fall (after September 30<sup>th</sup>) or early spring when temperatures are cool to moderate.

# CROP ROTATION – (Fruit, Nut, and Vine Crops)

Do not plant any crops, except field corn, tomatoes, potatoes, and those listed on this label in the PRODUCT INFORMATION section, within one year of the last **Rimsulfuron 25% SG** application. Prior to planting, fields to be

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rotated to the above crops should have a thorough soil mixing – for example, two diskings, or a plowing and a disking. To help ensure rotational crop safety, complete a field bioassay prior to planting any other desired crops. The results of this bioassay may require the crop rotation interval to be extended. A successful field bioassay means growing to maturity a test strip of the crop(s) intended for production. The test strip should cross the entire field including knolls and low areas.

#### MICRO-SPRINKLER CHEMIGATION - (Fruit, Nut, and Vine Crops)

Rimsulfuron 25% SG can be applied via micro-sprinkler chemigation. The 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 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 that 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 (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticide(s) and capable of being fitted with a system interlock. Do not apply Rimsulfuron 25% SG through any other chemigation equipment.

# **USE PRECAUTIONS FOR CHEMIGATION – (Fruit, Nut, and Vine Crops)**

- Distributing treated water in an uneven manner results in crop injury, lack of effectiveness, or over-tolerance
  pesticide residues in the crop. Therefore, to ensure that the mixture is applied evenly at the labeled rate, use
  sufficient water, apply the mixture for the proper length of time and ensure sprinkler produces a uniform water
  pattern.
- Continuous agitation in the mix tank is needed to keep the product from settling. If settling does occur, thoroughly re-agitate the tank mixture before using.

# **USE RESTRICTIONS FOR CHEMIGATION – (Fruit, Nut, and Vine Crops)**

- Do not connect an irrigation system used for Rimsulfuron 25% SG application to a public water system.
- Do not permit run-off during chemigation.

# POTATOES

# APPLICATION INFORMATION

# PRE-EMERGENCE APPLICATIONS

Apply 1-1½ ounces of product per acre **Rimsulfuron 25% SG** immediately after hilling, drag-off, or reservoir tillage (dam/dike operation) to a clean, newly prepared seedbed.

To activate **Rimsulfuron 25% SG** in the soil, supply moisture by a single rainfall event or apply sprinkler irrigation of 1/3-1 inch (sandy soils apply at least 1/3 inch, sandy loams apply at least 1/2 inch, silt soils apply at least 3/4 inch, clay soils apply at least 1 inch), within 5 days after application to move **Rimsulfuron 25% SG** 3 inches deep into the soil profile. Activation is required regardless of the soil moisture level at planting or the cumulative precipitation that occurs over the next 5 days (unless rainfall occurs in a single event and equals the activation moisture requirement). If rainfall or sprinkler activation cannot be managed, wait for weeds to emerge and apply **Rimsulfuron 25% SG** post-emergence for better weed control.

If a clean, newly prepared seedbed free of emerged or germinating weeds does not occur, and weeds are present at the application, add a spray adjuvant to the spray mix. Control may not be adequate for weeds that have an established root system before activation of **Rimsulfuron 25% SG**.

Do not apply Rimsulfuron 25% SG within 30 days of potato harvest.

Do not exceed 2.5 oz. of Rimsulfuron 25% SG per acre per crop season.

# TANK MIXTURES - PRE-EMERGENCE APPLICATIONS

Tank mix **Rimsulfuron 25% SG** with herbicides labeled for use on potatoes (such as "Eptam® 7E", "Prowl®", "Prowl® H2O", "Lorox®" DF, "Cinch®", or "Dual II Magnum®", Glyfos X-TRA® products registered for potatoes) in accordance with the most restrictive label limitations and precautions. If tank mixing **Rimsulfuron 25% SG** with another potato herbicide(s), read and follow all use directions, restrictions, and precautions of both **Rimsulfuron 25% SG** and the tank

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mix partner(s). Rimsulfuron 25% SG can be used in three-way tank mix combinations with the above herbicide(s). If these instructions conflict with this Rimsulfuron 25% SG label, do not use as a tank mix with Rimsulfuron 25% SG.

#### Rimsulfuron 25% SG plus Metribuzin

Apply 1-1½ oz. per acre **Rimsulfuron 25% SG** and  $\frac{1}{2}$  to  $\frac{1}{2}$  lb. active ingredient per acre metribuzin in a tank mix combination for better control of kochia, Russian thistle, and common lambsquarters. For optimum results, apply after hilling or drag-off to a clean, newly prepared seedbed before potatoes emerge and weeds germinate. Read and follow the metribuzin label for your area.

#### Rimsulfuron 25% SG plus Eptam® 7E

Apply 1-1½ oz. per acre **Rimsulfuron 25% SG** in a tank mix with Eptam® 7E at specified label rates for better control of hairy nightshade and crabgrass. For optimum results, apply after hilling or drag-off to a clean, newly prepared seedbed before potatoes emerge and weeds germinate. Since the rates and incorporation methods of Eptam® 7E vary by region, follow the instructions for your region. The procedure is to incorporate a tank mix of Eptam® 7E + **Rimsulfuron 25% SG** using irrigation, and not equipment, to prevent poor weed control from deep incorporation of the **Rimsulfuron 25% SG** 

If your area does not allow incorporation using irrigation, then apply Eptam® 7E and **Rimsulfuron 25% SG** in a split application. Read and follow both product labels for your area.

# Rimsulfuron 25% SG plus pendimethalin (such as Prowl® H2O, Prowl® 3.3 EC, Pendimax®, or generic pendimethalin)

Apply 1-1½ oz. per acre **Rimsulfuron 25% SG** as a tank mix combination with Prowl® H2O, Prowl® 3.3 EC, Pendimax®, or generic pendimethalin at specified label rates for better control of kochia, crabgrass, and common lambsquarters. For optimum results, apply after hilling or drag-off to a clean, newly prepared seedbed before potatoes emerge and weeds germinate. Read and follow the Prowl® H2O, Prowl® 3.3 EC, Pendimax®, or generic pendimethalin label for your area.

# Rimsulfuron 25% SG plus Linuron (such as Lorox® DF)

Apply 1-1½ oz. per acre **Rimsulfuron 25% SG** in a tank mix combination with 1-4 lbs. per acre Lorox® DF for better control of common lambsquarters and common ragweed. For optimum results, apply after hilling or drag-off to a clean, newly prepared seedbed, before potatoes emerge and weeds germinate. Read and follow the Lorox® DF label for your area.

#### Rimsulfuron 25% SG plus S-Metolachlor

Apply 1-1½ oz. per acre **Rimsulfuron 25% SG** in a tank mix combination with S-Metolachlor at 1-2 pints per acre for better control of yellow nutsedge and black nightshade. For optimum results, apply after hilling or drag-off to a clean, newly prepared seedbed before potatoes emerge and weeds germinate. Read and follow both product labels for your area

# **POST-EMERGENCE APPLICATIONS – POTATOES**

Apply 1-1½ oz. per acre **Rimsulfuron 25% SG** to young, actively growing weeds after crop emergence. Typically, small weeds (less than 1 inch in height or diameter) that are actively growing at application are most easily controlled. Under growing conditions that promote crop stress (such as drought, frost, cold temperatures, high temperatures, or extreme temperature variations), temporary chlorosis (lime green color) may occur after application of **Rimsulfuron 25% SG**. Symptoms usually disappear within 5-15 days.

For optimum results with **Rimsulfuron 25% SG** post-emergence, rainfall or sprinkler irrigation of ½-1 inch (sandy soils apply at least ½ inch, sandy loams apply at least ½ inch, silt soils apply at least ¾ inch, clay soils apply at least 1 inch), no sooner than 4 hours, but not more than 5 days after application, will activate **Rimsulfuron 25% SG** in the soil and help provide control of subsequent flushes of annual weeds.

# TANK MIXTURES (POTATOES) - POST-EMERGENCE APPLICATIONS

Tank mix **Rimsulfuron 25% SG** with pesticide products labeled for use on potatoes (such as Eptam® 7E and metribuzin) in accordance with the most restrictive of label limitations and precautions. If tank mixing **Rimsulfuron 25% SG** with another potato pesticide(s), read and follow all use directions, restrictions, and precautions of both **Rimsulfuron 25% SG** and the tank mix partner(s).

Rimsulfuron 25% SG can be used in three-way tank mix combinations with the above pesticide(s). If these instructions conflict with this Rimsulfuron 25% SG label, do not use as a tank mix with Rimsulfuron 25% SG.

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#### Rimsulfuron 25% SG plus Foliar Fungicides

Tank mix **Rimsulfuron 25% SG** with other suitable registered fungicides on potatoes (such as "KOVERALL", mancozeb, or chlorthalonil).

Read and follow all manufacturers' label instructions for the companion fungicide. If these instructions conflict with this **Rimsulfuron 25% SG** label, do not use as a tank mix with **Rimsulfuron 25% SG**.

# Rimsulfuron 25% SG plus Metribuzin

Apply 1-1½ oz. per acre **Rimsulfuron 25% SG** in a tank mix combination with  $\frac{1}{5}$  - $\frac{1}{2}$  lb. active ingredient metribuzin per acre for improved weed control of Russian thistle, common lambsquarters and triazine-resistant weeds. Use a nonionic surfactant (NIS) at 0.125% v/v (1 pint/100 gals. of water). The addition of adjuvants to post-emergence metribuzin applications reduces crop tolerance. Use adjuvants with caution.

When possible, avoid post-emergence applications on metribuzin-sensitive varieties or if the crop is under stress. Read and follow both product labels for your area.

**Note: Do not use** crop oil concentrate (COC) or methylated seed oil (MSO) for tank mix combinations with **Rimsulfuron 25% SG** plus metribuzin.

## Rimsulfuron 25% SG plus "Eptam 7E"

Apply 1-1½ ounce per acre **Rimsulfuron 25% SG** in tank mix with 1 pint per acre Eptam® 7E herbicide. Include 1% volume/volume (1 gal./100 gals. spray solution) of either a modified seed oil adjuvant (MSO) or 0.5% volume/volume (0.5 gal./100 gals. spray solution) of an organo-silicon/modified seed oil blend (OS/MSO – such as Dyne-Amic®, Rivet™, or Phase®). Include a 2 lbs./acre of a spray-grade ammonium sulfate (AMS).

For optimum results, rainfall or sprinkler irrigation of ½-1 inch (sandy soils apply at least ½ inch, sandy loams apply at least ½ inch, silt soils apply at least ¾ inch, clay soils apply at least 1 inch), no sooner than 4 hours after application, but not more than 1 day after application.

Additional Eptam® 7E can be added during the water in process if desired (read and follow all use directions, restrictions, and precautions on the Eptam® 7E label before use. If these instructions conflict with this **Rimsulfuron 25% SG** label, do not use as a tank mix with **Rimsulfuron 25% SG**).

**NOTE:** Crop injury can occur (leaf burn and temporary yellowing) when applications are made under high temperatures. Addition of fungicides may increase the level of crop injury. In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed and may be more variable in weed control

#### **SEQUENTIAL APPLICATIONS – POTATOES**

Depending upon rainfall or other environmental conditions, and the density of the top growth of the potato variety (those with poor top growth such as Norkotah), annual weeds may have a second flush of germinating seedlings, and treated perennials may produce new growth from underground roots or stems. To maximize control, apply **Rimsulfuron 25% SG** a second time 14-28 days after the first application (typically, make applications to small weeds that are less than 1 inch in height or diameter that are actively growing). The combined rate of the applications must not exceed 2.5 oz. **Rimsulfuron 25% SG** per acre during the same growing season.

# **POTATOES GROWN FOR SEED**

Use **Rimsulfuron 25% SG** on potatoes grown for seed that use field-grown tubers as the planted seed piece and are at least the progeny of the first field planting. (First field planting utilizes laboratory-tested stocks, which may be tissue-cultured plantlets, greenhouse-produced micro-tubers, mini-tubers, stem cuttings, or line selections.)

Apply Rimsulfuron 25% SG by any of the following methods:

- Pre-emergence: 1½ oz. per acre
- Post-emergence: 1-11/2 oz. per acre
- Sequential application pre-emergence: 1-11/2 oz. per acre, followed by post-emergence at 1 oz. per acre;
- Post-emergence: 1 oz. per acre followed by post-emergence at 1 oz. per acre.

Do not exceed 2.5 oz. per acre of **Rimsulfuron 25% SG** in the same growing season.

To activate **Rimsulfuron 25% SG** pre-emergence, supply moisture by a single rainfall event, or apply sprinkler irrigation of  $\frac{1}{2}$ -1 inch (sandy soils apply at least  $\frac{1}{2}$  inch, sandy loams apply at least  $\frac{1}{2}$  inch, silt soils apply at least  $\frac{3}{4}$  inch, clay soils apply at least 1 inch) within 5 days after application to move **Rimsulfuron 25% SG** 2 to 3 inches deep into the soil profile.

#### POTATOES GROWN FOR SEED PRECAUTIONS:

- The rotational crop interval listed in the **Rimsulfuron 25% SG** label may need to be extended to 18 months if seed potato production practices decrease water and/or time for **Rimsulfuron 25% SG** breakdown. Practices that may shorten the breakdown are late planting or less frequent irrigations as compared to commercial production practices. Potatoes can be planted at any time.
- Consider informing your state seed certification agency or inspector that **Rimsulfuron 25% SG** has been applied. Under growing conditions that promote crop stress (such as drought, frost, cold temperatures, high temperatures, or extreme temperature variations), temporary chlorosis (lime green color) may occur after application. These symptoms may appear similar to virus-like symptoms (such as chlorosis, leaf crinkling, pinching of terminal leaflet) but will usually disappear within 5 to 15 days of application.
- The rotational crop interval for Spring Barley is extended to 18 months due to the generally shorter growing seasons and different cultural practices in seed production in the states of California, Idaho, Oregon, Montana, South Dakota, Washington, Colorado, and parts of North Dakota (all counties in North Dakota except Pembina, Towner, Walsh, Grand Forks, Trail, and Cass).

#### POTATOES GROWN FOR SEED RESTRICTIONS:

- . Do not apply to plants suffering stress from lack of moisture, cold, herbicide injury, and insect or disease injury.
- Do not use on potatoes grown for seed if these are grown from micro-tubers or transplants. Depending on geography, these may be referred to as Generation 1, Nuclear, Elite 1, or Pre-Elite.

#### **WEEDS CONTROLLED - POTATO**

PRE-EMERGENCE WEED CONTROL	
Grass Weeds	Broadleaf Weeds
Barnyardgrass (Echinochloa crus-galli)	Chamomile, false (Matricaria maritima)
Foxtail, giant (Setaria faberi)	Filaree, redstem (Erodium cicutarium)
Foxtail, green (Setaria viridis)	Henbit (Lamium amplexicaule)
Foxtail, yellow (Setaria pumila)	Kochia (Kochia scoparia)
Wheat, volunteer (Triticum aestivum)	Mustard, birdsrape (Brassica rapa)
	Mustard, black (Brassica nigra)
	Pigweed, prostrate (Amaranthus blitoides)
	Pigweed, redroot (Amaranthus retroflexus)
	Pigweed, smooth (Amaranthus hybridus)
	Purslane, common (Portulaca oleracea)
	Spurge, prostrate (Chamaesyce prostrata)
	Spurge, spotted (Chamaesyce maculata)

Grass Weeds	Broadleaf Weeds
Crabgrass (Digitaria spp.)	Cocklebur (Xanthium spp.)
Oat, wild <i>(Avena fatua)</i>	Lambsquarters, common (Chenopodium album)
	Nightshade†, black (Solanum nigrum)
	Nightshade, hairy (Solanum sarrachoides)
	Pigweed, prostrate (Amaranthus blitoides)
	Ragweed, common (Ambrosia artemisiifolia)
	Velvetleaf (Abutilon theophrasti)
•	n (reduced population and/or vigor) as visually compared to an untreated
area. † Eastern Black Nightshade <i>(Solanum ptycanthum)</i> is NC	OT controlled or cumpressed

POST-EMERGENCE WEED CONTROL	
Grass Weeds	Broadleaf Weeds
Barley, volunteer (Hordeum vulgare)	Chamomile, false (Matricaria maritima L.)
Barnyardgrass (Echinochloa crus-galli)	Chickweed, common (Stellaria media)
Bluegrass, annual (Poa annua)	Henbit (Lamium amplexicaule)

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Crabgrass, large (Digitaria sanguinalis)	Kochia (Kochia scoparia)
Foxtail, bristly (Setaria verticillata)	Mustard, birdsrape (Brassica rapa L.)
Foxtail, giant (Setaria faberi)	Mustard, black (Brassica nigra)
Foxtail, green (Setaria viridis)	Mustard, wild (Sinapsis arvensis)
Foxtail, yellow (Setaria pumila)	Pigweed, redroot (Amaranthus retroflexus)
Panicum, fall (Panicum dichotomiflorum)	Pigweed, smooth (Amaranthus hybridus)
Wheat, volunteer (Triticum aestivum)	Purslane, common (Portulaca oleracea)
	Shepherd's purse (Capsella bursa-pastoris)
	Wild Radish (Raphanus raphanistrum)

POST-EMERGENCE PARTIAL WEED CONTROL‡	
Grass Weeds	Broadleaf Weeds
Johnsongrass, seedling (Sorghum halepense)	Thistle, Canada† (Cirsium arvense)
Millet, wild-proso (Panicum miliaceum)	Cocklebur (Xanthium spp.)
Oat, wild (Avena fatua)	Lambsquarters, common (Chenopodium album)
Stinkgrass (Eragrostis cilianensis)	Morningglory, Ivyleaf (Ipomoea hederacea)
Yellow nutsedge (Cyperus esculentus)	Nightshade, hairy (Solanum sarrachoides)
	Nightshade*, black† (Solanum nigrum)
	Pigweed, prostrate (Amaranthus blitoides)
	Quackgrass † (Elymus repens)
	Ragweed, common (Ambrosia artemisiifolia)
	Smartweed, Pennsylvania (Polygonum pensylvanicum)
	Velvetleaf (Abutilon theophrasti)
	Volunteer Alfalfa** (Medicago sativa)

- \* Eastern black nightshade (Solanum ptycanthum) is NOT controlled or suppressed.
- \*\* Except in California.
- Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of partial control varies with the rate used, the size of weeds, and the environmental conditions following treatment.
- † See "Specific Weed Problems".

# AERIAL APPLICATION PRECAUTIONS (See also SPRAY DRIFT):

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage at a minimum
of 5 GPA. In California use a minimum of 10 GPA.

# AERIAL APPLICATION RESTRICTIONS (See also SPRAY DRIFT):

- Do not apply during a temperature inversion, when winds are gusty or when conditions favor poor coverage and/or
  off-target spray movement.
- Do not apply by air in the state of California, except in Modoc or Siskiyou counties.
- Do not apply by air in the state of New York.

# **CHEMIGATION – POTATOES**

Apply **Rimsulfuron 25% SG** using center-pivot, lateral-move, solid-set, or hand-move irrigation systems in potatoes. Do not apply **Rimsulfuron 25% SG** using any other type of irrigation system. Check irrigation systems to ensure uniform application of water to all areas. Failure to apply **Rimsulfuron 25% SG** uniformly may result in crop injury and/or poor weed control.

For optimum results, use the highest labeled rate within the specified rate range and apply pre-emergence to early post-emergence to the weeds (weeds less than 1 inch tall). If weeds are present at application, add a nonionic surfactant containing at least 80% active ingredient to the spray mix at 1-2 pints/acre.

**Rimsulfuron 25% SG** may be mixed in a supply tank with water, fertilizer, or other appropriate agricultural chemicals. Maintain continuous agitation in the injection nurse tanks during application.

For solid set and hand move irrigation systems, apply **Rimsulfuron 25% SG** at the beginning of the set and then apply  $\frac{1}{1}$ -1 inch of water for activation (sandy soils apply at least  $\frac{1}{1}$  inch, sandy loams apply at least  $\frac{1}{1}$  inch, and clay soils apply at least 1 inch).

If you have questions about calibrating chemigation equipment, contact State Extension Service specialists, equipment manufacturers, or other experts. If the chemigation equipment needs adjustment, only the custodian responsible for its operation or someone under the supervision of that custodian should make the necessary adjustments.

# **IRRIGATION SYSTEM REQUIREMENTS**

The irrigation system must contain the following:

- · A functional check valve;
- Vacuum relief valve;
- A low-pressure drain (to prevent water source contamination from backflow; should be located on the irrigation pipeline);
- Functional interlocking controls (to automatically shut off the pesticide injection pump when the water pump motor stops);
- A metering pump, such as 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.

The pesticide injection pipeline must contain the following:

- A functional, automatic, quick-closing check valve (to prevent the flow of fluid back toward the injection pump);
- A functional, solenoid-operated valve (normally closed) located on the intake side of the injection pump (should be
  connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation
  system is shut down either automatically or manually).

The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when pesticide distribution is adversely affected by a decrease in water pressure.

#### CHEMIGATION PRECAUTIONS

Distributing treated water in an uneven manner can result in crop injury, lack of effectiveness, and pesticide residues in the crop that may be above tolerance limits. Therefore, to ensure that the mixture is applied evenly at the labeled rate, use sufficient water and apply the mixture for the proper length of time.

# CHEMIGATION RESTRICTIONS

- Do not permit run-off during chemigation.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Do not connect an irrigation system (including greenhouse systems) used for Rimsulfuron 25% SG application to a public water system.

# RIMSULFURON 25% SG ROTATIONAL CROP GUIDELINES - POTATO

For crops listed below, planting prior to the interval shown can result in crop injury when using this product. Rotation intervals may need to be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted unless supplemental sprinkler irrigation has been applied and totals greater than 15" during the growing season. For tank mixtures, follow the most restrictive rotational crop guideline.

Rotation Crop	Interval (Months)
Corn (Field), Potatoes, Tomato	Anytime
Alfalfa**, Carrots (Kern County, CA)**, Cover Crops	4
(erosion control), Grass, pasture, hay, seed**, Mint**,	
Soybeans, Winter Wheat	
Garlic	6
Peas**	8
Barley (Spring*), Oats (Spring), Wheat (Spring)	9
Beans (Dry), Carrots**, Corn (Popcorn/Sweet), Cotton,	10
Cucumber, Onions**, Sunflowers	
Crops Not Listed	18

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- \* Idaho 18 months for Teton County, Caribou County, Madison County East of Hwy. 20, and Fremont County East of Hwy. 20. Colorado Alamosa, Conejos, Costilla, Rio Grande and Saguache Counties: 1.5 oz. or less Rimsulfuron 25% SG per acre per season 9 months; greater than 1½ oz. of Rimsulfuron 25% SG per acre per season 18 months
- \*\* Potatoes grown in the counties listed below in OR and WA under sprinkler irrigation with a minimum of 18 inches of water per season. All other areas may be rotated to alfalfa at 18 months after application. This rotation interval is for sand, loamy sand, and sandy loam soils having not more than 1½% organic matter where a minimum of 18 inches of sprinkler irrigation is used on the previous potato crop. Injury to the rotated crop may occur if less than 18 inches of irrigation is used on the previous potato crop. For tank mixtures, follow the most restrictive rotational crop guideline.

#### \*\* Specific Rotation for Crops marked \*\*:

For Rotation to Alfalfa: **Rimsulfuron 25% SG** in potatoes not to exceed 1 ounce per use season in the following Washington counties: Adams, Grant, Douglas, and Lincoln.

For Rotation to Alfalfa: **Rimsulfuron 25% SG** in potatoes not to exceed 1½ ounces per acre per use season in the following Washington counties: Benton, Franklin, Klickitat, Walla Walla, and Yakima.

For Rotation to Alfalfa: **Rimsulfuron 25% SG** in potatoes not to exceed 1½ ounces per acre per use season in the following Oregon counties: Morrow and Umatilla.

For Rotation to Onions and Carrots: **Rimsulfuron 25% SG** in potatoes not to exceed 1½ ounces per acre per use season in the following Washington counties: Adams, Grant, Douglas, and Lincoln Counties of Washington

For Rotation to Onions and Carrots: **Rimsulfuron 25% SG** in potatoes not to exceed 2½ ounces per acre per use season in the following Washington counties: Benton, Franklin, Klickitat, Walla Walla, and Yakima.

For Rotation to Onions and Carrots: **Rimsulfuron 25% SG** in potatoes not to exceed 2½ ounces per acre per use season in the following Oregon counties: Morrow and Umatilla.

For Rotation to Grass Crops Grown for Seed, Hay or Pasture: **Rimsulfuron 25% SG** in potatoes not to exceed 1½ ounces per acre per use season in the following Washington counties: Adams, Grant, Douglas, and Lincoln.

For Rotation to Grass Crops Grown for Seed, Hay or Pasture: **Rimsulfuron 25% SG** in potatoes not to exceed 2½ ounces per acre per use season in the following Washington Counties: Benton, Franklin, Klickitat, Walla Walla, and Yakima.

For Rotation to Grass Crops Grown for Seed, Hay or Pasture: **Rimsulfuron 25% SG** in potatoes not to exceed 2½ ounces per acre per use season in the following Oregon Counties: Morrow and Umatilla.

For Rotation to Peas and Mints: Rimsulfuron 25% SG in potatoes not to exceed 11/2 ounces per acre per use season in all areas.

**NOTE:** Do not use **Rimsulfuron 25% SG** in a tank mix or sequential application program with other soil residual ALS-inhibiting herbicides on potatoes as the combined effects of these herbicides on the planting of subsequent crops have not been thoroughly investigated and crop injury may occur.

# **RESTRICTIONS - POTATOES**

- Do not apply Rimsulfuron 25% SG on potatoes within 30 days of harvest.
- Do not exceed 21/2 oz. of Rimsulfuron 25% SG per acre on potatoes during the same growing season.
- Do not apply to sweet potatoes or yams.
- Do not use Rimsulfuron 25% SG on potatoes grown for seed, except as directed on this labeling or supplemental labeling.
- Do not apply to potatoes growing in greenhouses, cold frames, pot cultures, etc. Apply only to potatoes growing in fields.

# TOMATOES (DIRECT-SEEDED AND TRANSPLANT)

# PRE-EMERGENCE APPLICATIONS

Apply Rimsulfuron 25% SG after seeding at 2-4 ounces product per acre.

To activate **Rimsulfuron 25% SG** in the soil, supply moisture by a single rainfall event, or apply sprinkler irrigation of  $V_2$ -1 inch (sandy soils apply at least  $V_2$  inch, sandy loams apply at least  $V_2$  inch, silt soils apply at least  $V_2$  inch, clay soils apply at least 1 inch) within 5 days after application to move **Rimsulfuron 25% SG** 2-3 inches deep into the soil profile. Activating sprinkler irrigation is required regardless of the soil moisture level at planting or the cumulative precipitation that occurs over the next 5 days (unless rainfall occurs in a single event and equals the activation moisture requirement). If rainfall or sprinkler activation cannot be managed, waiting for weeds to emerge and applying **Rimsulfuron 25% SG** post-emergence may result in better weed control.

If a clean, newly prepared seedbed, free of emerged or germinating weeds does not occur and weeds are present at application, add a spray adjuvant to improve weed control (see the "Spray Adjuvant" section of this label for additional information). Control may not be adequate for weeds that are greater than 1 inch in height or diameter or weeds that have an established root system before activation of **Rimsulfuron 25% SG**.

## POST-EMERGENCE APPLICATIONS

For post-emergence applications, apply **Rimsulfuron 25% SG** at 1-2 ounces product per acre (use 2 ounces per acre for longer residual) to young, actively growing weeds after the crop has reached the cotyledon stage. Optimum performance is obtained when weeds are less than 1 inch in height or diameter and are actively growing.

Use a surfactant at a minimum rate of 0.25% V/V (2 pints/100 gallons of water). The use of crop oil concentrate, methylated seed oils, nitrogen fertilizer solution, or nonionic surfactant rates above 0.25% V/V may result in temporary crop chlorosis (yellowish color). Symptoms usually disappear within 5-15 days.

Under growing conditions that promote crop stress (such as drought, frost, cold temperatures, high temperatures, extreme temperature variations, or saturated or water-logged soils), temporary crop chlorosis (yellowish color) may occur after application with **Rimsulfuron 25% SG**. Symptoms usually disappear within 5-15 days.

For optimum results with **Rimsulfuron 25% SG** post-emergence, rainfall or sprinkler irrigation of  $\frac{1}{2}$  to 1 inch (sandy soils apply at least  $\frac{1}{2}$ , sandy loams apply at least  $\frac{1}{2}$ , silt soils apply at least  $\frac{3}{4}$  inch, clay soils apply at least 1 inch), no sooner than 4 hours but not more than 5 days after application, will activate **Rimsulfuron 25% SG** in the soil and help provide control of subsequent flushes of annual weeds.

Make post-emergence applications of Rimsulfuron 25% SG after the tomatoes reach the cotyledon stage.

#### SEQUENTIAL APPLICATIONS TOMATOES

Annual weeds at times may have multiple flushes of seedlings, or treated weeds may sometimes regrow from underground stems or roots, depending upon rainfall and other environmental conditions. For optimum control, make a sequential application of **Rimsulfuron 25% SG**.

#### PRE-EMERGENCE FOLLOWED BY POST-EMERGENCE

Applications of **Rimsulfuron 25% SG** may be applied pre-emergence followed by a single or multiple applications post-emergence.

**Note:** For sequential applications the total amount of **Rimsulfuron 25% SG** must not exceed 4 oz. product per acre per year on a broadcast basis.

## POST-EMERGENCE FOLLOWED BY POST-EMERGENCE

Multiple applications of **Rimsulfuron 25% SG** can be applied post-emergence, optimum control is seen when the first application is made to small actively growing weeds, followed by a second application 7-14 days later.

**Note:** For sequential applications the total amount of **Rimsulfuron 25% SG** must not exceed 4 oz. product per acre per year on a broadcast basis.

# **BAND APPLICATIONS - TOMATOES**

**Rimsulfuron 25% SG** can be applied pre-emergence and post-emergence as a banded application. Use proportionally less spray mixture based on the soil area actually sprayed. See the "Pre-emergence Applications" and "Post-emergence Applications" sections of this label for additional details on the use of **Rimsulfuron 25% SG**.

# **TANK MIXTURES – TOMATOES**

Tank mix **Rimsulfuron 25% SG** with pesticide products labeled for use on tomatoes in accordance with the most restrictive of label limitations and precautions. If tank mixing **Rimsulfuron 25% SG** with another tomato pesticide(s), read and follow all use directions, restrictions, and precautions of both **Rimsulfuron 25% SG** and the tank mix partner(s).

**Rimsulfuron 25% SG** can be used in three-way tank mix combinations with the above pesticide(s). If these instructions conflict with this **Rimsulfuron 25% SG** label, do not use as a tank mix with **Rimsulfuron 25% SG**. Tank mixtures with products that lower the spray solution pH may reduce weed control (such as L1700 surfactant).

# Rimsulfuron 25% SG plus Foliar Fungicides

**Rimsulfuron 25% SG** can be tank mixed with suitable registered fungicides (such as "KOVERALL", mancozeb, or chlorthalonil) on tomatoes. Tank mixtures with copper-containing fungicides may reduce weed control.

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Read and follow all manufacturers' label instructions for the companion fungicide. If these instructions conflict with this **Rimsulfuron 25% SG** label, do not use as a tank mix with **Rimsulfuron 25% SG**.

## **TOMATOES: CALIFORNIA**

#### PRE-EMERGENCE APPLICATIONS

Apply 2-4 oz. **Rimsulfuron 25% SG** per acre after seeding. To activate **Rimsulfuron 25% SG** in the soil, supply moisture by a single rainfall event, or apply sprinkler irrigation of ½-1 inch (sandy soils apply at least ½ inch, sandy loams apply at least ½ inch, silt soils apply at least ¾ inch, clay soils apply at least 1 inch) within 5 days after application to move **Rimsulfuron 25% SG** 2-3 inches deep into the soil profile. Activating sprinkler irrigation is required regardless of the soil moisture level at planting, or the cumulative precipitation that occurs over the next 5 days (unless rainfall occurs in a single event and equals the activation moisture requirement). If rainfall or sprinkler activation cannot be managed, waiting for weeds to emerge and applying **Rimsulfuron 25% SG** post-emergence may result in better weed control.

If a clean, newly prepared seedbed, free of emerged or germinating weeds does not occur and weeds are present at application, add a spray adjuvant to improve weed control (see the "Spray Adjuvant" section of this label for additional information). Control may not be adequate for weeds that are greater than 1 inch in height or diameter or weeds that have an established root system before activation of **Rimsulfuron 25% SG**.

#### POST-EMERGENCE APPLICATIONS

For post-emergence applications, apply 2 oz. product per acre **Rimsulfuron 25% SG** to young, actively growing weeds after the crop has reached the cotyledon stage. Optimum performance is obtained when weeds are less than 1 inch in height or diameter and are actively growing.

Use a surfactant at a minimum rate of 0.25% V/V (2 pints/100 gallons of water). The use of crop oil concentrate, methylated seed oils, nitrogen fertilizer solution or nonionic surfactant rates above 0.25% V/V may result in temporary crop chlorosis (yellowish color). Symptoms usually disappear within 5-15 days.

Use a surfactant at a minimum rate of 0.25% V/V (2 pints/100 gallons of water). The use of crop oil concentrate, methylated seed oils, nitrogen fertilizer solution or nonionic surfactant rates above 0.25% V/V may result in temporary crop chlorosis (yellowish color). Symptoms usually disappear within 5-15 days.

Under growing conditions that promote crop stress (such as drought, frost, cold temperatures, high temperatures, extreme temperature variations, or saturated or water-logged soils), temporary crop chlorosis (yellowish color) may occur after application of **Rimsulfuron 25% SG**. Symptoms usually disappear within 5-15 days.

For optimum results with **Rimsulfuron 25% SG** post-emergence, rainfall or sprinkler irrigation of ½-1 inch (sandy soils apply at least ½ inch, sandy loams apply at least ½ inch, silt soils apply at least ¾ inch, clay soils apply at least 1 inch) no sooner than 4 hours but not more than 5 days after application will activate **Rimsulfuron 25% SG** in the soil and help provide control of subsequent flushes of annual weeds.

Make post-emergence applications of **Rimsulfuron 25% SG** after the tomatoes reach the cotyledon stage.

#### SEQUENTIAL APPLICATIONS

Annual weeds at times may have multiple flushes of seedlings, or treated weeds may sometimes regrow from underground stems or roots, depending upon rainfall and other environmental conditions. To optimize control make a sequential application of **Rimsulfuron 25% SG**.

# PRE-EMERGENCE FOLLOWED BY POST-EMERGENCE

Apply Rimsulfuron 25% SG Pre-emergence followed by single or multiple applications of Post-emergence.

**Note:** For sequential applications the total amount of **Rimsulfuron 25% SG** must not exceed 4 oz. product per acre year on a broadcast basis.

# POST-EMERGENCE FOLLOWED BY POST-EMERGENCE

Multiple applications of **Rimsulfuron 25% SG** can be made post-emergence; optimum control is seen when the first application is made to small actively growing weeds followed by a second application 7-14 days later.

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**Note:** For sequential applications the total amount of **Rimsulfuron 25% SG** must not exceed 4 oz. product per acre per year on a broadcast basis.

# **BAND APPLICATIONS – TOMATOES:**

Apply 2-4 oz. per acre **Rimsulfuron 25% SG** in a pre-emergence band at (For example,  $\frac{1}{2}$ -1 oz. of product per conventional broadcast acre assuming 25% banding) followed by two separate post-emergence band applications applied at 2 oz. product per acre (For example,  $\frac{1}{2}$  oz. of product per conventional broadcast acre assuming 25% banding) over the same sprayed area.

Do not make any more than three band applications of **Rimsulfuron 25% SG** in one growing season.

## **WEEDS CONTROLLED - TOMATO**

PRE-EMERGENCE WEED CONTROL	
Grass Weeds	Broadleaf Weeds
Barnyardgrass (Echinochloa crus-galli)	Filaree, redstem (Erodium cicutarium)
Foxtail, giant (Setaria faberi)	Henbit (Lamium amplexicaule)
Foxtail, green (Setaria viridis)	Kochia (Kochia scoparia)
Foxtail, yellow (Setaria pumila)	Mustard, black (Brassica nigra)
Wheat, volunteer (Triticum aestivum)	Pigweed, redroot (Amaranthus retroflexus)
	Pigweed, smooth (Amaranthus hybridus)
	Purslane, common (Portulaca oleracea)

Grass Weeds	Broadleaf Weeds
Crabgrass, large (Digitaria spp.)	Cocklebur (Xanthium spp.)
Wild Oat (Avena fatua)	Lambsquarters, common (Chenopodium album)
	Nightshade*, black† (Solanum nigrum)
	Nightshade, hairy (Solanum sarrachoides)
	Pigweed, prostrate (Amaranthus blitoides)
	Ragweed, common (Ambrosia artemisiifolia)
	Velvetleaf (Abutilon theophrasti)
* Eastern black nightshade (Solanum ptycanthum) is	s NOT controlled or suppressed.
† See "Specific Seed Problems".	
‡ Weed partial control is a reduction in weed compe	etition (reduced population and/or vigor) as visually compared to an untreated
area.	

Grass Weeds	Broadleaf Weeds
Barley, volunteer (Hordeum vulgare)	Chamomile, false (Matricaria maritima)
Barnyardgrass (Echinochloa crus-galli)	Chickweed, common (Stellaria media)
Bluegrass, annual (Poa annua)	Henbit (Lamium amplexicaule)
Crabgrass (Digitaria spp.)	Kochia (Kochia scoparia)
Foxtail, bristly (Setaria verticillata)	Mustard, birdsrape (Brassica rapa L.)
Foxtail, giant (Setaria faberi)	Mustard, black (Brassica nigra)
Foxtail, green (Setaria viridis)	Mustard, wild (Sinapsis arvensis)
Foxtail, yellow (Setaria pumila)	Pigweed, redroot (Amaranthus retroflexus)
Panicum, fall (Panicum dichotomiflorum)	Pigweed, smooth (Amaranthus hybridus)
Wheat, volunteer (Triticum aestivum)	Purslane, common (Portulaca oleracea)
	Shepherd's purse (Capsella bursa-pastoris)
	Wild Radish (Raphanus raphanistrum)

POST-EMERGENCE PARTIAL WEED CONTROL‡	
Grass Weeds	Broadleaf Weeds
Johnsongrass, seedling (Sorghum halepense)	Thistle, Canada† (Cirsium arvense)
Millet, wild-proso (Panicum miliaceum)	Cocklebur (Xanthium spp.)
Oat, wild (Avena fatua)	Lambsquarters, common (Chenopodium album)
Quackgrass (Elymus repens)	Morningglory, Ivyleaf (Ipomoea hederacea)
Stinkgrass (Eragrostis cilianensis)	Nightshade, hairy (Solanum sarrachoides)
Yellow Nutsedge (Cyperus esculentus)	Nightshade*, black† (cotyledon stage only)

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	(Solanum nigrum)
	Pigweed, prostrate (Amaranthus blitoides)
	Quackgrass † (Elymus repens)
	Ragweed, common (Ambrosia artemisiifolia)
	Smartweed, Pennsylvania (Polygonum pensylvanicum)
	Velvetleaf (Abutilon theophrasti)
	Volunteer Alfalfa** (Medicago sativa)
* Fastern black nightshade (Solanum ntycanthum) is NOT controll	ed or suppressed. Black nightshade partial control is only for use

- \* Eastern black nightshade (Solanum ptycanthum) is NOT controlled or suppressed. Black nightshade partial control is only for use in Tomatoes in California.
- \*\* Except in California.
- ‡ Weed partial control is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of partial control varies with the rate used, the size of weeds, and the environmental conditions following treatment.
- † See "Specific Weed Problems".

## **RIMSULFURON 25% SG ROTATIONAL CROP GUIDELINES – TOMATO**

For crops listed below, planting prior to the interval shown may result in crop injury when using **Rimsulfuron 25% SG**. Rotation intervals may need to be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless supplemental sprinkler irrigation has been applied and totals greater than 15 inches during the growing season. For tank mixtures, follow the most restrictive rotational crop guideline.

Rotation Crop	Interval (Months)
Corn (Field), Potatoes, Tomatoes	Anytime
Wheat, Winter	4
Garlic	6
Beans (Dry/Snap), Corn (Sweet), Cotton, Cucumber,	10
Soybeans	
Crops Not Listed	12
Note: Where drip-irrigated tomatoes are grown, rotate only	to tomato, potato, or field corn as crop injury may result.

Rotational crops may be planted at indicated intervals provided the fields are deep disked or plowed and thorough soil mixing is achieved prior to planting the rotational crop.

# **RESTRICTIONS - TOMATO**

- Do not apply Rimsulfuron 25% SG within 45 days of tomato harvest.
- Do not apply Rimsulfuron 25% SG by air on tomatoes.
- Do not apply using assisted (Air Blast) field crops sprayers on tomatoes.
- Do not exceed 4 ounces Rimsulfuron 25% SG per acre (broadcast basis) on tomatoes during the same growing season.
- Do not apply to tomatoes growing in greenhouses, cold frames, pot cultures, etc. Apply only to tomatoes growing in fields.
- Do not apply through any type of irrigation system.

# **CULTIVATION**

A timely cultivation may be necessary to control suppressed weeds, weeds that were beyond the maximum size at application, or weeds that emerge after an application of **Rimsulfuron 25% SG**.

- Cultivation up to 7 days before the post-emergence application of Rimsulfuron 25% SG may decrease weed
  control by pruning weed roots, placing the weeds under stress or covering the weeds with soil and preventing
  coverage by Rimsulfuron 25% SG.
- To allow Rimsulfuron 25% SG to fully control treated weeds, do not cultivate for 7 days after application.
- Optimizing timing for cultivation is 7-14 days after a post-emergence application of Rimsulfuron 25% SG.

#### SPECIFIC WEED PROBLEMS

**Quackgrass:** Apply **Rimsulfuron 25% SG** post-emergence to quackgrass that is 4-8 inches tall. Quackgrass not emerged at the time of application will not be controlled or suppressed and will require a second post-emergence application for acceptable control.

**Black Nightshade (Tomatoes):** For optimum results, apply **Rimsulfuron 25% SG** pre-emergence (prior to weed germination) at 2-4 oz. per acre followed by a post-emergence application at 1-2 oz. per acre to small actively growing weeds.

**Canada Thistle:** For optimum results, apply **Rimsulfuron 25% SG** post-emergence to small actively growing Canada thistle. Canada thistle not emerged at the time of application will not be controlled or suppressed and will require a second post-emergence application for acceptable control.

#### **SPRAY ADJUVANTS**

Include a spray adjuvant with applications of **Rimsulfuron 25% SG** when applied by itself and post-emergence to the weeds. Consult your Ag dealer or applicator prior to using an adjuvant system. If another herbicide is tank mixed with **Rimsulfuron 25% SG**, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients (40 CFR 910 or 40 CFR 920).

# **Nonionic Surfactant (NIS)**

- Apply 0.125 to 0.25% v/v (1-2 pints/100 gals. of water). Use the 0.25% v/v rate in arid or drought conditions.
- Surfactant products must contain at least 80% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

### Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- Apply at 1% volume/volume (1 gal. per 100 gals. spray solution) or 2% under arid conditions.
- Oil adjuvants must contain at least 80% high-quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.
- Blended products that contain both MSO and silicone are acceptable at labeled rates.

## **Ammonium Nitrogen Fertilizer**

- Use 2 quarts/acre of a high-quality urea ammonium nitrate (UAN), such as 28%N or 32%N, or 2 lbs./acre of a spraygrade ammonium sulfate (AMS). Use 4 quarts/acre UAN or 4 lbs./acre AMS under arid conditions.
- Do not use liquid nitrogen fertilizer as the total carrier solution.

# **Special Adjuvant Types**

- Combination adjuvant products may be used at doses that provide the required amount of NIS and ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- Do not use any other adjuvant rates or mixtures with Rimsulfuron 25% SG unless instructed to do so by a Rotam representative.

#### **Precautions**

- Using a silicone polymer-type surfactants is not suggested as reduced weed control may result.
- Avoid using crop oil concentrate (COC) or methylated seed oil (MSO) when tomatoes are under heat stress (>85°F) as multiple stresses may cause crop injury.

# **EQUIPMENT-SPRAY VOLUMES**

Agitate the spray tank continuously to keep the material in suspension.

Do not use equipment and/or spray volumes that will cause damage from spray by drift onto nontarget sites. Do not make applications when weather conditions are likely to cause spray to drift onto nontarget sites. (See the "Spray Drift Management" section of this label for additional information.)

# GROUND APPLICATION – POTATOES AND TOMATOES

To ensure optimum spray distribution and thorough coverage, apply **Rimsulfuron 25% SG** with a properly calibrated, low-pressure (20-40 psi) boom sprayer equipped with flat fan, "Twinjet", under-leaf banding nozzles or flood jet nozzles. Nozzle screens should be no finer than 50 mesh. When using flood nozzles, the spray pattern should overlap 100% for optimum product performance. For banded applications even-flow flat fan or twin jet spray nozzles may provide a more uniform spray distribution.

For maximum pre-emergence activity, prior to application, the bed or soil surface should be smooth and relatively free of crop and weed trash (dead weeds, decaying leaves, clippings, etc.). Remove leaves and trash by blowing the area to be treated or by thoroughly mixing the trash into the soil through cultivation prior to herbicide application. Cultural practices that result in redistribution or disturbance of the soil surface after treatment will decrease the herbicidal effectiveness of **Rimsulfuron 25% SG**. Cutting water furrows or cultivations that mix untreated soil into the treated areas will also reduce the effectiveness of the herbicide treatment.

For optimum results, apply **Rimsulfuron 25% SG** with another suitable residual herbicide registered for that crop on all soil types, but especially on coarse-textured soils under standard sprinklers or micro-sprinklers.

More than one banded application of Rimsulfuron 25% SG may be needed to provide extended weed control.

#### **Potatoes and Tomatoes Precautions:**

- Potato and tomato varieties may differ in their response to various herbicides. 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.
- Pre-emergence use on soils containing more than 6% organic matter may not provide adequate soil-residual weed control and may result in reduced weed control.
- Pre-emergence and post-emergence use on rill-irrigated potatoes and tomatoes (furrow or gravity) may not provide
  adequate weed control in the absence of rainfall.
- If sprinklers are used for frost protection, delay the application of Rimsulfuron 25% SG until stress from environmental conditions has passed.
- Avoid spray drift to any adjacent crops or desirable plants as injury may occur.
- Crop injury may occur following an application of Rimsulfuron 25% SG if there is a prolonged period of cold weather and/or cold weather in conjunction with wet soils caused by poor drainage or excessive use of sprinkler irrigation for frost protection.
- Draining or flushing equipment on or near desirable trees or other plants, or in areas where their roots may extend, or
  in locations where the chemical may be washed or moved into contact with their roots may injure these plants. Trees
  or other desirable plants whose roots extend into a treated crop use area may be injured.
- For best results, maintain spray tank solution at pH 5 to 7.
- If the selected companion herbicide has a ground or surface water advisory, consider the advisory when using the companion herbicide.
- Tank mixing Rimsulfuron 25% SG with organophosphate insecticides in tomatoes may result in crop injury.

#### **Potatoes and Tomatoes Restrictions:**

• Do not apply to frozen or snow-covered soil. Crop injury may occur from applications made to poorly drained soils.

# BLUEBERRY (HIGH AND LOW BUSH) AND CANEBERRY (RASPBERRY AND BLACKBERRY)

\*Not for use in California.

#### **BLUEBERRY (High Bush)**

For broadcast applications, make a single application of **Rimsulfuron 25% SG** pre-emergence or early post-emergence to actively growing weeds at **4 ounces per acre per year**. Use a directed spray application adjusted to provide complete coverage of the weeds while minimizing the amount of spray coming into contact with the blueberry plants. When applied as a banded treatment (50% treated band or less), **Rimsulfuron 25% SG** may be applied twice per year.

- Allow a minimum of 30 days between applications.
- Applications made after bud break may cause temporary chlorosis and/ or stunting of leaves contacted by the spray.
- Use Rimsulfuron 25% SG on high bush blueberries that have gone through at least one growing season and are in good health and vigor
- Rimsulfuron 25% SG may be applied in tank mixture with other herbicides registered for use in high bush blueberries.

## **Blueberry (High Bush) Restrictions:**

- Do not apply by air.
- Do not use on soils classified as sand.
- Do not apply within 21 days of first harvest (21-day PHI).
- Do not apply more than 4 ounces per acre on a broadcast application basis per year.

### **BLUEBERRY (Low Bush)**

All applications of **Rimsulfuron 25% SG** are to be applied in the vegetative year growth stage of low bush blueberries. Make a single broadcast application of **Rimsulfuron 25% SG** pre-emergence or early post-emergence to actively growing weeds at **4 ounces per acre per year.** When applied as a banded treatment (50% treated band or less), **Rimsulfuron 25% SG** may be applied twice per year.

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- Allow a minimum of 30 days between applications.
- For broadcast treatments, make the application prior to bud break of the blueberries. After bud break, use a directed spray application adjusted to provide complete coverage of the weeds while minimizing spray contact with the blueberry plants.
- Applications made after bud break may cause temporary chlorosis and/ or stunting of leaves contacted by the spray.
- Use Rimsulfuron 25% SG on low bush blueberries that have gone through at least one growing season and are in good health and vigor.
- Rimsulfuron 25% SG may be applied in tank mixture with other herbicides registered for use in low bush blueberries.

## **Blueberry (Low Bush) Restrictions:**

- · Do not apply by air.
- Do not use on soils classified as sand.
- Do not apply within 21 days of first harvest (21-day PHI).
- Do not apply more than 4 ounces per acre on a broadcast application basis per year.

# CANEBERRY (Raspberry, Blackberry)

#### \*Not for use in California.

For broadcast applications, make a single application of **Rimsulfuron 25% SG** pre-emergence or early post-emergence to actively growing weeds at **4 ounces per acre per year**. Use a directed spray application adjusted to provide complete coverage of the weeds while minimizing the amount of spray coming into contact with the caneberry plants. When applied as a banded treatment (50% treated band or less), **Rimsulfuron 25% SG** may be applied twice per year.

- Allow a minimum of 30 days between applications.
- If primocanes are up at time of treatment, temporary chlorosis of foliage and/or stunting of primocane growth
  may occur. These symptoms are temporary and do not affect the overall health and vigor of primocane
  development.
- Use Rimsulfuron 25% SG on caneberry plants that have gone through at least one growing season and are in good health and vigor.
- Rimsulfuron 25% SG may be applied in tank mixture with other herbicides registered for use in caneberry.

# Caneberry (Raspberry, Blackberry) Restrictions:

- Do not apply by air.
- Do not use on soils classified as sand.
- Do not apply within 21 days of first harvest (21-day PHI).
- Do not apply more than 4 ounces per acre on a broadcast application basis per year.

# RANGELAND RESTORATION WEST OF THE MISSISSIPPI RIVER

#### PRODUCT INFORMATION

A restoration management program that includes **Rimsulfuron 25% SG** may be used when rangeland has become severely infested with invasive weed species such that the land has deteriorated to a point that it is no longer suitable for grazing or forage production. To reclaim these lands, the invasive weed species must first be controlled to allow native grasses to reestablish or to be replanted with desirable forage grasses. The grasses must be allowed time to reestablish before grazing or forage production is resumed. A typical restoration management program will take one to two years. **Rimsulfuron 25% SG** may be used to control grass and broadleaf weeds listed in this section under Weeds Controlled. The residual activity of **Rimsulfuron 25% SG** will also help prevent the reemergence of many of these weeds while desirable grasses are being reestablished.

At the maximum application rate of 4.0 ounces of **Rimsulfuron 25% SG** per acre per year, desirable rangeland perennial grasses in the treated area may exhibit a temporary chlorosis (yellowing of foliage) following application. The use of an adjuvant with **Rimsulfuron 25% SG** can increase desirable perennial grass injury.

Do not graze treated sites or cut for forage or hay for a minimum of 1 year after application in order to allow newly emerged grasses sufficient time to become established. Where practical, fencing or other measures are to be used to prevent early grazing of re-established sites to help promote active grass restoration.

#### **RESTORATION PROGRAM**

An effective restoration program may include one or more of the following steps (A through F):

- A. Identify and inventory weeds and desired grass densities.
- B. Consult and plan the entire program with personnel experienced in herbicide programs and range restoration. Make applications of **Rimsulfuron 25% SG** prior to soil freeze or after spring thaw.
- C. Make sure all label precautions are followed.
- D. Include a tank mix partner labeled for use on rangeland to broaden the spectrum of weeds controlled.
- E. Plant grass seed as needed to improve the site, per the Grass Replant Interval in this section of the label.
  - Plant to obtain the highest possible grass stand establishment.
  - Plant a selected grass mixture to improve the desired stand.
  - Use a properly fitted drill to help ensure correct seed placement and depth.
  - Seed in late fall to best ensure moisture for seed germination. Seeding in the spring has the highest risk of stand failure.
  - · Consult with a knowledgeable grass seed supplier to select the best-suited varieties for your area.
- F. Treat for second year forbs (if necessary): Treat with REPORT® Herbicide (75% chlorsulfuron) (0.25-1 ounce per acre) + bromoxynil (1 pint per acre) to weeds at the early growth stage.

#### **GRASS REPLANT INTERVAL**

The replant interval is for soils with a pH of less than 7.5. Soils having a pH greater than 7.5 will require a longer interval. The replant interval is for applications made in the spring. Because **Rimsulfuron 25% SG** degradation is slowed by cold, dry, or frozen soils, the replant interval for applications made in the fall should begin the spring following treatment.

Following a treatment with **Rimsulfuron 25% SG** at use rates up to 4 ounces of product per acre, the following grasses may be replanted at least 7 months after a spring application. Rainfall or irrigation of at least ½ inch following treatment is necessary to replant 7 months after a **Rimsulfuron 25% SG** application. If the treated site does not receive at least ½ inch of rainfall or irrigation within 4 weeks after **Rimsulfuron 25% SG** application, then the grass replant interval is 12 months.

Crested wheatgrass (Agropyron cristatum)	Beadless (creeping) wild rye (Leymus triticoides)
Intermediate wheatgrass (Thinopyrum intermedium)	Big bluegrass (Poa ampla)
Blue bunch wheatgrass (Pseudoroegneria spicata)	Idaho fescue (Festuca idahoensis)
Squirreltail (Elymus elymoides)	Smooth brome (Bromus inermis)

Testing has indicated that there is considerable variation in response among species and types of grasses when seeded into areas treated with **Rimsulfuron 25% SG**. If species other than those listed above are to be planted into areas treated with **Rimsulfuron 25% SG**, a field bioassay should be performed, or previous experience may be used to determine the feasibility of replanting treated areas. To conduct a field bioassay, grow to maturity test strips of the grass species you plan to grow the following year. The test strips should cross the entire field including knolls and low areas. Crop response to the bioassay will indicate whether or not to plant the grass species grown in the test strips.

## **APPLICATION EQUIPMENT**

Apply **Rimsulfuron 25% SG** using ground or aerial spray equipment. Fixed-wing aircraft and helicopters can be used to apply **Rimsulfuron 25% SG**; however, do not make applications by fixed-wing aircraft unless appropriate buffer zones can be maintained to prevent spray drift out of the target area or, when treating open tracts of land, spray drift as a result of fixed-wing aircraft application can be tolerated. Aerial equipment designed to minimize spray drift, such as a helicopter equipped with a Microfoil® boom or raindrop nozzles, must be used and calibrated. Except when applying with a Microfoil® boom, a drift-control agent may be added at the labeled rate.

# **APPLICATION RATES AND TIMING**

Apply 2-4 ounces per acre **Rimsulfuron 25% SG** in the fall or spring, prior to moisture expectation and plant growth. Do not apply when soil is frozen. For residual activity, moisture is required to activate **Rimsulfuron 25% SG**. When applied at lower rates in the spring, **Rimsulfuron 25% SG** provides suppression\* of weeds listed. When applied at higher rates in the fall, weed control is afforded.

\*Weed suppression is a visual reduction in weed competition (reduced population and/or vigor) as compared to an untreated check. The degree of actual control that may occur will vary with the size of the weeds, the degree of weed or desirable grass competition, and environmental conditions.

#### **TANK MIXTURES**

**Rimsulfuron 25% SG** may be tank mixed with other herbicides registered for rangeland use. Refer to the label of the tank mix partner(s) for any additional use instructions or restrictions. **Rimsulfuron 25% SG** may be mixed with Report Herbicide (chlorsulfuron) at 0.25 to 1 ounce per acre to broaden the spectrum of broadleaf and grass weed control. Refer to the REPORT® Herbicide label for additional information on weed species controlled, use rates, and instructions or restrictions.

### **WEEDS CONTROLLED**

Brome, downy (cheatgrass) (Bromus tectorum)

When applied at 2 ounces per acre in the spring, **Rimsulfuron 25% SG** suppresses the following weeds and when applied at 3 ounces per acre in the fall, **Rimsulfuron 25% SG** controls the following weeds:

	Brome, Japanese (Bromus japonicus)		
When applied at 4 ounces per acre, Rimsulfuron 25% SG controls the following additional weeds:			
	Barnyardgrass (Echinochloa crus-galli)	Mallow, common (Malva neglecta)	
	Crabgrass, large (Digitaria sanguinalis)	Horseweed/marestail* (Conyza canadensis)	
	Foxtail, giant (Setaria faberi)	Medusahead (Taeniatherum caput-medusae)	
	Foxtail, green (Setaria viridis)	Mustard, black (Brassica nigra)	

Cheat (Bromus secalinus)

Foxtail, green (Setaria viridis)

Foxtail, yellow (Setaria pumila)

Filaree redstem (Erodium cicutarium)

Fleabane, hairy (Conyza bonariensis)

Mustard, black (Brassica nigra)

Pigweed, redroot (Amaranthus retroflexus)

Pigweed, smooth (Amaranthus hybridus)

Puncturevine (Tribulus terrestris)

#### **Use Precautions**

- Treatment of powdery, dry soil or light sandy soil when there is little likelihood of rainfall soon after treatment
  may result in off-target movement and possible damage to susceptible crops when soil particles are moved by
  wind or water
- . Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops.
- Exposure to Rimsulfuron 25% SG may injure or kill most crops. Injury may be more severe when the crops are irrigated.

## **Use Restrictions**

• Do not apply **Rimsulfuron 25% SG** when these conditions are identified and where powdery, dry soil or light or sandy soil is known to be prevalent in the area to be treated.

In order to reduce the potential for off-site movement of **Rimsulfuron 25% SG** from wind or water-related soil erosion, do not burn, disk, or otherwise disturb treated sites between the time of application and reseeding or re-establishment of native grasses.

Pre-emergence use on soils containing more than 6% organic matter may result in reduced weed control.

Minimize spray drift to any adjacent crops or planned crop planting areas or desirable plants since injury may occur.

Draining or flushing equipment on or near desirable trees or other plants or in areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots may injure these plants.

Crops (especially crops other than pome fruit, tree nuts, stone fruit, citrus, grapes, potatoes, tomatoes, and field corn) whose roots may extend into a treated area may be injured.

Do not contaminate any body of water, including irrigation water that may be used on other crops.

Do not treat frozen soil. Do not apply in or on irrigation ditches or canals including their outer banks. Do not apply through any type of irrigation system. If restoration sites treated with **Rimsulfuron 25% SG** are to be converted to an agricultural use other than rangeland, consult the **Rimsulfuron 25% SG** label for all rotational crop instructions.

<sup>\*</sup> Naturally occurring resistant biotypes of this weed are known to exist in some areas of the U.S. **Rimsulfuron 25% SG** will not control these biotypes.

# SELECTIVE WEED CONTROL AND INVASIVE SPECIES MANAGEMENT IN NON-CROP SITES

**Rimsulfuron 25% SG** is a water dispersible granule formulation to be mixed with water and sprayed for weed control on private, public, and military lands as follows: non-agricultural areas (such as airports, highway, railroad and utility rights-of-way, sewage disposal areas, etc.); uncultivated agricultural areas – non-crop producing (such as farmyards, fuel storage areas, fence rows, non-irrigation ditch-banks, barrier strips, etc.); industrial sites – outdoor (such as lumberyards, pipeline and tank farms, etc.), and non-cropland wildlife habitats.

#### **INVASIVE SPECIES MANAGEMENT**

**Rimsulfuron 25% SG** may be used on public, private, and tribal lands to treat certain weed species infestations that have been determined to be invasive, consistent with the Federal Interagency Committee for Management of Noxious and Exotic Weeds (FICMNEW) and National Early Detection and Rapid Response (EDRR) System for invasive plants.

Effective EDRR systems address invasions by eradicating the invader where possible, and controlling them when the invasive species is too established to be feasibly eradicated. Once an EDRR assessment has been completed and action is recommended, a Rapid Response needs to be taken to quickly contain, deny reproduction, and if possible, eliminate the invader. Consult your appropriate state extension service, forest service, or regional multidisciplinary invasive species management coordination team to determine the appropriate Rapid Response provisions and allowed treatments in your area.

**Rimsulfuron 25% SG** is non-corrosive to spray equipment, non-flammable and non-volatile. Do not use **Rimsulfuron 25% SG** in a spray solution or with spray additives that buffer the pH to below 4.0 or above 8.0 as degradation of **Rimsulfuron 25% SG** may occur.

**Rimsulfuron 25% SG** may be used in weed management programs on non-crop sites to provide residual preemergence and early post-emergence control of the following weeds:

ciliar gariac and carry post ciliar gariac control of the following	Woods.
Barnyardgrass (Echinochloa crus-galli)	Mallow, common (Malva neglecta)
Browne, downy (Bromus tectorum)	Horseweed/marestail* (Conyza canadensis)
Crabgrass, large (Digitaria sanguinalis)	Medusahead (Taeniatherum caput-medusae)
Foxtail, giant (Setaria faberi)	Mustard, black (Brassica nigra)
Foxtail, green (Setaria viridis)	Pigweed, redroot (Amaranthus retroflexus)
Foxtail, yellow (Setaria pumila)	Pigweed, smooth (Amaranthus hybridus)
Filaree redstem (Erodium cicutarium)	Puncturevine (Tribulus terrestris)
Fleabane, hairy (Conyza bonariensis)	

<sup>\*</sup> Naturally occurring resistant biotypes of this weed are known to exist in some areas of the U.S. **Rimsulfuron 25% SG** will not control these biotypes.

Refer to the rest of the label for other weeds controlled.

To provide a broader spectrum of residual weed control, **Rimsulfuron 25% SG** may be applied in a tank mixture with other registered pre-emergence herbicides. When weeds are present at application, include a labeled burndown herbicide, such as Glyfos® X-TRA.

For best results, make post-emergence applications to young, actively growing weeds and include a spray adjuvant. Refer to the label of the tank mixture partner(s) for any additional use instructions or restrictions. Follow the most restrictive labeling of any of the tank-mix component products.

# **TANK MIXTURES**

**Rimsulfuron 25% SG** may be mixed with other herbicides registered for non-crop use. It may also be tank mixed with any adjuvants registered for non-crop use. Refer to the label of the tank mixture partner(s) for any additional use instructions or restrictions.

#### **APPLICATION INFORMATION**

Apply 4 ounces broadcast per acre Rimsulfuron 25% SG. Do not apply more than 4.0 ounces of Rimsulfuron 25% SG per acre per year.

For best pre-emergence and residual activity, **Rimsulfuron 25% SG** must be activated by rainfall and applied when soil temperatures are cool. Make applications to take advantage of normal rainfall patterns (minimum of  $\frac{1}{2}$  inch) and cooler temperatures. For best results, moisture for activation should occur within 2-3 weeks after application.

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To help ensure uniform coverage, use a minimum of 10 gallons of spray solution per acre. Nozzle selection should meet manufacturer's spray volume and pressure recommendations for pre-emergence or post-emergence herbicide applications

Rimsulfuron 25% SG may be applied using ground or aerial spray equipment. Fixed wing aircraft and helicopters can be used to apply Rimsulfuron 25% SG; however, do not make applications by fixed wing aircraft unless appropriate buffer zones can be maintained to prevent spray drift out of the target area or, when treating open tracts of land, spray drift as a result of fixed wing aircraft application can be tolerated. Aerial equipment designed to minimize spray drift, such as helicopter equipped with a Microfoil™ boom or raindrop nozzles, must be used and calibrated. Except when applying with a Microfoil™ boom, a drift control agent may be added at the labeled rate.

#### **NON-CROPLAND RESTORATION**

**Rimsulfuron 25% SG** is labeled for the control of downy brome (cheatgrass), medusahead, and certain broadleaf weeds in non-cropland. In order to release desirable, perennial grass species for site restoration, **Rimsulfuron 25% SG** may be applied at 3-4 ounces of product per acre in the fall, within 6 weeks before the expected date when the soil freezes. Use the higher rate for medusahead control.

To provide broader spectrum broadleaf weed control in non-crop land restoration, a tank mixture of **Rimsulfuron 25% SG** and Report Herbicide may be used. Include Report Herbicide at the use rate of 0.5 ounce per acre.

#### **Use Precautions**

- Treatment of powdery, dry soil or light, sandy soil when there is little likelihood of rainfall soon after treatment
  may result in off-target movement and possible damage to susceptible crops when soil particles are moved by
  wind or water
- . Injury to crops may result if treated soil is washed, blown, or moved onto land used to produce crops.
- Exposure to Rimsulfuron 25% SG may injure or kill most crops. Injury may be more severe when the crops are irrigated.

#### **Use Restrictions**

 Do not apply Rimsulfuron 25% SG when these conditions are identified and powdery, dry soil or light, or sandy soil is known to be prevalent in the area to be treated.

Pre-emergence use on soils containing more than 6% organic matter may result in reduced weed control. Avoid spray drift to any adjacent crops or planned crop planting areas or desirable plants since injury may occur.

Draining or flushing equipment on or near desirable trees or other plants or in areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots may injure these plants.

Crops (especially crops other than pome fruit, tree nuts, stone fruit, citrus, grapes, potatoes, tomatoes, and field corn) whose roots may extend into a treated area may be injured.

Where food and/or feed crops are grown, or in areas where food and/ or feed crops are planned to be grown, care should be taken to prevent any direct spray of **Rimsulfuron 25% SG** onto, or drift to, these crops or planned planting areas since severe crop injury may occur.

Do not contaminate any body of water, including irrigation water that may be used on other crops. Do not apply in or on irrigation ditches or canals including their outer banks. Do not apply when the soil is frozen.

If non-crop sites treated with **Rimsulfuron 25% SG** are to be converted to an agriculture use, consult the **Rimsulfuron 25% SG** package label for all rotational crop instructions.

# ADDITIONAL USE INFORMATION - ALL CROPS AND USES

# MIXING INSTRUCTIONS

**Rimsulfuron 25% SG** must be completely dissolved in clean water before adding to spray tanks that do not have continuous agitation during loading and mixing. (This is common for airplanes with turbine engines).

- 1. Fill the tank 1/4 to 1/3 full of water.
- 2. While agitating, add the required amount of Rimsulfuron 25% SG.
- 3. Continue agitation until the **Rimsulfuron 25% SG** is fully dissolved, at least 5 minutes.

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- 4. Once the Rimsulfuron 25% SG is fully dissolved, maintain agitation and continue filling tank with water.
- As the tank is filling, add tank mix partners (if desired) then add the required amount of spray adjuvant (if needed). Always add the spray adjuvant last.
- 6. Dispersed tank mix partners can settle if the tank mixture is not continually agitated. If settling occurs, thoroughly re-agitate before using.
- 7. Apply Rimsulfuron 25% SG spray mixture within 24 hours of mixing to avoid product degradation.
- 8. If **Rimsulfuron 25% SG** and a tank mix partner are to be applied in multiple loads, fully dissolve the **Rimsulfuron 25% SG** in clean water prior to adding to the tank.

If the selected companion herbicide has a ground or surface water advisory, consider this advisory when using the companion herbicide.

#### AT THE END OF THE DAY

After each day of spraying multiple loads of **Rimsulfuron 25% SG**, the interior of the tank should be rinsed with fresh water and then partially filled and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits from accumulating in the application equipment.

# After Spraying Rimsulfuron 25% SG and Before Spraying Other Crops

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of **Rimsulfuron 25% SG** as follows:

- 1. Empty the tank and drain the sump completely.
- Spray the tank walls with clean water using a minimum volume of 10% of the tank volume. Circulate the water through the lines, including all by-pass lines, for at least two minutes. Flush the boom well and empty the sprayer. Completely drain the sump.
- 3. Repeat step 2.
- 4. Remove the nozzles and screens and clean separately in a bucket containing water.

The rinsate solution may be applied back to the crop(s) listed on this label. Do not exceed the maximum labeled use rate. If 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.

#### Notes

- 1. Always start with a clean spray tank.
- 2. Steam-cleaning aerial spray tanks should be done to facilitate the removal of any caked deposits.
- When Rimsulfuron 25% SG is tank mixed with other pesticides, all cleanout procedures for each product should be examined and the most rigorous procedure should be followed.
- 4. Follow any pre-cleanout guidelines specified on other product labels.

#### **SPRAY DRIFT MANAGEMENT**

The interaction of a number of 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. Where states have more stringent regulations, they should be followed.

# **Importance of 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. 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 listed 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.

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#### 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 ¾ of the wing or rotor length longer booms increase drift notential
- Application Height Application more than 10 feet above the canopy increases the potential for spray drift.

# **Boom Height**

Set the boom at the lowest height that provides uniform coverage and reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

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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. Do not apply when wind speed is less than 3 mph or above 10 mph.

**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 or 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.

# **BIOLOGICAL ACTIVITY AND ENVIRONMENTAL CONDITIONS**

**Rimsulfuron 25% SG** is absorbed through the roots and foliage of plants, rapidly inhibiting the growth of susceptible weeds. For pre-emergence weed control, rainfall or sprinkler irrigation is needed to move **Rimsulfuron 25% SG** into the soil. Weeds will generally not emerge from pre-emergence applications. In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases and leaves become chlorotic (yellowish) three to five days after emergence. Death of leaf tissue and growing point will follow in some species, while others will remain green but stunted and noncompetitive.

One to three weeks after post-emergence application to weeds, leaves of susceptible plants appear chlorotic, and the growing point subsequently dies. In warm, moist conditions, the expression of herbicide symptoms is accelerated; in cold, dry conditions, expression of herbicide symptoms is delayed. Death of leaf tissue and growing point will follow in some species, while others will remain green but stunted and noncompetitive.

**Rimsulfuron 25% SG** provides the best control of weeds in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not provide satisfactory control. However, a crop canopy that is too dense at application can intercept spray and reduce weed control.

The herbicidal action of **Rimsulfuron 25% SG** may be less effective on weeds stressed from adverse environmental conditions such as abnormally hot or cold temperatures, abnormal soil conditions such as extremely dry or water-

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saturated soil, or hail or frost damage. Incomplete control may also result on plants injured from disruptive cultural practices, herbicide carryover from a previous crop, or injury from insects, diseases, or other pests. Additionally, weeds hardened-off by drought stress are less susceptible to **Rimsulfuron 25% SG**. It is best to delay applications until stress has been alleviated.

Post-emergence weed control may be reduced if rainfall occurs soon after application. Several hours of dry weather are needed to allow **Rimsulfuron 25% SG** to be sufficiently absorbed by weed foliage (generally **Rimsulfuron 25% SG** is rainfast in 4 hours).

#### 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 the field. Adequate control to 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 usage available in your area.

Naturally occurring weed biotypes that are resistant to Amber®, Accurate®, Report™, Report Extra™, Nuance™, and Nimble™ will also be resistant to **Rimsulfuron 25% SG**.

## **INTEGRATED PEST MANAGEMENT**

To better control pests, Rotam recommends the use of Integrated Pest Management (IPM). **Rimsulfuron 25% SG** may be used as part of an Integrated Pest Management program, which can include biological, cultural, and genetic practices, aimed at preventing economic pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for treating specific pest/crop or site systems in your area.

# RESTRICTIONS

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

- Do not apply, drain, or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
- · Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants.
- · Do not contaminate any body of water, including irrigation water that may be used on other crops.
- Carefully observe sprayer cleanup instructions, as spray tank residue may damage crops other than potatoes or tomatoes.
- · Do not apply using Air Assisted (Air Blast) field-crop sprayers.

### STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store product in original container only. Store in a cool, dry place.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

PESTICIDE STORAGE: Store in original container in a well-ventilated area separately from fertilizer, feed and foodstuffs. Avoid cross-contamination with other pesticides. Spillage or leakage should be contained and absorbed with clay granules, sawdust or equivalent material for disposal.

PESTICIDE DISPOSAL: Triple rinse pesticide from containers and use rinsates in the pesticide application. Wastes which cannot be used according to label instructions may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING:

NONREFILLABLE CONTAINER (LESS THAN 50 LBS.)

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Nonrefillable container: Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

# NONREFILLABLE CONTAINERS (GREATER THAN 50, LBS.) GREATER THAN 5 GALLONS

Nonrefillable container: Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then 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.

#### REFILLABLE CONTAINERS

Refillable container: 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 this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then 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.

#### CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of this product, which are beyond the control of ROTAM AGROCHEMICAL COMPANY LIMITED or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ROTAM AGROCHEMICAL COMPANY LIMITED and Seller harmless for any claims relating to such factors.

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