



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

May 8, 2018

S.K. Theodorakis  
Product Registration Manager  
E.I. du Pont de Nemours and Company  
DuPont Crop Protection  
Stine-Haskell Research Center  
P.O. Box 30  
Newark, DE 19714-0030

Subject: PRIA Label Amendment – adding new uses including berry, low growing, except strawberry, subgroup 13-07H for rimsulfuron and the regionally restricted uses on 1.) fescue, forage 2.) fescue, hay 3.) ryegrass, perennial, hay 4.) ryegrass, perennial, forage. EPA is also granting the conversion of the existing tolerances in or on 1.) fruit, citrus, group 10-10 2.) fruit, pome, group 11-10 3.) fruit, stone, group 12-12 4.) nut, tree, group 14-12; and expansion of existing tolerances in or on 1.) vegetable, tuberous and corm, subgroup 1C 2.) fruit, small, vine climbing, except fuzzy kiwi, subgroup 13-07F  
Product Name: DuPont Matrix SG Herbicide  
EPA Registration Number: 352-768  
Application Date: 5/8/2018  
Decision Number: 540843; 540844

Dear S.K. Theodorakis:

The application referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable under FIFRA Section 3(c)(7)(B), subject to the following conditions:

1. You must submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.
2. You are required to submit to the Agency the following toxicity data for pollinators: honey bee adult acute oral toxicity, honey bee larvae acute oral toxicity, honey bee adult chronic oral toxicity, and honey bee larvae chronic oral toxicity. The deadline for you to submit these required data to the Agency is 2/16/2020. Your failure to provide these data in a timely or adequate manner may result in initiation of a cancellation action against your registration.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR

152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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.

Your release for shipment of the product constitutes acceptance of these conditions. If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). If you have any questions, please contact Nathan Mellor by phone at 703-347-8562, or via email at [mellor.nathan@epa.gov](mailto:mellor.nathan@epa.gov).

Sincerely,



Rachel C. Holloman, Chief  
Fungicide & Herbicide Branch,  
Registration Division,  
Office of Pesticide Programs



# DuPont™ Matrix® SG

**HERBICIDE**

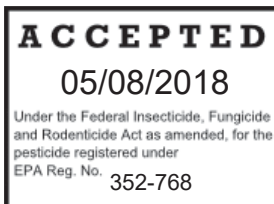
GROUP 2 HERBICIDE

## WATER SOLUBLE GRANULE

*For weed control in Citrus Fruit, Stone Fruit, Tree Nuts, Pome Fruit, Grapes, Potatoes, Potatoes (Grown for Seed), Tomatoes (field grown), Field Corn (California), Blueberries, Raspberries, Blackberries and Grass Grown for Seed (Oregon & Washington)*

Active Ingredients	By Weight
Rimsulfuron	
N-((4,6-dimethoxypyrimidin-2-yl)aminocarbonyl)-3-(ethylsulfonyl)-2-pyridinesulfonamide	25.0%
<b>Other Ingredients</b>	<b>75.0%</b>
<b>TOTAL</b>	<b>100.0%</b>

EPA Reg. No. 352-768  
**Nonrefillable Container**  
 Net: \_\_\_\_\_  
 OR  
**Refillable Container**  
 Net: \_\_\_\_\_



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

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

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-441-3637 for emergency medical treatment information.

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco, or using the toilet.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Applicators and other handlers must wear:**

- Long-sleeve shirt and long pants
- Chemical resistant gloves made of any waterproof material including nitrile rubber, natural rubber, neoprene rubber, or butyl rubber
- Shoes plus socks

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

#### **Engineering Control Statements**

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

### **USER SAFETY RECOMMENDATIONS**

**USERS SHOULD:** Wash hands before eating, drinking, chewing gum, using tobacco or using toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### **ENVIRONMENTAL HAZARDS**

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

#### **Surface Water Advisory**

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for months or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this product from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

#### **Windblown Soil Particles**

This product has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying this product if prevailing local conditions may be expected to result in off-site movement.

#### **Non-target Organism Advisory**

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

## **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.

DuPont™ MATRIX® SG herbicide, also referred to below as DuPont™ MATRIX® SG, MATRIX® SG herbicide or MATRIX® SG, must be used in accordance with the directions for use on this label; Supplemental Labels; Special Local Need Registrations; FIFRA Section 18 exemptions. Always read the entire label including the Limitation of Warranty and Liability.

### **AGRICULTURAL USE REQUIREMENTS**

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

Coveralls

Chemical resistant gloves made of any water proof material including nitrile rubber, natural rubber, neoprene rubber, or butyl rubber

Shoes plus socks

## **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 Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used produce agricultural plants on farms, forests, nurseries, or greenhouses. Use on noncrop 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.

## **PRODUCT INFORMATION**

DuPont™ MATRIX® SG herbicide is a water soluble granule formulation that selectively controls certain broadleaf weeds and grasses in pome fruit, citrus fruit, tree nuts, stone fruit, blueberry, caneberry and small vine climbing fruit (except fuzzy kiwifruit) [grape] crops which have been established for at least one full growing season. MATRIX® SG herbicide also selectively controls certain broadleaf weeds and grasses in field corn (CA only), tuberous and corm vegetable [potatoes,] [potatoes grown for seed] and field grown tomatoes (direct seeded and transplant).

The best control is obtained when MATRIX® SG is applied to young, actively growing weeds. The degree and duration of control may depend on the following:

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

## **BIOLOGICAL ACTIVITY AND ENVIRONMENTAL CONDITIONS**

MATRIX® SG is absorbed through the roots and foliage of plants, rapidly inhibiting the growth of susceptible weeds. For Preemergence weed control, rainfall or sprinkler irrigation is needed to move MATRIX® SG into the soil. Weeds will generally not emerge from Preemergence applications. In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases and leaves become chlorotic 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 postemergence 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.

MATRIX® 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 MATRIX® SG may be less effective on weeds stressed from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions, or cultural practices. In addition, weeds hardened-off by drought stress are less susceptible to MATRIX® SG.

Postemergence weed control may be reduced if rainfall occurs soon after application. Several hours of dry weather are needed to allow MATRIX® SG to be sufficiently absorbed by weed foliage (generally MATRIX® SG is rainfast in 4 hours).

## **PRECAUTIONS**

- Potato and tomato varieties may differ in their response to various herbicides. DuPont recommends that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use to a small area.
- Preemergence use on soils containing more than 6% organic matter may not provide adequate soil residual weed control and may result in reduced weed control.
- Preemergence and Postemergence 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 MATRIX® SG until stress from environmental conditions have passed.
- Avoid spray drift to any adjacent crops or desirable plants as injury may occur.
- Crop injury may occur following an application of MATRIX® 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.
- Carefully observe sprayer cleanup instructions, as spray tank residue may damage other crops.
- 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 DuPont™ MATRIX® SG with organophosphate insecticides in tomatoes may result in crop injury.
- Naturally occurring weed biotypes that are resistant to DuPont™ ALLY® herbicide, DuPont™ GLEAN® FC herbicide, DuPont™ EXPRESS® herbicide, DuPont™ HARMONY® EXTRA herbicide, or DuPont™ FINESSE® herbicide will also be resistant to MATRIX® SG (refer to Weed Resistance Management section)

## **RESTRICTIONS**

- Do not apply more than 4 ounces (0.0625 lb ai) MATRIX® SG per acre per year. Refer to Table 1 and the Application Information section for each crop/crop group for specific use 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.
- Do not apply to frozen or snow covered soil. Crop injury may occur from applications made to poorly drained soils.
- Do not apply using Air Assisted (Air Blast) field crop sprayers.

## **WEED RESISTANCE MANAGEMENT**

MATRIX® SG, which contains the active ingredient rimsulfuron, is a Group 2 herbicide based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program.

To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of MATRIX® SG for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your DuPont representative, local retailer, or county extension agent.
- Contact your DuPont representative, crop advisor, or extension agent to find out if suspected resistant weeds to this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective sites of actions for each target weed.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 2 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - A spreading patch of non-controlled plants of a particular weed species; and
  - Surviving plants mixed with controlled individuals of the same species.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 2 herbicides.
- Avoid making more than two applications of MATRIX® SG and any other Group 2 herbicides within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult-to-control weeds.



- Incorporate non-chemical weed control practices, including mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

### **INTEGRATED PEST MANAGEMENT**

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

### **MANDATORY SPRAY DRIFT MANAGEMENT**

#### **Ground Boom Applications:**

- Apply with the nozzle height specified by the manufacturer, but no more than 3 feet above the ground or crop canopy unless making a rangeland application, in which case applicators may apply with a nozzle height no more than 4 feet above the ground.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

#### **Aerial Applications:**

- Do not release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use one-half swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

#### **Boom-less Ground Applications:**

- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1) for all applications.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

### **SPRAY DRIFT MANAGEMENT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **Controlling Droplet Size – Ground Boom**

- **Volume** - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- **Pressure** - Use the lowest spray pressure specified for the nozzle to produce the target spray volume and droplet size.

- **Spray Nozzle** - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **Controlling Droplet Size – Aircraft**

- **Adjust Nozzles** - Follow nozzle manufacturers specifications for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

#### **BOOM HEIGHT – Ground Boom**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT – Aircraft**

Higher release heights increase the potential for spray drift. When applying aurally to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

#### **Boom-less Ground Applications:**

- Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### **Handheld Technology Applications:**

- Take precautions to minimize spray drift.

#### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

#### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

#### **WIND**

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### **DRIFT CONTROL ADDITIVES**

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Chemical Producers and Distributors Association (CPDA).

#### **TANK MIXTURES**

To broaden the weed control spectrum and /or extend the residual effectiveness of DuPont™ MATRIX® SG herbicide, MATRIX® SG may be tank mixed with other registered herbicides affecting a different site of action (mode of action) and /or adjuvants registered for use on the crops listed on MATRIX® SG labeling.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.



**TABLE 1 - CROPS, USE RATES AND PRE-HARVEST INTERVAL FOR APPLICATIONS OF DUPONT™ MATRIX® SG HERBICIDE**

CROPS	RATE OF MATRIX® SG/ACRE/YEAR			USE RATE RESTRICTIONS
	OZ PRODUCT	LB ACTIVE INGREDIENT (AI)	PRE-HARVEST INTERVAL (PHI)	
<b>BLUEBERRY:</b> Lowbush and Highbush	4.0 oz	0.0625 lb ai	21 days	Do not apply more than 4 oz (0.0625 lb ai) MATRIX® SG per acre per year. When applied as a banded treatment (50% band or less), MATRIX® SG may be applied twice per year. Do not make more than 1 broadcast application or 2 band applications per year. Allow a minimum of 30 days between band applications, except for yellow nutsedge the minimum retreatment interval is 14 days. Refer to Application Information section for additional use restrictions
<b>CANEBERRY:</b> Blackberry and Raspberry	4.0 oz	0.0625 lb ai	21 days	Do not apply more than 4 oz (0.0625 lb ai) MATRIX® SG per acre per year. When applied as a banded treatment (50% band or less), MATRIX® SG may be applied twice per year. Do not make more than 1 broadcast application or 2 band applications per year. Allow a minimum of 30 days between band applications, except for yellow nutsedge the minimum retreatment interval is 14 days. Refer to Application Information section for additional use restrictions.
<b>CITRUS FRUIT:</b> Australian desert lime; Australian finger-lime; Australian round lime; Brown River finger lime; calamondin; citron; citrus hybrids; grapefruit; Japanese summer grapefruit; kumquat; lemon; lime; Mediterranean mandarin; mount white lime; New Guinea wild lime; orange, sour; orange, sweet; pummelo; Russell River lime; satsuma mandarin; sweet lime; tachibana orange; Tahiti lime; tangelo; tangerine (mandarin); tangor; trifoliate orange; unqi fruit; cultivars, varieties, and/or hybrids of these	4.0 oz	0.0625 lb ai	3 days	Do not apply more than 4 oz (0.0625 lb ai) MATRIX® SG per acre per year. When applied as a banded treatment (50% band or less), MATRIX® SG may be applied twice per year. Do not make more than 1 broadcast application or 2 band applications per year. Allow a minimum 30 days interval for band applications, except for yellow nutsedge the minimum retreatment interval is 14 days. Refer to Application Information section for additional use restrictions.
<b>CORN, FIELD</b> (California)	0.5 – 2.0 oz	0.008 – 0.0313 lb ai	Restriction: Do not apply to corn taller than 12 inches or exhibiting 6 or more leaf collars, whichever is more restrictive.	Do not apply more than 2.0 oz (0.0313 lb ai) MATRIX® SG per acre per year. Allow at least 28 days between applications. Refer to Application Information section for additional use restrictions.
<b>FRUIT, SMALL VINE CLIMBING (EXCEPT FUZZY KIWIFRUIT):</b> Amur river grape; gooseberry; grape; kiwifruit, hardy; maypop; schisandra berry; cultivars, varieties, and/or hybrids of these	4.0 oz	0.0625 lb ai	14 days	Do not apply more than 4 oz (0.0625 lb ai) MATRIX® SG per acre per year. When applied as a banded treatment (50% band or less), MATRIX® SG may be applied twice per year. Do not make more than 1 broadcast application or 2 band applications per year. Allow a minimum 30 days retreatment interval for band applications, except for yellow nutsedge the minimum retreatment interval is 14 days. Refer to Application Information section for additional use restrictions.
<b>GRASS GROWN FOR SEED</b> (Oregon, Washington)	3.0 oz	0.0469 lb ai	NA	Do not apply more than 3 oz (0.0469 lb ai) MATRIX® SG per acre per year. Do not make more than 1 application of MATRIX® SG per year. Refer to Application Information section for additional use restrictions.

CROPS	RATE OF DUPONT™ MATRIX® SG/ACRE/YEAR			USE RATE RESTRICTIONS
	OZ PRODUCT	LB ACTIVE INGREDIENT (AI)	PRE-HARVEST INTERVAL (PHI)	
<b>POME FRUIT:</b> Apple; azarole; crabapple; loquat; mayhaw; medlar; pear; pear, Asian; quince; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties, and/or hybrids of these	4.0 oz	0.0625 lb ai	7 days	Do not apply more than 4 oz (0.0625 lb ai) MATRIX® SG per acre per year. When applied as a banded treatment (50% band or less), MATRIX® SG may be applied twice per year. Do not make more than 1 broadcast application or 2 band applications per year. Allow a minimum 30 days retreatment interval for band applications, except for yellow nutsedge the minimum retreatment interval is 14 days. Refer to Application Information section for additional use restrictions.
<b>STONE FRUIT:</b> Apricot; apricot, Japanese; capulin; cherry, black; cherry, Nanking; cherry, sweet; cherry, tart; Jujube, Chinese; nectarine; peach; plum; plum, American; plum, beach; plum, Canada; plum, cherry; plum, Chickasaw; plum, Damson; plum, Japanese; plum, Klamath; plum, prune; plumcot; sloe; cultivars, varieties, and/or hybrids of these	4.0 oz	0.0625 lb ai	14 days	Do not apply more than 4 oz (0.0625 lb ai) MATRIX® SG per acre per year. When applied as a banded treatment (50% band or less), MATRIX® SG may be applied twice per year. Do not make more than 1 broadcast application or 2 band applications per year. Allow a minimum 30 days retreatment interval for band applications, except for yellow nutsedge the minimum retreatment interval is 14 days. Refer to Application Information section for additional use restrictions.
<b>TOMATO:</b> Direct Seeded and Transplant	1.0 – 4.0 oz	0.0156 – 0.0625 lb ai	45 days	Do not apply more than 4.0 oz (0.0625 lb ai) MATRIX® SG per acre (broadcast basis) on tomatoes during the same year. Banding applications of MATRIX® SG must not exceed 4.0 ounces on a broadcast basis in the same year. Do not make more than 3 broadcast or band applications per year. Minimum 7-day retreatment interval. Refer to Application Information section for additional use restrictions.
<b>TREE NUTS:</b> African nut-tree; almond; beechnut; Brazil nut; Brazilian pine; bunya; bur oak; butternut; Cajou nut; candlenut; cashew; chestnut; chinquapin; coconut; coquito nut; dika nut; ginkgo; Guiana chestnut; hazelnut (filbert); heartnut; hickory nut; Japanese horse-chestnut; macadamia nut; mongongo nut; monkey-pot; monkey puzzle nut; Okari nut; Pachira nut; peach palm nut; pecan; pequi; Pili nut; pine nut; pistachio; Sapucaia nut; tropical almond; walnut, black; walnut, English; yellowhorn; cultivars, varieties, and/or hybrids of these	4.0 oz	0.0625 lb ai	14 days	Do not apply more than 4 oz (0.0625 lb ai) MATRIX® SG per acre per year. When applied as a banded treatment (50% band or less), MATRIX® SG may be applied twice per year. Do not make more than 1 broadcast application or 2 band applications per year. Allow a minimum 30 days retreatment interval for band applications, except for yellow nutsedge the minimum retreatment interval is 14 days. Refer to Application Information section for additional use restrictions.
<b>VEGETABLE, TUBEROUS AND CORM:</b> Arracacha; Arrowroot; artichoke, Chinese; artichoke, Jerusalem; Canna, Edible; Cassava, Bitter & Sweet; Chayote (Root); Chufa; Dasheen; Ginger; Leren; Potato; Sweet Potato; Tanier; Turmeric; Yam Bean; Yam, True	1.0 – 1.5 oz	0.0156 - 0.0234 lb ai	30 days	Do not apply more than 2.5 oz (0.0391 lb ai) of MATRIX® SG per acre per year. Do not make more than 2 applications of MATRIX® SG per year. Minimum 14-day retreatment interval. Refer to Application Information section for additional use restrictions.

## **BUSHBERRY (BLUEBERRIES) AND CANEBERRY (RASPBERRIES, BLACKBERRIES)**

### **APPLICATION INFORMATION**

DuPont™ MATRIX® SG is most effective when applied preemergence or early postemergence to actively growing weeds. If weeds have emerged at the time of application, use an adjuvant (non-ionic surfactant at 1 quart/100 gallons, or crop oil/methylated seed oil at 1 gallon per 100 gallons of spray mix) with MATRIX® SG to improve foliar uptake and translocation.

To optimize residual weed control, MATRIX® SG must be moved into the soil via rainfall or overhead irrigation. The best residual control is obtained when at least 0.5 inches of rain or overhead irrigation comes within the first week after application.

#### **Use Restrictions**

- Do not apply by air. Use ground application equipment only.
- Do not use on soils classified as Sand.
- Do not apply more than 4 ounces (0.0625 lb ai) of MATRIX® SG broadcast per acre per year.
- Do not make more than 1 broadcast application or 2 band applications per year.
- Allow a minimum of 30 days between band applications, except for yellow nutsedge the minimum retreatment interval is 14 days.

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

For broadcast applications, make a single application of MATRIX® SG preemergence or early postemergence to actively growing weeds at 4 ounces (0.0625 lb ai) per acre. 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. MATRIX® SG may be applied twice per acre per year as a banded treatment preemergence or postemergence at the 4 ounces (0.0625 lb ai) of product rate, per conventional broadcast acre, at 50% banding or less. See below to calculate actual treatment area when using band applications.

**Band Width (inches) x Rate per Broadcast Acre = Amount MATRIX® SG Band Applied per Acre**

**Row Width (inches)**

Use MATRIX® SG on high bush blueberries that have gone through at least one growing season and are in good health and vigor. 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.

Application made after bud break may cause temporary chlorosis and/or stunting of leaves contacted by the spray.

MATRIX® SG may be applied in tank mixture with other herbicides registered for use in high bush blueberries. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restriction and limitation and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

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

All applications of MATRIX® SG are to be applied in the Vegetative Year growth stage of low bush blueberries.

Make a single broadcast application of MATRIX® SG preemergence or early postemergence to actively growing weeds at 4 ounces (0.0625 lb ai) per acre. MATRIX® SG may be applied twice per acre per year as a banded treatment preemergence or postemergence at the 4 ounces (0.0625 lb ai) of product rate, per conventional broadcast acre, at 50% banding or less. See below to calculate actual treatment area when using band applications.

**Band Width (inches) x Rate per Broadcast Acre = Amount MATRIX® SG Band Applied per Acre**

**Row Width (inches)**

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.

Use MATRIX® SG on low bush blueberries that have gone through at least one growing season and are in good health and vigor. 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.

MATRIX® SG may be applied in tank mixture with other herbicides registered for use in low bush blueberries. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restriction and limitation and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### **CANEBERRY (RASPBERRY AND BLACKBERRY)**

For broadcast applications, make a single application of MATRIX® SG preemergence or early postemergence to actively growing weeds at 4 ounces (0.0625 lb ai) per acre. MATRIX® SG may be applied twice per acre per year as a banded treatment preemergence or postemergence at the 4 ounces (0.0625 lb ai) of product rate, per conventional broadcast acre, at 50% banding or less. See below to calculate actual treated area when using band applications.

**Band Width (inches) x Rate per Broadcast Acre = Amount MATRIX® SG Band Applied per Acre**

**Row Width (inches)**

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.

#### **Crop Age for Application**

Apply DuPont™ MATRIX® SG to raspberries that have been established for at least one growing season and are in good health and vigor. For blackberries apply after plantings have gone through at least two growing seasons and are in good health and vigor. See USE PRECAUTIONS.

#### **Crop Grown Stage**

##### For Every-year Bearing Crops:

To reduce the risk of injury to primocanes, apply before primocanes emerge in the spring, or wait until primocanes are approximately 3 feet tall or taller and make a directed application by adjusting the spray nozzles so that only the lower 12 inches of primocanes are exposed to the herbicide spray pattern. For blackberries that have trailing primocanes, apply before primocane emergence.

##### Alternate Year Bearing Crops:

Apply in the dormant period before canes start new growth or wait until new growth canes are several feet tall so that a directed application can be used. To avoid crop injury, do not apply over the top of canes once new growth had started. Once canes are approximately 3 feet tall or taller, a directed application can be used provided the spray nozzles are adjusted so that only lower 12 inches of canes are exposed to the herbicide spray pattern.

MATRIX® SG may be applied in tank mixture with other herbicides registered for use in caneberries. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restriction and limitation and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### **Use Precautions**

If MATRIX® SG is applied over the top of emerged primocanes, injury to the primocanes may occur in the form of chlorosis and/or stunting of primocane growth and in severe situations, individual primocanes may die. To avoid injury to primocanes, apply before primocane emergence or wait until they are at least 3 feet tall before making a directed spray so that only the bottom 12 inches of primocanes are exposed to the herbicide spray pattern.

MATRIX® SG may cause damage to plants that are small and/or weak due to weed competition, poor soil conditions, disease, insect damage or other factors that can reduce plant health and vigor.

MATRIX® SG may cause damage to plants growing in areas that are poorly drained, or areas that are subject to saturated or anaerobic soil conditions for an extended period of time.

## **CITRUS FRUIT, POME FRUIT, STONE FRUIT, TREE NUTS AND SMALL VINE CLIMBING FRUIT (EXCEPT FUZZY KIWIFRUIT) [GRAPES]**

### **APPLICATION INFORMATION**

Apply MATRIX® 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 MATRIX® SG at 4 ounces (0.0625 lb ai) per acre per year. For improved weed management, MATRIX® SG should be applied in tank mixture with other registered preemergence herbicides.

MATRIX® SG may be applied twice per acre per year as a banded treatment preemergence or postemergence at the 4 ounces (0.0625 lb ai) of product rate, per conventional broadcast acre, at 50% banding or less. See below to calculate actual treated area when using band applications.

**Band Width (inches) x Rate per Broadcast Acre = Amount MATRIX® SG Band Applied per Acre**  
**Row Width (inches)**

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 preemergence or postemergence herbicide applications.

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

Best results are obtained when the soil is moist at the time of application, and 1/2 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.

MATRIX® SG may also be applied by certain chemigation methods, including micro-sprinkler. However, do not apply by overhead, flood, or drip irrigation.

#### **Use Precautions**

- Direct sprays to minimize spray contact with fruit or foliage.
- Avoid direct or indirect spray contact with crop foliage or fruit, except undesirable suckers.

#### **Use Restrictions**

- Do not apply MATRIX® SG by air.

- Use ground application equipment only.
- Do not use DuPont™ MATRIX® SG in a spray solution with a pH of below 4.0 or above 8.0, or with spray additives that buffer the pH to below 4.0 or above 8.0, since degradation of MATRIX® SG may occur.
- Do not apply more than 4 oz (0.0625 lb ai) of MATRIX® SG broadcast per acre per year.
- Do not make more than 1 broadcast application or 2 band applications per year.
- Allow a minimum of 30 days retreatment interval between band applications, except for yellow nutsedge the minimum retreatment interval is 14 days.

**WEEDS CONTROLLED - BLUEBERRY, CANEBERRY (RASPBERRY, BLACKBERRY), SMALL VINE CLIMBING FRUIT (EXCEPT FUZZY KIWIFRUIT) [GRAPES], TREE FRUITS (CITRUS, POME & STONE), AND TREE NUTS**

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 burn down herbicide, including glyphosate, paraquat, or glufosinate, with an appropriate adjuvant. MATRIX® SG will help provide postemergence control of the weeds listed in this label. For best results, make postemergence applications to young, actively growing weeds and include a spray adjuvant.

Residual weed control may be reduced when MATRIX® SG is applied where heavy crop trash and/or weed residue exists. Weed control may also be reduced when applications of MATRIX® SG are made to weeds under stress from drought, excessive water, temperature extremes, disease or low humidity.

**PREEMERGENCE WEED CONTROL**

**GRASSES**

Barnyardgrass  
Bluegrass, annual  
Crabgrass, large  
Foxtail, Giant  
Foxtail, Green  
Foxtail, Yellow  
Quackgrass  
Ryegrass, Italian  
Wheat, Volunteer

**BROADLEAVES**

Burclover  
Chamomile, False  
Cheeseweed  
Chickweed, common  
Dandelion, common (seedling)  
Fiddleneck, coast  
Filaree, Redstem  
Filaree, Whitestem  
Fleabane, hairy  
Groundsel, common  
Henbit  
Kochia  
Lettuce, prickly  
Mallow, common

Marestail/horseweed  
Mustard, Birdsrage  
Mustard, Black  
Pigweed, Redroot  
Pigweed, Smooth  
Puncturevine  
Purslane, Common  
Redmaids  
Rocket, London  
Sowthistle, annual  
Spurge, prostrate  
Spurge, spotted  
Sweetclover, yellow  
Swinecress, lesser  
Willowweed, panicle

**PREEMERGENCE PARTIAL WEED CONTROL**

**GRASSES**

Wild Oat

**BROADLEAVES/SEDGES**

Cocklebur  
Dandelion, common (established)  
Lambsquarters, common  
Nightshade, Black  
Nightshade, Hairy  
Nutsedge, yellow  
Pigweed, Prostrate  
Ragweed, Common  
Velvetleaf

**POSTEMERGENCE WEED CONTROL**

**GRASSES (1-2 inches)**

Barley, Volunteer  
Barnyardgrass  
Bluegrass, Annual  
Crabgrass, large (1/2 inch)  
Foxtail, Bristly  
Foxtail, Giant  
Foxtail, Green  
Foxtail, Yellow  
Panicum, Fall  
Wheat, Volunteer

**BROADLEAVES (1-2 inches)**

Chamomile, False  
Chickweed, common  
Henbit  
Kochia  
Mustard, Black  
Mustard, Wild  
Pigweed, Redroot  
Pigweed, Smooth  
Purslane, common  
Shepherd's-purse  
Wild Radish

**POSTEMERGENCE PARTIAL WEED CONTROL**

**GRASSES**

Johnsongrass, seedling  
Millet, wild-proso  
Oat, wild  
Quackgrass  
Stinkgrass

**BROADLEAVES/SEDGES**

Cocklebur  
Dandelion, common (>6 inches in diameter)  
Lambsquarters, common  
Nightshade, hairy  
Nutsedge, yellow  
Pigweed, prostrate  
Ragweed, common  
Smartweed, Pennsylvania  
Thistle, Canada  
Velvetleaf



## **SPECIFIC WEED PROBLEMS**

**COMMON DANDELION AND MALLOW:** DuPont™ MATRIX® SG provides excellent preemergence control of common dandelion and mallow germinating from seed. In high rainfall areas or where sprinkler irrigation is used, a second application may be needed to extend residual control throughout the growing season. When applications are made postemergence to these weeds, always add a suitable burndown herbicide (e.g., glyphosate or paraquat). Small and medium sized plants (up to 6 inches in diameter) are controlled by postemergence applications of MATRIX® 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 AND FLEABANE:** Where marestail and fleabane are the target weeds, applications prior to emergence provide best results. This may require a fall application to help prevent fall germinated seedlings from becoming established during the winter. A foliar active herbicide with activity on fleabane and marestail (e.g., paraquat, glyphosate, and/or glufosinate) must be tank mixed with MATRIX® SG for best control and resistance management. After Fall application, a second application in the spring may be required to provide extended weed control into the summer. Where MATRIX® SG is applied for control of Marestail and Fleabane, it is also recommended that another soil residual herbicide be included as a tank mix or rotational partner to aid in resistance management.

**PUNCTUREVINE:** For best results, apply early in the spring when you can expect rainfall or overhead irrigation to move MATRIX® 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:** MATRIX® SG provides suppression of yellow nutsedge. To obtain the most effective results, use the highest rate allowed based on the width of your spray band and make two applications. For applications made postemergence to nutsedge, always add the appropriate rate of a glyphosate product and an effective adjuvant. On soils with high organic matter (6% or higher) always apply postemergence to weeds since preemergence applications are not as effective on these soils.

### **Application Timing - Yellow Nutsedge**

**Preemergence plus Early Postemergence:** Make the preemergence application when you can expect rainfall or overhead irrigation to move MATRIX® SG into the nutsedge root zone prior to nutsedge emergence. Make a second application when emerging nutsedge is 2 to 4 inches tall. **Postemergence plus second Postemergence:** Make first application when emerging nutsedge is 2 to 4 inches tall. Repeat application 14 days later. **Note:** If yellow nutsedge is greater than 6 inches tall at the first application, weed control effectiveness will be greatly reduced.

**ANNUAL SUMMER GRASSES (including Barnyardgrass, Green foxtail, and Crabgrass):** Where sprinkler irrigation is used, a fall or early spring application of MATRIX® SG will not provide season-long control of summer grasses like foxtail, barnyardgrass and crabgrass. For best results, use MATRIX® SG with a suitable tank-mix herbicide containing one of the following active ingredients; indaziflam ("Alion"), flumioxazin ("Chateau"), oxyfluorfen ("Goal", "GoalTender"), oryzalin or pendimethalin. A second application may be needed to provide extended control of summer grasses.

**Diuron Containing Products (Washington and Oregon):** On coarse textured soils where crops are grown under sprinkler irrigation, avoid using diuron containing products as a tank-mix partner with MATRIX® SG between June 1 and September 30 since crop injury may result. MATRIX® SG tank-mixed with diuron products (including "Karmex" DF or "Direx" 4L) can be used in the fall (after September 30), or early spring when temperatures are cool to moderate.

### **CROP ROTATION - Fruit, Nut, and Vine Crops**

**Restriction:** Do not plant any crops, except field corn, tomatoes, potatoes, and those listed on this label in TABLE 1, within one year of the last MATRIX® SG application.

Prior to planting, fields to be 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, a field bioassay should be completed 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**

MATRIX® SG may 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 contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional (normally closed) solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, including a positive displacement injection 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.

### **USE RESTRICTIONS FOR CHEMIGATION - Fruit, Nut, and Vine Crops**

- When applying DuPont™ MATRIX® SG via chemigation to these crops, use micro-sprinkler equipment only.
- Do not connect an irrigation system used for MATRIX® SG Herbicide application to a public water system.
- Do not permit run-off during chemigation.

### **USE PRECAUTIONS FOR CHEMIGATION- Fruit, Nut, and Vine Crops**

- Distributing treated water in an uneven manner can result 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 agitate the tank mixture before using.

## **GRASS GROWN FOR SEED (OREGON, WASHINGTON)**

### **APPLICATION INFORMATION**

Use MATRIX® SG only in conjunction with carbon planted Perennial Ryegrass and Tall Fescue grown for seed.

The activated carbon band over the seed row absorbs MATRIX® SG so that seedling grass germinating beneath the carbon band is protected from the herbicide. The protection provided by the carbon band is only as good as the width and integrity of the band.

Heavy and/or persistent rains after planting can cause deterioration of the carbon band allowing MATRIX® SG to move into the grass root zone causing injury and/or stand loss. Standing water can also increase the risk of MATRIX® SG moving vertically through the carbon band or laterally beneath the band.

Variability in seedbed preparation, and unpredictable environmental conditions, including heavy rain, can compromise the protection provided by the carbon band. Therefore, to the extent consistent with applicable law, the grower assumes all risks of crop injury and/or stand loss associated with the use of MATRIX® SG.

Apply MATRIX® SG with properly calibrated ground equipment with good mechanical or by-pass agitation. Only apply MATRIX® SG on early fall planted fields (refer to Use Precautions section) that have been prepared with a smooth, fine seedbed that is firmly packed prior to planting.

During the planting operation, apply activated carbon at the label directed rate as long as that rate is not lower than 300 lbs per acre. Apply the activated carbon in a band at least 1.0 inch wide centered over the seed row. Use a minimum spray volume of 40 gallons per acre to apply the activated carbon.

### **WEEDS CONTROLLED - GRASS GROWN FOR SEED**

In the area outside of the carbon band, MATRIX® SG will provide control of seedling annual bluegrass, annual and perennial ryegrass, volunteer wheat, and roughstock bluegrass.

Note: Certain biotypes of diuron resistant annual bluegrass have shown reduced sensitivity to MATRIX® SG and may not be adequately controlled. Where these biotypes are known to exist, apply MATRIX® SG in a tank-mix with "Kerb" SC, a pronamide containing herbicide.

Some biotypes of annual bluegrass that are resistant to other herbicides have also shown reduced sensitivity to MATRIX® SG. Where these biotypes are present, MATRIX® SG used alone will only provide suppression.

### **TANK MIXES WITH OTHER HERBICIDES**

MATRIX® SG can be applied in a tank-mix with other pre-emergence herbicides, including "Kerb SC or a diuron containing herbicide, that are also registered for use in carbon planted grass grown for seed. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### **USE RATE**

Apply MATRIX® SG at 3.0 ounces (0.0469 lb ai) per acre immediately (within 5 days) after carbon planting and prior to grass emergence. In areas where there are biotypes of annual bluegrass that are resistant to MATRIX® SG, apply MATRIX® SG in a tank-mix with "Kerb" SC. Make application before grass emergence while the carbon band is still intact. Do not apply MATRIX® SG if heavy rainfall or overhead irrigation has caused dissipation of the carbon band. Best results are obtained when rainfall of 1/4 to 1/2 inch, or light, frequent irrigation occurs, within two weeks after MATRIX® SG is applied.

If DuPont™ MATRIX® SG is being used on fields that are sprinkler irrigated, best practice is to irrigate before planting to provide enough moisture for grass germination and then apply not more than 1/4 to 1/2 inch of water in the first irrigation after MATRIX® SG is applied.

### **CROP ROTATION**

Where MATRIX® SG has been applied in the fall and stand loss has occurred over the winter; best practice is to wait until soil temperatures are warm enough to support rapid germination (usually mid to late March) before trying to replant grass in the spring.

#### **Use Precautions**

- Crop injury and/or stand loss can occur in treated areas that have standing water.
- Crop injury may occur in areas of fields where heavy residue from the previous crop makes it difficult to form a smooth, fine seed bed.
- Crop injury may occur in areas of spray overlap.
- Crop injury may occur if the carbon band is less than 1.0 inch wide.

#### **Use Restrictions**

- Do not apply more than 3 oz (0.0469 lb ai) MATRIX® SG per acre per year.
- Do not make more than 1 application of MATRIX® SG per year.
- When a tank mix of MATRIX® SG and with "Kerb" SC is applied, do not graze livestock in the treated fields or cut treated fields for forage or hay for livestock feed for 180 days following application.
- Do not apply MATRIX® SG through any type of irrigation system.
- Do not use MATRIX® SG if heavy rainfall and/or overhead irrigation has caused deterioration of the carbon band prior to application.
- Do not use MATRIX® SG on fields that routinely have large areas of standing water.
- After planting, prior to grass emergence, do not use Big Gun irrigation or other types of overhead irrigation that product large droplets that can displace the carbon band.
- Do not use MATRIX® SG on fields that have enough slope to cause surface runoff.
- To avoid herbicide injury related to late planted grass, do not apply MATRIX® SG to fields planted after October 31.
- Do not apply MATRIX® SG to fields with sandy or gravelly soil.

## **VEGETABLE, TUBEROUS AND CORM VEGETABLES [POTATOES]**

### **APPLICATION INFORMATION**

#### **Use Precautions**

- 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.

#### **Use Restrictions**

- Do not apply MATRIX® SG on potatoes within 30 days of harvest.
- Do not make more than 2 applications of MATRIX® SG per year.
- Do not exceed 2.5 ounces (0.0391 lb ai) MATRIX® SG per acre per year.
- Do not apply to sweet potatoes or yams.
- Do not apply to potatoes growing in Greenhouses, Cold Frames, Pot cultures, etc. Apply only to potatoes growing in fields.

### **PRE-EMERGENCE APPLICATION**

For best results, apply MATRIX® SG at 1 to 1.5 ounces (0.0156-0.0234 lb ai) product per acre, immediately after hilling, drag-off, or reservoir tillage (dam/dike operation), to a clean, newly prepared seedbed.

To activate MATRIX® SG in the soil, supply moisture by a single rainfall event, or apply sprinkler irrigation of 1/3 to 1" (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), within 5 days after application, to move MATRIX® SG 2 to 3" 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 MATRIX® SG postemergence would 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 the spray mix (See the "Spray Adjuvant" section of this label for additional information). Control may not be adequate for weeds that have an established root system before activation of DuPont™ MATRIX® SG.

#### **TANK MIXTURES - PREEMERGENCE APPLICATIONS**

MATRIX® SG may be tank mixed with pesticide products labeled for use on potatoes, including "Eptam" 7E (EPTC), "Prowl" (pendamethalin), "Lorox" DF (linuron), CINCH® or "Dual II Magnum" (S-metolachlor), Roundup" or glyphosate-containing products registered for potatoes, in accordance with the most restrictive of label limitations and precautions.

MATRIX® SG may also be used in three-way tank mix combinations with the above pesticide(s). If these instructions conflict with this MATRIX® SG label, do not use as a tank mix with MATRIX® SG.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

##### ***MATRIX® SG plus A Metribuzin Based Herbicide (including "Sencor")***

Apply a tank mix combination of MATRIX® SG at 1 to 1.5 ounces (0.0156-0.0234 lb ai) per acre and a metribuzin herbicide for better control of such weeds as kochia, Russian thistle and common lambsquarters. For best 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.

##### ***MATRIX® SG plus A EPTC Based Herbicide (including "Eptam" 7E)***

Apply a tank mix of MATRIX® SG at 1 to 1.5 ounces (0.0156-0.0234 lb ai) per acre and "Eptam" 7E herbicide at label rates for better control of weeds including hairy nightshade and crabgrass. For best 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 EPTC based herbicides vary by region, follow the instructions for your region. It is recommended to incorporate a tank mix of "Eptam" 7E herbicide + MATRIX® SG using irrigation, and not equipment, to prevent poor weed control from deep incorporation of the MATRIX® SG.

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

##### ***MATRIX® SG plus A Pendimethalin Based Herbicide (including "Prowl")***

Apply a tank mix combination of MATRIX® SG at 1 to 1.5 ounces (0.0156-0.0234 lb ai) per acre and "Prowl" herbicide at label rates for better control of such weeds as kochia, crabgrass, and common lambsquarters. For best results apply after hilling or drag-off to a clean, newly prepared seedbed, before potatoes emerge and weeds germinate. Read and follow the "Prowl" herbicide label for your area.

##### ***MATRIX® SG plus A Linuron Based Herbicide (including "Lorox" DF)***

Apply a tank mix combination of MATRIX® SG at 1 to 1.5 ounces (0.0156-0.0234 lb ai) per acre and "Lorox" DF herbicide at label rates for better control of such weeds as common lambsquarter and common ragweed. For best 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 herbicide label for your area.

##### ***MATRIX® SG Plus A S-Metolachlor Based Herbicide (including CINCH® or "Dual II Magnum")***

Apply a tank mix combination of MATRIX® SG at 1 to 1.5 ounces (0.0156 - 0.0234 lb ai) per acre and CINCH® or "Dual II Magnum" herbicide at label rates for better control of such weeds as yellow nutsedge and black nightshade. For best 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.

#### **POSTEMERGENCE APPLICATION**

For postemergence applications, apply MATRIX® SG at 1 to 1.5 ounces (0.0156 - 0.0234 lb ai) per acre to young, actively growing weeds after crop emergence. Typically, small weeds (less than 1" in height or diameter) that are actively growing at application are most easily controlled (See the "Specific Weed Problem" section of this label for more information).

Under growing conditions that promote crop stress (including drought, frost, cold temperatures, high temperatures, or extreme temperature variations), temporary chlorosis (lime green color) may occur after application of MATRIX® SG. Symptoms usually disappear within 5 to 15 days.

For best results with MATRIX® SG postemergence, rainfall or sprinkler irrigation of 1/3 to 1" (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), no sooner than 4 hours, but not more than 5 days after application, will activate MATRIX® SG in the soil and help provide control of subsequent flushes of annual weeds.

#### **TANK MIXTURES (POTATOES) - POSTEMERGENCE APPLICATIONS**

MATRIX® SG may be tank mixed with pesticide products labeled for use on potatoes (including "Eptam" 7E and metribuzin based products) in accordance with the most restrictive of label limitations and precautions. When tank mixing MATRIX® SG

with another potato pesticide(s), read and follow all use directions, restrictions, and precautions of both DuPont™ MATRIX® SG and the tank mix partner(s).

MATRIX® SG may also be used in three-way tank mix combinations with the above pesticide(s). If these instructions conflict with this MATRIX® SG label, do not use as a tank mix with MATRIX® SG.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### ***MATRIX® SG Plus Foliar Fungicides***

MATRIX® SG may be tank mixed with other suitable registered fungicides on potatoes, including CURZATE® 60DF (cymoxanil), "Manzate" (mancozeb), and "Bravo" (chlorthalonil) at labeled rates.

Read and follow all manufacturer's label instructions for the companion fungicide. If these instructions conflict with this MATRIX® SG label, do not use as a tank mix with MATRIX® SG.

#### ***MATRIX® SG Plus A Metribuzin Based Herbicide (including "Sencor")***

Apply a tank mix combination of MATRIX® SG at 1 to 1.5 ounces (0.0156-0.0234 lb ai) per acre and a metribuzin containing herbicide (including "Sencor") at label rates for improved weed control of such weeds as Russian thistle, common lambsquarters and triazine-resistant weeds. Use a nonionic surfactant (NIS) at 0.125 % v/v (1 pt/100 gal of water). The addition of adjuvants to post emergence metribuzin applications may reduce crop safety. 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: The use of crop oil concentrate (COC) or methylated seed oil (MSO) is not advised for tank mix combinations with MATRIX® SG plus Metribuzin.

#### ***MATRIX® SG Plus A EPTC Based Herbicide (including "Eptam" 7E)***

Apply MATRIX® SG herbicide at 1 to 1.5 ounces (0.016-0.024 lb ai) per acre in tankmix with label rates of "Eptam" 7E herbicide. Include 1% volume/volume (1 gal per 100 gal spray solution) of either of a modified seed oil adjuvant (MSO) or 0.5% volume/volume (0.5 gal per 100 gal spray solution) of a organo-silicon/modified seed oil blend (OS/MSO – including "Dyne-Amic", "Rivet", or "Phase"). Include 2 lb/acre of a spray-grade ammonium sulfate (AMS).

For best results, rainfall or sprinkler irrigation of 1/3 to 1" (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), no sooner than 4 hours after application, but not more than 1 day after application.

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

## **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 including 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 of such weeds, it may be necessary to apply MATRIX® SG a second time, 14 to 28 days after the first application (typically, make applications to small weeds that are less than 1" in height or diameter that are actively growing). **Restrictions:** Make no more than 2 applications, and the combined rate of the applications cannot exceed 2.5 ounces (0.0391 lb ai) MATRIX® SG per acre.

## **POTATOES GROWN FOR SEED**

### **APPLICATION INFORMATION**

MATRIX® SG may be used 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\*.

Apply MATRIX® SG by any of the following methods:

- Preemergence 1.5 oz (0.0234 lb ai) per acre
- Postemergence at 1.0 to 1.5 oz (0.0156-0.0234 lb ai) per acre
- In a sequential application Preemergence at 1.0-1.5 oz (0.0156-0.0234 lb ai) per acre, followed by Postemergence at 1.0 oz (0.0156 lb ai) per acre.
- Postemergence at 1.0 oz (0.0156 lb ai) per acre followed by second Postemergence at 1.0 oz (0.0156 lb ai) per acre.

To activate MATRIX® SG preemergence, supply moisture by a single rainfall event, or apply sprinkler irrigation of 1/3 to 1" (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), within 5 days after application, to move MATRIX® SG 2" to 3" deep into the soil profile.

## Use Precautions

- The rotational crop interval listed in the DuPont™ MATRIX® SG label may need to be extended to 18 months if seed potato production practices decrease water and/or time for MATRIX® 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 anytime.
- Consider informing your state seed certification agency or inspector that MATRIX® SG has been applied. Under growing conditions that promote crop stress (including 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 (including chlorosis, leaf crinkling, pinching of terminal leaflet) but will usually disappear within 5 to 15 days of application.

## Use Restrictions

- Do not make more the 2 applications of MATRIX® SG per year.
- Do not exceed 2.5 oz (0.0391 lb ai) of MATRIX® SG per acre per year.
- 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 microtubers or transplants. Depending on geography, these may be referred to as Generation 1, Nuclear, Elite 1, or Pre-Elite.
- The rotational crop interval for Spring Barley is extended to 18 months due to the 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\*\*.

\* First field planting utilizes laboratory tested stocks which may be tissue cultured plantlets, greenhouse produced microtubers, minitubers, stem cuttings, or line selections.

\*\*All counties in North Dakota except Pembina, Towner, Walsh, Grand Forks, Trail and Cass.

## WEEDS CONTROLLED - POTATO

### PREEMERGENCE CONTROL

#### GRASSES

Barnyardgrass  
Foxtail, Giant  
Foxtail, Green  
Foxtail, Yellow  
Wheat, Volunteer

#### BROADLEAVES

Chamomile, False  
Filaree, Redstem  
Henbit  
Kochia  
Mustard, Birdsraps  
Mustard, Black  
Pigweed, Prostrate  
Pigweed, Redroot  
Pigweed, Smooth  
Purslane, Common

### PREEMERGENCE (PARTIAL CONTROL)

#### GRASSES

Crabgrass  
Wild Oat

#### BROADLEAVES

Cocklebur  
Lambsquarters, Common  
Nightshade†, Black  
Nightshade, Hairy  
Pigweed, Prostrate  
Ragweed, Common  
Velvetleaf

† Eastern Black Nightshade (*Solanum ptycanthum*) is NOT Controlled or suppressed

### POSTEMERGENCE CONTROL

#### GRASSES

Barley, Volunteer  
Barnyardgrass  
Bluegrass, Annual  
Crabgrass  
Foxtail, Bristly  
Foxtail, Giant  
Foxtail, Green  
Foxtail, Yellow  
Panicum, Fall  
Wheat, Volunteer

#### BROADLEAVES

Chamomile, False  
Chickweed, Common  
Henbit  
Kochia  
Mustard, Birdsraps  
Mustard, Black  
Mustard, Wild  
Pigweed, Redroot  
Pigweed, Smooth  
Purslane, Common  
Shepherd's purse  
Wild Radish



## **POSTEMERGENCE (PARTIAL CONTROL)‡**

### **GRASSES**

Johnsongrass, Seedling  
Millet, Wild Proso  
Quackgrass†  
Stinkgrass  
Wild Oat  
Yellow Nutsedge

### **BROADLEAVES**

Thistle, Canada†  
Cocklebur  
Lambsquarters, Common  
Morningglory, Ivyleaf  
Nightshade, Hairy  
Nightshade\*†, Black

Pigweed, Prostrate  
Ragweed, Common  
Smartweed, Pennsylvania  
Velvetleaf  
Volunteer Alfalfa\*\*

\* 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 the weeds, and the environmental conditions following treatment.

† See Specific Weed Problems

## **AERIAL APPLICATION**

(Also read **SPRAY DRIFT MANAGEMENT** section)

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

Aerial Application Restrictions:

- 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 ONLY**

DuPont™ MATRIX® SG can be applied using center pivot, lateral move, solid set, or hand move irrigation systems in potatoes. Do not apply MATRIX® SG using any other type of irrigation system. Check irrigation systems to insure uniform application of water to all areas. Failure to apply MATRIX® SG uniformly may result in crop injury and/or poor weed control.

For best results, use the highest labeled rate and apply preemergence to early postemergence to the weeds (weeds less than 1" tall). If weeds are present at application, add a nonionic surfactant containing at least 80% active ingredient to the spray mix at 1 to 2 pt/acre.

MATRIX® 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 MATRIX® SG at the beginning of the set and then apply 1/3 to 1" of water for activation (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1").

For center pivot and lateral move irrigation systems, apply MATRIX® SG in 1/3 to 1" of water for activation as a continuous injection (sandy soils apply at least 1/3", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1").

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, can 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; must 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, including a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock

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.



## USE PRECAUTIONS FOR CHEMIGATION - POTATOES

Distributing treated water in an uneven manner can result 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, and apply the mixture for the proper length of time.

## USE RESTRICTIONS FOR CHEMIGATION - POTATOES

- 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 DuPont™ MATRIX® SG application to a public water system.

## MATRIX® SG ROTATIONAL CROP RESTRICTIONS - POTATO

For crops listed below, planting prior to the interval shown may result in crop injury when using MATRIX® 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" during the growing season. For tank mixtures, follow the most restrictive rotational crop guideline

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

\* 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 (0.0234 lb ai) or less MATRIX® SG per acre per year--9 months; greater than 1.5 oz (0.0234 lb ai) of MATRIX® SG per acre per year--18 months

\*\*For the select counties listed below in OR and WA where potatoes are grown under a minimum of 18 inches of sprinkler irrigation per season, alfalfa may be rotated at 4 months after application. 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 1.5% 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.

For Rotation to Alfalfa: MATRIX® SG in potatoes not to exceed 1 oz (0.0156 lb ai) per use year in Adams, Grant, Douglas and Lincoln counties of Washington, and MATRIX® SG in potatoes not to exceed 1.5 oz (0.0234 lb ai) per acre per year in Benton, Franklin, Klickitat, Walla Walla and Yakima counties in Washington and Morrow and Umatilla counties in Oregon.

For Rotation to Onions and Carrots: MATRIX® SG in potatoes not to exceed 1.5 oz (0.0234 lb ai) per acre per year in Adams, Grant, Douglas and Lincoln counties of Washington, and MATRIX® SG in potatoes not to exceed 2.5 oz (0.0391 lb ai) per acre per year in Benton, Franklin, Klickitat, Walla Walla and Yakima counties in Washington and Morrow and Umatilla counties in Oregon.

For Rotation to Grass Crops Grown for Seed, Hay or Pasture: MATRIX® SG in potatoes not to exceed 1.5 oz (0.0234 lb ai) per acre per use year in Adams, Grant, Douglas and Lincoln counties of Washington, and MATRIX® SG in potatoes not to exceed 2.5 oz (0.0391 lb ai) per acre per use year in Benton, Franklin, Klickitat, Walla Walla and Yakima counties in Washington and Morrow and Umatilla counties in Oregon.

For Rotation to Peas and Mints: MATRIX® SG in potatoes not to exceed 1.5 oz (0.0234 lb ai) per acre per use year in all areas.

NOTE: MATRIX® SG must not be used in a tankmix 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.

## TOMATOES (DIRECT SEEDED AND TRANSPLANT)

### APPLICATION INFORMATION

#### Use Restrictions

- Do not apply DuPont™ MATRIX® SG within 45 days of tomato harvest.
- Do not apply MATRIX® SG by air on tomatoes.
- Do not apply using assisted (Airblast) field crops sprayers on tomatoes.
- Do not exceed 4.0 oz (0.0625 lb ai) MATRIX® SG per acre (broadcast basis) on tomatoes during the same year.
- Do not make more than 3 applications broadcast of MATRIX® SG per year.
- Banding applications of MATRIX® SG must not exceed 4.0 oz (0.0625 lb ai) on a broadcast basis in the same year.
- Do not make more than 3 applications banded of MATRIX® SG per year.
- 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.

#### PRE-EMERGENCE APPLICATIONS

For preemergence applications to the crop, apply MATRIX® SG after seeding at 2.0-4.0 ounces (0.0313 - 0.0625 lb ai) product per acre.

To activate MATRIX® SG in the soil, supply moisture by a single rainfall event, or apply sprinkler irrigation of 1/2 to 1" (sandy soils apply at least 1/2", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), within 5 days after application, to move MATRIX® SG 2 to 3" 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 MATRIX® SG postemergence 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, the addition of a spray adjuvant may 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" in height or diameter or weeds that have an established root system before activation of MATRIX® SG.

#### POSTEMERGENCE APPLICATIONS

For postemergence applications, apply MATRIX® SG at 1.0-2.0 ounces (0.0156 - 0.0313 lb ai) product per acre (use 2.0 ounces (0.0313 lb ai) 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" 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 (lime green color). Symptoms usually disappear within 5 to 15 days.

Under growing conditions that promote crop stress (including drought, frost, cold temperatures, high temperatures, extreme temperature variations or saturated or water-logged soils), temporary crop chlorosis (lime green color) may occur after application of MATRIX® SG. Symptoms usually disappear within 5 to 15 days.

For best results with MATRIX® SG postemergence, rainfall or sprinkler irrigation of 1/2 to 1" (sandy soils apply at least 1/2", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), no sooner than 4 hours, but not more than 5 days after application, will activate MATRIX® SG in the soil and help provide control of subsequent flushes of annual weeds.

Postemergence applications of MATRIX® SG should be made 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. To maximize control of such weeds, it may be necessary to use sequential applications of MATRIX® SG.

##### **PREEMERGENCE FOLLOWED BY POSTEMERGENCE**

Applications of MATRIX® SG may be applied Preemergence followed by single or multiple applications Postemergence.

**Restrictions:** For sequential applications the total amount of MATRIX® SG cannot exceed 4.0 ounces (0.0625 lb ai) of product broadcast per acre per year. Do not make more than 3 broadcast applications of MATRIX® SG per year.

##### **POSTEMERGENCE FOLLOWED BY SECOND POSTEMERGENCE**

Multiple applications of MATRIX® SG may be applied postemergence, optimum control is seen when the first application is made to small actively growing weeds, followed by a second application 7 to 14 days later.

**Restrictions:** For sequential applications the total amount of MATRIX® SG cannot exceed 4.0 ounces (0.0625 lb ai) of product broadcast per acre per year. Do not make more than 2 applications of MATRIX® SG broadcast per year.

## **BAND APPLICATIONS - TOMATOES**

DuPont™ MATRIX® SG can be applied preemergence and postemergence as a banded application. Use proportionally less spray mixture based on the soil area actually sprayed. See the "Preemergence Applications" and "Postemergence Applications" sections of this label for additional details on the use of MATRIX® SG. See below to calculate actual treated area when using band applications.

**Restrictions:** For band applications the total amount of MATRIX® SG cannot exceed 4.0 ounces (0.0625 lb ai) product on a broadcast basis per acre per year. Do not make more than 3 band applications of MATRIX® SG per year.

**Band Width (inches) x Rate per Broadcast Acre = Amount MATRIX® SG Band Applied per Acre**

**Row Width (inches)**

## **TANK MIXTURES - TOMATOES**

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

MATRIX® SG may be tank mixed with pesticide products labeled for use on tomatoes in accordance with the most restrictive of label limitations and precautions. When tank mixing MATRIX® SG with another tomato pesticide(s), read and follow all use directions, restrictions, and precautions of both MATRIX® SG and the tank mix partner(s).

MATRIX® SG may also be used in three-way tank mix combinations with the above pesticide(s). If these instructions conflict with this MATRIX® SG label, do not use as a tank mix with MATRIX® SG. Tank mixtures with products that lower the spray solution pH may reduce weed control (including LI700 surfactant).

### **MATRIX® SG Plus Foliar Fungicides**

MATRIX® SG may be tank mixed with other suitable registered fungicides on tomatoes, including "Manzate" (mancozeb) and "Bravo" (chlorothalonil) fungicide). Tank mixes with copper containing fungicides may reduce weed control.

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

## **TOMATOES: CALIFORNIA**

### **PREEMERGENCE APPLICATIONS**

For preemergence applications to the crop, apply MATRIX® SG after seeding at 2.0-4.0 ounces (0.0313 - 0.0625 lb ai) product per acre. To activate MATRIX® SG in the soil, supply moisture by a single rainfall event, or apply sprinkler irrigation of 1/2 to 1" (sandy soils apply at least 1/2", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), within 5 days after application, to move MATRIX® SG 2 to 3" 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 MATRIX® SG postemergence 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, the addition of a spray adjuvant may 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" in height or diameter or weeds that have an established root system before activation of MATRIX® SG.

### **POSTEMERGENCE APPLICATIONS**

For postemergence applications, apply MATRIX® SG at 2.0 ounces (0.0313 lb ai) product per acre to young, actively growing weeds after the crop has reached the cotyledon stage. Optimum performance is obtained when weeds are less than 1" 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 (lime green color). Symptoms usually disappear within 5 to 15 days.

Under growing conditions that promote crop stress (including drought, frost, cold temperatures, high temperatures, extreme temperature variations or saturated or water-logged soils), temporary crop chlorosis (lime green color) may occur after application of MATRIX® SG. Symptoms usually disappear within 5 to 15 days.

For best results with MATRIX® SG postemergence, rainfall or sprinkler irrigation of 1/2 to 1" (sandy soils apply at least 1/2", sandy loams apply at least 1/2", silt soils apply at least 3/4", clay soils apply at least 1"), no sooner than 4 hours, but not more than 5 days after application, will activate MATRIX® SG in the soil and help provide control of subsequent flushes of annual weeds.

Postemergence applications of MATRIX® SG should be made 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 maximize control of such weeds, it may be necessary to use sequential applications of MATRIX® SG.

### **PREEMERGENCE FOLLOWED BY POSTEMERGENCE**

Applications of DuPont™ MATRIX® SG may be applied Preemergence followed by single or multiple applications Postemergence.

**Restriction:** For sequential applications the total amount of MATRIX® SG cannot exceed 4.0 ounces (0.0625 lb ai) product per acre per year on a broadcast basis.

### **POSTEMERGENCE FOLLOWED BY SECOND POSTEMERGENCE**

Multiple applications of MATRIX® SG may be applied postemergence, optimum control is seen when the first application is made to small actively growing weeds, followed by a second application 7 to 14 days later.

**Restriction:** For sequential applications the total amount of MATRIX® SG cannot exceed 4.0 ounces (0.0625 lb ai) product per acre per year on a broadcast basis.

### **BAND APPLICATIONS – TOMATOES:**

MATRIX® SG can be applied in a preemergence band at 2.0 - 4.0 ounces (0.0313 - 0.0625 lb ai) product per acre (For example, 0.5-1.0 ounces (0.0078-0.0156 lb ai) of product per conventional broadcast acre assuming 25% banding) followed by two separate postemergence band applications applied at 2 ounces (0.0313 lb ai) product per acre (For example, 0.5 ounces (0.0078 lb ai) of product per conventional broadcast acre assuming 25% banding) over the same sprayed area.

MATRIX® SG can be applied using three postemergence band applications at 2.0 ounces (0.0313 lb ai) product per acre (For example, 0.5 ounces (0.0078 lb ai) of product per conventional broadcast acre assuming 25% banding). See below to calculate actual treated area when using band applications.

**Restrictions:** For band applications, the total amount of MATRIX® SG cannot exceed 4.0 ounces (0.0625 lb ai) product on a broadcast basis per acre per year. Do not make more than 3 band applications of MATRIX® SG per year.

**Band Width (inches) x Rate per Broadcast Acre = Amount MATRIX® SG Band Applied per Acre**

**Row Width (inches)**

### **WEEDS CONTROLLED - TOMATO**

#### **PREEMERGENCE CONTROL**

##### GRASSES

Barnyardgrass  
Foxtail, Giant  
Foxtail, Green  
Foxtail, Yellow  
Wheat, Volunteer

##### BROADLEAVES

Filaree, Redstem  
Henbit  
Kochia  
Mustard, Black  
Pigweed, Redroot  
Pigweed, Smooth  
Purslane, Common

#### **PREEMERGENCE (PARTIAL CONTROL)**

##### GRASSES

Crabgrass  
Wild Oat

##### BROADLEAVES

Cocklebur  
Lambsquarters, Common  
Nightshade\*, Black†  
Nightshade, Hairy  
Pigweed, Prostrate  
Ragweed, Common  
Velvetleaf

\* Eastern Black Nightshade (*Solanum ptycanthum*) is NOT Controlled or suppressed.

Black Nightshade suppression is only for use in Tomatoes in California.

† See Specific Weed Problems

#### **POSTEMERGENCE CONTROL (Weeds not to exceed 1" in height)**

##### GRASSES

Barley, Volunteer  
Barnyardgrass  
Bluegrass, Annual  
Crabgrass  
Foxtail, Bristly  
Foxtail, Giant  
Foxtail, Green  
Foxtail, Yellow  
Panicum, Fall  
Wheat, Volunteer

##### BROADLEAVES

Chamomile, False  
Chickweed, Common  
Henbit  
Kochia  
Mustard, Birdrape  
Mustard, Black  
Mustard, Wild  
Pigweed, Redroot  
Pigweed, Smooth  
Purslane, Common  
Shepherd's purse  
Wild Radish

## POSTEMERGENCE (PARTIAL CONTROL)‡

### GRASSES

Johnsongrass, Seedling  
Millet, Wild Proso  
Stinkgrass  
Quackgrass†  
Wild Oat  
Yellow Nutsedge

### BROADLEAVES

Thistle, Canada†  
Cocklebur  
Lambsquarters, Common  
Morningglory, Ivyleaf  
Nightshade, Hairy  
Nightshade\*†, Black (cotyledon stage only)  
Pigweed, Prostrate  
Ragweed, Common  
Smartweed, Pennsylvania  
Velvetleaf  
Volunteer Alfalfa\*\*

\* Eastern Black Nightshade (*Solanum ptycanthum*) is NOT Controlled or suppressed.

Black Nightshade partial control is only for use in Tomatoes in California.

\*\*Except California

‡ 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 the weeds, and the environmental conditions following treatment.

† See Specific Weed Problems

## SPECIFIC WEED PROBLEMS

**Quackgrass:** For best results, apply DuPont™ MATRIX® SG postemergence to quackgrass that is 4 to 8" tall. Quackgrass not emerged at the time of application will not be controlled or suppressed, and would require a second postemergence application for acceptable control.

**Black Nightshade (Tomatoes):** For best results, apply MATRIX® SG preemergence (prior to weed germination) at 2 - 4 ounces (0.0313 - 0.0625 lb ai) per acre followed by a postemergence application at 1 to 2 ounces (0.0156 - 0.0313 lb ai) per acre to small actively growing weeds.

**Canada Thistle:** For best results, apply MATRIX® SG postemergence to small actively growing Canada thistle. Canada thistle not emerged at the time of application will not be controlled or suppressed, and would require a second postemergence application for acceptable control.

## MATRIX® SG ROTATIONAL CROP GUIDELINES - TOMATO

For crops listed below, planting prior to the interval shown may result in crop injury when using MATRIX® 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" during the growing season. For tank mixtures, follow the most restrictive rotational crop guideline.

Rotation Crop	Interval (months)
Beans, Dry	10
Beans, Snap	10
Corn, Field	Anytime
Corn, Sweet	10
Cotton	10
Cucumber	10
Garlic	6
Potatoes	Anytime
Soybeans	10
Tomatoes	Anytime
Wheat, Winter	4
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.

## 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 MATRIX® SG.

- Cultivation up to 7 days before the postemergence application of MATRIX® SG may decrease weed control by pruning weed roots, placing the weeds under stress, or covering the weeds with soil and preventing coverage by MATRIX® SG.
- To allow MATRIX® SG to fully control treated weeds, cultivation is not advised for 7 days after application.
- Optimum timing for cultivation is 7 - 14 days after a postemergence application of MATRIX® SG.

## SPRAY ADJUVANTS

Include a spray adjuvant with applications of MATRIX® SG when applied by itself and postemergence to the weeds. Consult your Ag dealer or applicator, local DuPont fact sheets, technical bulletins, and service policies prior to using an adjuvant system. If another herbicide is tank mixed with MATRIX® SG, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients (40 CFR 1001).



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

- Apply 0.125 to 0.25% v/v (1 to 2 pt/100 gal of water). The 0.25% v/v rate is preferred under 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 gal 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 which contain both MSO and Silicone are acceptable at labeled rates.

### ***Ammonium Nitrogen Fertilizer***

- Use 2 qt/acre of a high-quality urea ammonium nitrate (UAN), including 28%N or 32%N, or 2 lb/acre of a spray grade ammonium sulfate (AMS). Use 4 qt/acre UAN or 4 lb/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 DuPont™ MATRIX® SG unless instructed to do so on DuPont Technical Bulletins.

### **Precautions:**

1. The use of silicone polymer type surfactants is not suggested as reduced weed control may result.
2. Avoid using crop oil concentrate (COC) or methylated seed oil (MSO) when potatoes are under heat stress (>85 degrees 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 MATRIX® SG with a properly calibrated, low-pressure (20 to 40 psi) boom sprayer equipped with flat fan, "Twinjet", underleaf banding nozzles or flood jet nozzles. Nozzle screens must 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.

With ground application equipment, use enough water to deliver 10 to 40 gal total spray solution per acre. Avoid overlapping, and shut off spray booms while starting, turning, slowing, or stopping, or injury to the crop may result.

### **SPRAYER CLEANUP**

Spray equipment or nurse tanks used in chemigation, must be cleaned before MATRIX® SG is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the 6 steps outlined in the "After Applying MATRIX® SG and Before Applying to Other Crops" section of this label.

For maximum preemergence 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.). Leaves and trash may be removed 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 MATRIX® SG. Cutting water furrows, or cultivations that mix untreated soil into the treated areas, will also reduce the effectiveness of the herbicide treatment.

For best weed management apply MATRIX® SG with another suitable residual herbicide registered for that crop. This is recommended for all soil types, but especially so for coarse textured soils under standard sprinklers or micro-sprinklers.

More than one banded application of MATRIX® SG may be needed to provide extended weed control.

## **CORN, FIELD (CALIFORNIA)**

### **APPLICATION INFORMATION**

MATRIX® SG is a selective herbicide for burndown and residual control of certain annual grass and broadleaf weeds when applied fallow, preemergence and postemergence to field corn. MATRIX® SG may be applied in tank mix



combinations with other corn herbicides for improved burndown and residual control. Residual weed control is dependent on rainfall, sprinkler irrigation, flood irrigation or furrow irrigation for herbicide activation. Furrow irrigation may not provide proper activation on tops of beds if rainfall or furrow irrigation does not drive DuPont™ MATRIX® SG into the soil and weed root zones.

MATRIX® SG is absorbed through the roots and leaf tissue of plants, rapidly inhibiting the growth of susceptible weeds. Rainfall or sprinkler irrigation is needed to move MATRIX® SG into the soil. Susceptible weeds will generally not emerge from a preemergence application. In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases and leaves become chlorotic three to five days after emergence. Death of leaf tissue and growing point will follow in some species, while others will remain green, stunted and noncompetitive.

The herbicidal action of MATRIX® SG may be less effective on weeds stressed from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions, or cultural practices.

MATRIX® SG treatments are most effective in controlling weeds when adequate rainfall or irrigation is received 5 -7 days after application. 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 MATRIX® SG and make certain corn seeds are below the tilled area.

MATRIX® SG is best used in a planned sequential application herbicide program, to be followed by an in-crop application of MATRIX® SG, and/or other post applied corn herbicides. Refer to the label of the respective sequential partner for specific use directions.

Allow at least 4 weeks between preemergence applications of MATRIX® SG and postemergence applications of MATRIX® SG.

Make sequential applications after the corn has reached the 2-collar stage but before the corn exceeds the maximum application height listed on the respective product labels.

Avoid making preemergence applications to coarse-textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter as crop injury may occur.

Apply MATRIX® 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 days RM, not all white corn hybrids nor Hi-Lysine hybrids have been tested for crop safety, nor does DuPont have access to all seed company data.

Consequently, to the extent consistent with applicable law, injury arising from the use of MATRIX® SG on these types of corn is the responsibility of the user. Consult with your seed supplier before applying MATRIX® 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 CRM or higher. As noted in the seed company publications, DuPont sulfonylurea herbicides including MATRIX® SG should be used with caution on these hybrids. Consult with your local DuPont representative or the DuPont Label Web Site (<http://cropprotection.dupont.com/>) for any additional supplemental labeling information relative to potential corn hybrid sensitivity to MATRIX® SG.

## **Fallow**

### **Use rates**

Apply MATRIX® SG at 1 to 2 ounces (0.0156 - 0.0313 lb ai) per acre.

### **Application Timing**

MATRIX® SG may be used as a fallow treatment, in the fall, winter or spring when the majority of weeds have emerged and are actively growing. Field corn may be planted to this treated area at any time.

## **Field Corn**

### **WHEN TO APPLY- Preemergence to the Crop**

MATRIX® SG may be applied preemergence or preplant to corn. Applications of MATRIX® SG made before weed emergence will provide residual control of labeled weeds. Control of emerged weeds will require the addition of spray adjuvants as noted below.

### **Preemergence Rates**

MATRIX® SG may be applied at 1.0 - 1.5 ounces (0.0156 - 0.0234 lb ai) product before corn emergence. See **Use Restrictions** below for rimsulfuron rate limitations.

### **Timing to Crop**

MATRIX® SG herbicide may be used in either conventional, conservation tillage, or no-till crop management systems, and may be applied either preplant, preplant incorporated (less than 2” deep) or preemergence for use in field corn production. Applications of MATRIX® SG made before weed emergence will provide residual control of labeled weeds. Control of emerged weeds will require the addition of spray adjuvants as noted in this label.

Preplant Surface Applied DuPont™ MATRIX® SG is best used in a planned sequential application program, followed by MATRIX® SG and/or other post applied corn herbicides. Refer to the label of the respective sequential partner for specific use directions.

### **Preplant/Preemergence Burndown**

Apply MATRIX® SG when weeds are young and actively growing but before they exceed the sizes listed on this label. When weeds exceed listed maximum height or weeds not controlled by MATRIX® SG are present, the addition of a burndown herbicide containing glyphosate, paraquat, dicamba, and/or 2,4-D is advised. If giant ragweed, common cocklebur, henbit, Pennsylvania smartweed or purple deadnettle are present at the time of application, the addition of atrazine will improve control. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. When mixing with liquid nitrogen fertilizer or glyphosate, substitute a non-ionic surfactant for crop oil.

### **WHEN TO APPLY - Postemergence to the Crop**

Apply MATRIX® SG to corn that is up to 12 inches tall or exhibiting 6 or more leaf collars, whichever is more restrictive. Applications of MATRIX® SG made after weed emergence will provide contact control of labeled weeds as well as limited residual control of later emergence.

### **Postemergence Rates**

Apply MATRIX® SG at 0.5 - 1.0 ounces (0.0078 - 0.0156 lb ai) per acre as a postemergence broadcast application. Use the 1 ounce/acre rate for most postemergence applications. See Use Restrictions below for cumulative rimsulfuron rate limitations.

### **Timing to Emerged Weeds**

- Tank mixtures of MATRIX® SG with glyphosate or glufosinate herbicides may be applied after weeds emerge but before they reach the maximum size listed on the glyphosate or glufosinate herbicide labels.
- Adequate soil moisture is required for optimum activity. Rainfall or irrigation within 5 to 7 days after application will enhance MATRIX® SG residual activity. If activating rainfall, flood, furrow or sprinkler irrigation (>0.5 inch) is not received within 5-7 days after application, follow with a cultivation or with a sequential application of a nicosulfuron containing herbicide, if needed.

### **Spray Adjuvants**

For control of emerged weeds, application of MATRIX® SG must include an appropriate adjuvant and an ammonium nitrogen fertilizer. If applied in tank mix combination with a glyphosate or glufosinate herbicide that contains a built-in adjuvant system, no additional surfactant needs to be added. Products must contain only EPA-exempt ingredients (40 CFR 1001).

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

### **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.
- MSO adjuvants may be used 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 gal 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 qt/acre of a high-quality urea ammonium nitrate (UAN) including 28%N or 32%N, or 2 lb/acre of a spraygrade ammonium sulfate (AMS).

### **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.

## Use Restrictions

- Do not apply to field corn grown for seed, to popcorn or to sweet corn.
- Do not apply to field corn taller than 12 inches tall or exhibiting 6 or more leaf collars, whichever is more restrictive.
- Do not apply more than 1.5 oz (0.0234 lb ai) per acre per year preemergence to field corn.
- Do not apply more than 1.0 oz (0.0156 lb ai) per acre per year postemergence to field corn.
- Do not apply more than a total of 2.0 oz (equivalent to 0.0313 lb or 0.5 oz of rimsulfuron) DuPont™ MATRIX® SG per acre per year. This includes combinations of preemergence or postemergence applications of MATRIX SG; as well as rimsulfuron from application(s) of other products that contain rimsulfuron.
- Do not make more than 2 applications of MATRIX® SG per year.
- Allow at least 28 days between applications.
- Limit preemergence rates of MATRIX SG to a maximum of 1.25 oz (0.0195 lb ai) product if following with postemergence applications of the rimsulfuron containing products above.
- Do not apply by air in California.
- Do not apply MATRIX® SG within 45 days of crop emergence where an organophosphate insecticide was applied as an in-furrow treatment since crop injury may occur.
- Do not tank mix MATRIX® SG with foliar-applied organophosphate insecticides including “Lorsban”, malathion, parathion, etc, as severe crop injury may occur.
- Do not tank mix MATRIX® SG with a bentazon product, including “Basagran”, as severe crop injury may occur.
- Do not graze, feed forage, grain or fodder (stover) from treated areas to livestock within 30 days of MATRIX® SG application.
- Do not irrigate MATRIX® SG into coarse soils at planting time when soils are saturated.
- Do not apply through any type of irrigation system.
- Do not use flood or furrow irrigation to apply MATRIX® SG.
- Do not treat frozen soil.

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

- Do not apply MATRIX® 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 contaminate any body of water.

## WEEDS CONTROLLED/SUPPRESSED - FIELD CORN IN CALIFORNIA

### Fallow/Fieldcorn - Postemergence to Weeds - MATRIX® SG Alone

#### GRASSES (1-2 inches)

Barley, volunteer  
Barnyardgrass  
Bluegrass, annual  
Crabgrass, large (1/2")  
Cupgrass, woolly (1")  
Foxtail (bristly, giant, green, yellow)  
Johnsongrass, seedling\*  
Millet, Wild Proso\*  
Panicum, fall  
Quackgrass\*  
Ryegrass, Italian\*  
Shattercane (4")  
Signalgrass, broadleaf\*  
Stinkgrass\*  
Wheat, volunteer  
Wild Oat\*  
Yellow Nutsedge\*

#### BROADLEAVES (1-2 inches)

Canada thistle  
Chickweed, common  
Cocklebur  
Dandelion (6" diameter)  
Henbit  
Kochia  
Lambsquarters, common  
Morningglory, ivyleaf\*  
Mustard (birdrape, black, wild)  
Nightshade, hairy\*  
Pigweed (prostrate, redroot, smooth)  
Purslane, common\*  
Ragweed, common\*  
Shepherd's purse  
Smartweed, Pennsylvania\*  
Wild Radish  
Velvetleaf\*

### Fallow/Field Corn - Preemergence and Residual\* - MATRIX® SG Alone

#### GRASSES

Barnyardgrass  
Bluegrass, annual  
Crabgrass, large  
Foxtail (bristly, giant, green, yellow)  
Panicum, fall  
Ryegrass, Italian  
Signalgrass, broadleaf  
Wheat, Volunteer  
Wild Oat

#### BROADLEAVES

Carpetweed  
Chamomile, false  
Cocklebur  
Filaree, Redstem  
Henbit  
Jimsonweed  
Kochia (ALS-sensitive)  
Lambsquarters, common  
Morningglory, ivyleaf

Mustard (birdrape, black)  
Nightshade (hairy, black)  
Palmer amaranth  
Pigweed (prostrate, redroot, smooth)  
Purslane, common  
Ragweed, common  
Russian thistle, seedling  
Smartweed, Pennsylvania  
Velvetleaf\*

\*Partial control or suppression - for full season control, follow with a sequential, in-crop application of DuPont™ MATRIX® SG or with appropriate tank mix partners.

## TANK MIXTURES

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### Fallow

MATRIX® SG may be used as a fallow treatment, and may be tank mixed with other herbicides that are registered for use in fallow. Read and follow all applicable use instructions on this label and the labels of any tank mix partner before using in mixtures with MATRIX® SG. Do not use the tank mix partner if its label conflicts with this MATRIX® SG label.

### Field Corn

MATRIX® SG may be tank mixed with full or reduced rates of preemergence grass and broadleaf herbicides including atrazine, glyphosate, paraquat, dicamba, and/or 2,4-D to provide added residual activity or burndown activity on emerged weeds. Consult tank mix partner labeling for rate and soil-type restrictions. Read and follow all manufacturers' label instructions for the companion herbicide(s). Do not use a tank mix partner product if its label conflicts with this MATRIX® SG label.

Ensure the tank mix product is labeled for the same timing, method of application, adjuvants, and use restrictions as MATRIX® SG, as well as other products used in the tank mixture.

Read and follow all applicable use directions, precautions, and limitations specified on the respective product labels.

### Postemergence to the Crop

#### MATRIX® SG plus A Glyphosate Based Herbicide (including "Roundup")

When used in tank mixture with glyphosate, MATRIX® SG will deliver improved burndown and/or residual activity on the following weeds, as compared to glyphosate used alone. A glyphosate based herbicide may be tank mixed for post emerge applications of MATRIX® SG when made to corn hybrids containing the "Roundup Ready" gene. Consult with your seed supplier to confirm the corn hybrid contains the "Roundup Ready" gene before making any herbicide application containing glyphosate herbicides. Refer to the Spray Adjuvants section for additional information on proper adjuvant selection.

Barley, volunteer	Panicum, fall
Barnyardgrass	Pigweed (prostrate, redroot, smooth)
Bluegrass, annual	Purslane, common
Canada thistle	Quackgrass
Chamomile, false	Ragweed, common
Chickweed, common	Ryegrass, Italian
Cocklebur	Sandbur (field, longspine)
Crabgrass	Shepherd's purse
Dandelion (6" diameter)	Signalgrass, broadleaf
Filaree, redstem	Smartweed, Pennsylvania
Foxtail (bristly, giant, green, yellow)	Stinkgrass
Henbit	Velvetleaf
Johnsongrass, seedling	Wheat, volunteer
Kochia	Wild buckwheat
Lambsquarters, common	Wild oat
Millet, Wild Proso	Wild radish
Morningglory, ivyleaf	Yellow Nutsedge
Mustard (birdsrape, black, wild)	
Nightshade, hairy	

#### MATRIX® SG plus A Glufosinate Based Herbicide

MATRIX® SG may be tank mixed with glufosinate herbicide 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. When used in a tank mixture with glufosinate herbicide, MATRIX® SG will deliver improved burndown and/or limited residual activity on the following weeds, as compared to glufosinate used alone:

Velvetleaf  
Pigweed, redroot  
Lambsquarters, common  
Foxtail (giant, yellow)

### MATRIX® SG ROTATIONAL CROP GUIDELINES - FIELD CORN

For crops listed below, planting prior to the interval shown may result in crop injury when using MATRIX® 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" during the growing season. For tank mixtures, follow the most restrictive rotational crop guideline.

<b>Rotation Crop</b>	<b>Interval (months)</b>
Beans, Dry	10
Beans, Snap	10
Corn, Field	Anytime
Corn, Sweet	10
Cotton	10
Cucumber	10
Garlic	6
Potatoes	Anytime
Soybeans	10
Tomatoes	Anytime
Wheat, Winter	4
Crops Not Listed	12

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.

### **Mixing Instructions**

DuPont™ MATRIX® SG must be completely dissolved in clean water before adding to spray tanks that do not have continuous agitation during loading and mixing. Water Carrier Instructions

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of MATRIX® SG.
3. Continue agitation until the MATRIX® SG is fully dissolved, at least 5 minutes.
4. Once the MATRIX® SG is fully dissolved, maintain agitation and continue filling tank with water.
5. As the tank is filling, add tank mix partners and then add the required volume of spray adjuvant. Always add spray adjuvant last. Antifoaming agents may be used.
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 MATRIX® SG spray mixture within 24 hours of mixing to avoid product degradation.
8. If MATRIX® SG and a tank mix partner are to be applied in multiple loads, fully dissolve the MATRIX® SG in clean water prior to adding to the tank.

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

### **Application and Spray Volumes**

#### **Ground**

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, for example, 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 specified in manufacturers' 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.

#### **Use Precautions**

- MATRIX® SG may interact with certain insecticides previously applied to the crop. Crop response varies with field corn type, insecticide used, insecticide application methods, and soil type.
- MATRIX® SG may be applied to corn previously treated with nonorganophosphate soil insecticides regardless of soil type.
- Allow at least 60 days between a preemergence or preplant application of MATRIX® SG and application of organophosphate insecticide since crop injury may result.
- Crop injury may occur following an application of MATRIX® SG if there is a prolonged period of cold weather and / or in conjunction with wet soils.
- Prevent drift or spray onto desirable plants
- Thoroughly clean application equipment immediately after use.

### **ADDITIONAL USE INFORMATION - ALL CROPS**

#### **MIXING INSTRUCTIONS**

MATRIX® SG must be completely dissolved in cleanwater 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 DuPont™ MATRIX® SG herbicide.
3. Continue agitation until the MATRIX® SG herbicide is fully dissolved, at least 5 minutes.
4. Once the MATRIX® SG herbicide is fully dissolved, maintain agitation and continue filling tank with water.
5. As the tank is filling, add tank mix partners (if desired) then add the required 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 MATRIX® SG herbicide spray mixture within 24 hours of mixing to avoid product degradation.
8. If MATRIX® SG and a tank mix partner are to be applied in multiple loads, fully dissolve the MATRIX® 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.

## **SPRAYER CLEANUP**

The spray equipment must be cleaned before MATRIX® SG is sprayed. Follow the cleanup procedures specified on the labels of the previously applied products. If no directions are provided, follow the steps outlined in the "After Spraying MATRIX® SG and before Spraying Other Crops" section of this label.

### **At the End of the Day**

When spraying or mixing equipment will be used over an extended period to apply multiple loads of MATRIX® SG herbicide, partially fill the tank with fresh water at the end of each day of spraying, flush the boom and hoses, and allow to sit overnight. This will prevent the buildup of dried pesticide deposits from accumulating in the application equipment.

### **After Applying MATRIX® SG and Before Applying to Other Crops**

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

1. Empty the tank and drain the sump completely.
2. 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 is recommended to facilitate the removal of any caked deposits.
3. When MATRIX® SG is tank mixed with other pesticides, all cleanout procedures for each product must be examined and the most rigorous procedure must be followed.
4. Follow any pre-cleanout guidelines specified on other product labels.



## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store product in original container only. Store in a cool, dry place.

**Pesticide Disposal:** Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**Container Handling:** Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

**Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):** 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 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, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds):** 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, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down):** Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners:** Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with DuPont™ MATRIX® SG Herbicide containing rimsulfuron only. Do not reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Disposing of Fiber Drum and/or Liner: Do not reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

**All Other Refillable Containers:** Refillable container. Refilling Container: Refill this container with DuPont™ MATRIX® SG containing rimsulfuron only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage including cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact DuPont at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact DuPont at the number below for instructions. Disposing of Container: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont at 1-800-441-3637, day or night.

**NOTICE TO BUYER:** Purchase of this material does not confer any rights under patents of countries outside of the United States.

The DuPont Oval Logo, DuPont™, MATRIX®, CINCH®, CURZATE®, ALLY®, GLEAN®, EXPRESS®, HARMONY® and FINESSE® are trademarks or registered trademarks of E. I. duPont de Nemours and Company

"Bravo" and "Dual II Magnum" are registered trademarks of a Syngenta Group company.

"EPTAM" is a registered trademark of Gowan Company L.L.C.

"Prowl" and "Basagran" are registered trademarks of BASF SE.

"Lorox" is a registered trademark of Tessenderlo Kerley, Inc.

"Manzate" is a registered trademark of United Phosphorus Limited.

"Roundup" and "Roundup Ready" are registered trademarks of Monsanto Technology LLC

"TwinJet" is a trademark of Delavan

"Liberty", "Sencor" and "Alion" are registered trademarks of Bayer

"Lorsban" and "Kerb" are registered trademarks of Dow AgroSciences LLC

"Microfoil Boom" is a registered trademark of Bishop Equipment Manufacturing

**D - 2049MSTR 050718**

## **LIMITATION OF WARRANTY AND LIABILITY**

NOTICE: Read this Limitation of Warranty and Liability before buying or using this Product. DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not specifically directed by DuPont. User assumes all risks associated with such non-directed use. If the terms are not acceptable, return the product at once, unopened and the purchase price will be refunded.

It is impossible to eliminate all risks associated with the use of this product. Such risks arise from weather conditions, soil factors, off target movement, unconventional farming techniques, presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of DuPont. These risks can cause: ineffectiveness of the product, crop injury, or injury to non-target crops or plants. **WHEN YOU BUY OR USE THIS PRODUCT, YOU AGREE TO ACCEPT THESE RISKS.**

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BUYER'S OR USER'S BARGAINED-FOR EXPECTATION IS CROP PROTECTION. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER, FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, TORT OR STRICT LIABILITY), WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS, AND RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT, OR AT THE ELECTION OF DUPONT OR SELLER, THE REPLACEMENT OF THE PRODUCT.

To the extent consistent with applicable law that allows such requirement, DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer's or user's growing crops can be made. Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims, whether based on contract, negligence, strict liability, other tort or otherwise, or be barred from any remedy.

This Limitation of Warranty and Liability may not be amended by any oral or written agreement.

**For product information call: 1-888-6-DUPONT [1-888-638-7668]**

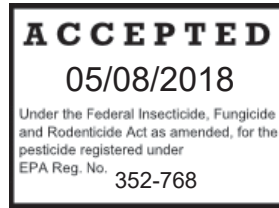
**Internet address: <http://cropprotection.dupont.com/>**

**© 2008-2018 E. I. du Pont de Nemours and Company, Chestnut Run Plaza, 974 Centre Road, Wilmington, DE 19805 U.S.A.**

**All rights reserved.**



**DuPont Crop  
Protection**



**SUPPLEMENTAL LABELING**

**DUPONT™ MATRIX® SG  
HERBICIDE  
FOR USE IN GRASS GROWN FOR  
SEED IN THE STATES OF  
OREGON AND WASHINGTON**

**DUPONT™ MATRIX® SG Herbicide**

EPA Reg. No. 352- 768

**FOR USE IN GRASS GROWN FOR SEED  
IN THE STATES OF OREGON AND WASHINGTON**

This supplemental labeling expires on April 30, 2021 and must not used or distributed after this date.

**DIRECTIONS FOR USE**

It is a violation of federal law to use this product in a manner inconsistent with its labeling. DuPont™ MATRIX® SG must be used only in accordance with instructions on this label.

This labeling must be in the possession of the user at the time of application. Read the label affixed to the container for MATRIX® SG herbicide before applying. Use of MATRIX® SG according to this labeling is subject to the use precautions and limitations imposed by the label affixed to the container for MATRIX® SG.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**APPLICATION INFORMATION**

Use DuPont MATRIX® SG only in conjunction with carbon planted Perennial Ryegrass and Tall Fescue grown for seed. The activated carbon band over the seed row absorbs MATRIX® SG so that seedling grass germinating beneath the carbon band is protected from the herbicide. The protection provided by the carbon band is only as good as the width and integrity of the band. Heavy and/or persistent rains after planting can cause deterioration of the carbon band allowing MATRIX® SG to move into the grass root zone causing injury and/or stand loss. Standing water can also increase the risk of MATRIX® SG moving vertically through the carbon band or laterally beneath the band.

Variability in seedbed preparation, and unpredictable environmental conditions such as heavy rain can compromise the protection provided by the carbon band. Therefore, to the extent consistent with applicable law, the grower assumes all risks of crop injury and/or stand loss associated with the use of MATRIX® SG.

Apply MATRIX® SG with properly calibrated ground equipment with good mechanical or by-pass agitation. Only apply MATRIX® SG on early fall planted fields (see **Use Precautions** section) that have been prepared with a smooth, fine seedbed that is firmly packed prior to planting.

During the planting operation, apply activated carbon at the label directed rate as long as that rate is not lower than 300 lbs per acre. Apply the activated carbon in a band at least 1.0 inch wide centered over the seed row. Use a minimum spray volume of 40 gallons per acre to apply the activated carbon.

**WEEDS CONTROLLED**

In the area outside of the carbon band, MATRIX® SG will provide control of seedling annual bluegrass, annual and perennial ryegrass, volunteer wheat, and roughstock bluegrass. For a complete list of weeds controlled see the MATRIX® SG section 3 label on product packaging.

Note: Certain biotypes of diuron resistant annual bluegrass have shown reduced sensitivity to MATRIX® SG and may not be adequately controlled. Where these biotypes are known to exist, apply MATRIX® SG in a bank-mix with “Kerb” SC, a pronamide containing herbicide. Some biotypes of annual bluegrass that are resistant to other herbicides have also shown reduced sensitivity to MATRIX® SG. Where these biotypes are present, MATRIX® SG used alone will only provide suppression.

© 2018 E. I. du Pont de Nemours and Company, Chestnut Run Plaza, 974 Centre Road, Wilmington, Delaware 19805 U.S.A.

## **TANK MIXES WITH OTHER HERBICIDES**

MATRIX® SG can be applied in a tank-mix with other pre-emergence herbicides, including “Kerb” SC or a diuron containing herbicides that are also registered for use in carbon planted grass grown for seed.

It is the pesticide user’s responsibility to ensure that all product are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

## **USE RATE**

Apply MATRIX® SG at 3.0 ounces (0.0469 lb ai) per acre immediately (within 5 days) after carbon planting and prior to grass emergence. In areas where there are biotypes of annual bluegrass that are tolerant to MATRIX® SG, apply MATRIX® SG in a tank-mix with Kerb SC. Make application before grass emergence while the carbon band is still intact. Do not apply MATRIX® SG if heavy rainfall or overhead irrigation has caused dissipation of the carbon band. Best results are obtained when rainfall of 1/4 to 1/2 inch , or light, frequent irrigation occurs, within two weeks after MATRIX® SG is applied.

If MATRIX® SG is being used on fields that are sprinkler irrigated, best practice is to irrigate before planting to provide enough moisture for grass germination and then apply not more than 1/4 to 1/2 inch of water in the first irrigation after MATRIX® SG is applied.

## **CROP ROTATION**

Where MATRIX® SG has been applied in the fall and stand loss has occurred over the winter; best practice is to wait until soil temperatures are warm enough to support rapid germination (usually mid to late March) before trying to replant grass in the spring.

## **Use Precautions**

- Crop injury and/or stand loss can occur in treated areas that have standing water.
- Crop injury may occur in areas of fields where heavy residue from the previous crop makes it difficult to form a smooth, fine seed bed.
- Crop injury may occur in areas of spray overlap.
- Crop injury may occur if the carbon band is less than 1.0 inch wide.

## **Use Restrictions**

- Do not apply more than 3 ounces (0.0469 lb ai) MATRIX® SG per acre per year.
- Do not make more than 1 application of MATRIX® SG per year.
- When a tank mix of MATRIX® SG and Kerb SC is applied, **do not** graze livestock in the treated fields or cut treated fields for forage or hay for livestock feed for 180 days following application.
- Do not apply MATRIX® SG through any type of irrigation system.
- Do not use MATRIX® SG if heavy rainfall and/or overhead irrigation has caused deterioration of the carbon band prior to application.
- Do not use MATRIX® SG on fields that routinely have large areas of standing water.
- After planting, prior to grass emergence, do not use Big Gun irrigation or other types of overhead irrigation that product large droplets that can displace the carbon band.
- Do not use MATRIX® SG on fields that have enough slope to cause surface runoff.
- To avoid herbicide injury related to late planted grass, do not apply MATRIX® SG to fields planted after October 31.
- Do not apply MATRIX® SG to fields with sandy or gravelly soil.

## **IMPORTANT**

### **BEFORE USING DUPONT™ MATRIX® SG HERBICIDE, READ AND FOLLOW ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE EPA REGISTERED LABEL.**

This supplemental label contains new or supplemental instructions for use of the product which may not appear on the package label, and may contain directions which are not appropriate for all geographies and weed control situations. Follow the instructions carefully.

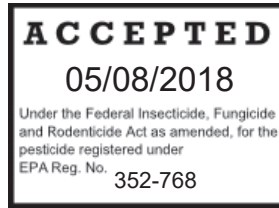
This labeling must be in the possession of the user at the time of pesticide application.

“Kerb” is a registered trademark of Dow AgroSciences LLC.





**DuPont Crop  
Protection**



**SUPPLEMENTAL LABELING**

**DUPONT™ MATRIX® SG  
HERBICIDE  
FOR USE IN BLUEBERRIES,  
RASPBERRIES, AND  
BLACKBERRIES**

**DUPONT™ MATRIX® SG Herbicide**

EPA Reg. No. 352-768

**FOR USE IN BLUEBERRIES, RASPBERRIES,  
AND BLACKBERRIES**

This supplemental labeling expires on April 30, 2021 and must not be used or distributed after this date.

**DIRECTIONS FOR USE**

It is a violation of federal law to use this product in a manner inconsistent with its labeling. DuPont™ MATRIX® SG must be used only in accordance with instructions on this label.

This labeling must be in the possession of the user at the time of application. Read the label affixed to the container for MATRIX® SG herbicide before applying. Use of MATRIX® SG according to this labeling is subject to the use precautions and limitations imposed by the label affixed to the container for MATRIX® SG.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**APPLICATION INFORMATION**

MATRIX™ SG is most effective when applied preemergence or early postemergence to actively growing weeds. If weeds have emerged at the time of application, use an adjuvant (non-ionic surfactant at 1 quart/100 gallons, or crop oil/methylated seed oil at 1 gallon per 100 gallons of spray mix) with MATRIX® SG to improve foliar uptake and translocation.

To optimize residual weed control, MATRIX® SG must be moved into the soil via rainfall or overhead irrigation. The best residual control is obtained when at least 0.5 inches of rain or overhead irrigation comes within the first week after application.

**USE RESTRICTIONS:**

- Do not apply by air. Use ground application equipment only.
- Do not use on soils classified as Sand.
- Do not apply within 21 days of first harvest.
- Do not apply more than 4 ounces (0.0625 lb ai) of MATRIX® SG broadcast per acre per year.
- Do not make more than 1 broadcast application or 2 band applications per year.
- Allow a minimum of 30 days between band applications, except for yellow nutsedge the minimum retreatment interval is 14 days.

**BLUEBERRY (High Bush)**

For broadcast applications, make a single application of MATRIX® SG preemergence or early postemergence to actively growing weeds at 4 ounces (0.0625 lb ai) per acre. 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. MATRIX® SG may be applied twice per acre per year as a banded treatment preemergence or postemergence at the 4 ounces (0.0625 lb ai) of product rate, per conventional broadcast acre, at 50% banding or less. See below to calculate actual treatment area when using band applications.

© 2018 E. I. du Pont de Nemours and Company, Chestnut Run Plaza, 974 Centre Road, Wilmington, Delaware 19805 U.S.A.

**Band Width (inches) x Rate per Broadcast Acre = Amount MATRIX® SG Band Applied per Acre**  
**Row Width (inches)**

Use MATRIX® SG on high bush blueberries that have gone through at least one growing season and are in good health and vigor. 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.

Application made after bud break may cause temporary chlorosis and/or stunting of leaves contacted by the spray. Application made after bud break may cause temporary chlorosis and/or stunting of leaves contacted by the spray.

MATRIX® SG may be applied in tank mixture with other herbicides registered for use in high bush blueberries. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restriction and limitation and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

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

All applications of MATRIX® SG are to be applied in the Vegetative Year growth stage of low bush blueberries. Make a single broadcast application of MATRIX® SG preemergence or early postemergence to actively growing weeds at 4 ounces (0.0625 lb ai) per acre. MATRIX® SG may be applied twice per acre per year as a banded treatment preemergence or postemergence at the 4 ounces (0.0625 lb ai) of product rate, per conventional broadcast acre, at 50% banding or less. See below to calculate actual treated area when using band applications.

**Band Width (inches) x Rate per Broadcast Acre = Amount MATRIX® SG Band Applied per Acre**  
**Row Width (inches)**

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.

Use MATRIX® SG on low bush blueberries that have gone through at least one growing season and are in good health and vigor. 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.

MATRIX® SG may be applied in tank mixture with other herbicides registered for use in low bush blueberries. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restriction and limitation and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### **CANEBERRY (RASPBERRY AND BLACKBERRY)**

For broadcast applications, make a single application of MATRIX® SG preemergence or early postemergence to actively growing weeds at 4 ounces (0.0625 lb ai) per acre. MATRIX® SG may be applied twice per acre per year as a banded treatment preemergence or postemergence at the 4 ounces (0.0625 lb ai) of product rate, per conventional broadcast acre, at 50% banding or less. See below to calculate actual treated area when using band applications.

**Band Width (inches) x Rate per Broadcast Acre = Amount MATRIX® SG Band Applied per Acre**  
**Row Width (inches)**

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.

#### **Crop Age for Application**

Apply MATRIX® SG to raspberries that have been established for at least one growing season and are in good health and vigor. For blackberries apply after plantings have gone through at least two growing seasons and are in good health and vigor. See use precautions.

© 2018 E. I. du Pont de Nemours and Company, Chestnut Run Plaza, 974 Centre Road, Wilmington, Delaware 19805 U.S.A.

## **Crop Grown Stage**

### For Every-year Bearing Crops:

To reduce the risk of injury to primocanes, apply before primocanes emerge in the spring, or wait until primocanes are approximately 3 feet tall or taller and make a directed application by adjusting the spray nozzles so that only the lower 12 inches of primocanes are exposed to the herbicide spray pattern. For blackberries that have trailing primocanes, apply before primocane emergence.

### Alternate Year Bearing Crops:

Apply in the dormant period before canes start new growth or wait until new growth canes are several feet tall so that a directed application can be used. To avoid crop injury, do not apply over the top of canes once new growth had started. Once canes are approximately 3 feet tall or taller, a directed application can be used provided the spray nozzles are adjusted so that only lower 12 inches of canes are exposed to the herbicide spray pattern.

MATRIX® SG may be applied in tank mixture with other herbicides registered for use in caneberries. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restriction and limitation and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

### **USE PRECAUTIONS:**

If MATRIX® SG is applied over the top of emerged primocanes, injury to the primocanes may occur in the form of chlorosis and/or stunting of primocane growth and in severe situations, individual primocanes may die. To avoid injury to primocanes, apply before primocane emergence or wait until they are at least 3 feet tall before making a directed spray so that only the bottom 12 inches of primocanes are exposed to the herbicide spray pattern.

MATRIX® SG may cause damage to plants that are small and/or weak due to weed competition, poor soil conditions, disease, insect damage or other factors that can reduce plant health and vigor.

MATRIX® SG may cause damage to plants growing in areas that are poorly drained, or areas that are subject to saturated or anaerobic soil conditions for an extended period of time.

## **IMPORTANT**

### **BEFORE USING DUPONT™ MATRIX® SG HERBICIDE, READ AND FOLLOW ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE EPA REGISTERED LABEL.**

This supplemental label contains new or supplemental instructions for use of the product which may not appear on the package label, and may contain directions which are not appropriate for all geographies and weed control situations. Follow the instructions carefully.

This supplemental label must be in the possession of the user at the time of pesticide application.