

# **POTATOES GROWN FOR SEED - PREEMERGENCE**

## General Information

### PRODUCT INFORMATION

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, corn and 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), 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

DuPont 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 (such as 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 MATRIX SG with Organophosphate insecticides in tomatoes may result in crop injury.

## 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.

## 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.

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

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

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

Naturally occurring weed biotypes that are resistant to "Amber" herbicide, DuPont ALLY herbicide, DuPont GLEAN FC herbicide, DuPont EXPRESS herbicide, DuPont

HARMONY EXTRA herbicide, or DuPont FINESSE herbicide will also be resistant to DuPont MATRIX SG.

#### INTEGRATED PEST MANAGEMENT

MATRIX SG should be integrated into an overall weed and pest management strategy whenever the use of a herbicide is required.

Practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) should be followed wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

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.

#### Limitations, Restrictions, and Exceptions

#### 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 per acre
- In a sequential application Preemergence at 1.0-1.5 oz per acre, followed by Postemergence at 1.0 oz 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 (such as drought, frost, cold temperatures, high temperatures, or extreme temperature variations), temporary chlorosis (lime green color) may occur after application. These symptoms may appear similar to virus like symptoms (such as chlorosis, leaf crinkling, pinching of terminal leaflet) but will usually disappear within 5 to 15 days of application.

#### Use Restrictions

- Do not exceed 2.5 oz per acre of MATRIX SG in the same 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 generally shorter growing seasons and different cultural practices in seed production in the states of California, Idaho, Oregon, Montana, South Dakota, Washington, Colorado, and parts of North Dakota\*\*.

\*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.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Sprinkler Irrigation](#)

Pre-Harvest Interval

30 days

Rates

[field\\_rates 0](#)

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Restricted Entry Interval

4 hours

Timings

[Preemergence \(Weed\)](#)