

# **POTATOES - PRE-EMERGENCE PARTIAL CONTROL**

## 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

### APPLICATION INFORMATION

#### PRE-EMERGENCE APPLICATIONS

For best results, apply MATRIX SG at 1 to 1.5 ounces 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 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 such as Norkotah), annual weeds may have a second flush of germinating seedlings, and treated perennials may produce new growth from underground roots or stems. To maximize control 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). The combined rate of the applications cannot exceed 2.5 oz MATRIX SG per acre.

#### 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 exceed 2.5 oz MATRIX SG per acre on potatoes during the same growing season or a total of 4 oz MATRIX SG on potatoes 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.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

[Sprinkler Irrigation](#)

Pre-Harvest Interval

30 days

Rates

[field\\_rates 0](#)

•

Restricted Entry Interval

4 hours

Timings

[Preemergence \(Weed\)](#)