352-671 8/29/2007 1 of 2

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

AUG 29 2007

Jacob J. Vukich
Sr. Product Registration Manager
DuPont Crop Protection
E.I. DuPont de Nemours and Company
Stine-Haskell Research Center
P.O. Box 30
Newark, DE 19714

SUBJECT: Application for Pesticide Notification –Requested Alternate Brand Name
DuPont™ DPX-E9636 FNV Herbicide
EPA Reg. No. 352-671
Application Dated July 28, 2007

Dear Ms. McClellan:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label with the alternate brand name "DuPont™ Matrix® FNV Herbicide" submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Terri Stowe of my staff at 703-305-6117.

Sincerely,

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs

*Please read instructions on reverse before completing form.* Form Approved. OMB No. 2070-0060. Approval expires 2-28-95

EPA

United States
**Environmental Protection Agency**
Washington, DC 20460

☐ Registration
☐ Amendment
☑ Other

OPP Identifier Number: 274019

## Application for Pesticide - Section I

| 1. Company/Product Number | 2. EPA Product Manager | 3. Proposed Classification |
|---|---|---|
| 352-671 | J. A. Tompkins | ☑ None ☐ Restricted |
| **4. Company/Product (Name)** DuPont DPX-E9636 FNV Herbicide | **PM#** 25 | |

**5. Name and Address of Applicant** *(Include ZIP Code)*
E.I. duPont de Nemours and Company
Stine-Haskell Research Center, PO Box 30
Newark, DE 19714

☐ *Check if this is a new address*

**6. Expedited Reveiw.** In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:
EPA Reg. No. _____
Product Name _____

## Section - II

☐ Amendment - Explain below.
☐ Resubmission in response to Agency letter dated _____
☐ Notification - Explain below.
☐ Final printed labels in repsonse to Agency letter dated _____
☐ "Me Too" Application.
☑ Other - Explain below.

NOTIFICATION
AUG 29 2007

**Explanation:** Use additional page(s) if necessary. (For section I and Section II.)

NOTIFICATION of Alternate Brand Name (ABN). The ABN is "DuPont Matrix FNV Herbicide"
This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be inviolation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

## Section - III

**1. Material This Product Will Be Packaged In:**

| Child-Resistant Packaging | Unit Packaging | Water Soluble Packaging | 2. Type of Container |
|---|---|---|---|
| ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Yes ☐ No | ☐ Metal ☐ Plastic ☐ Glass ☐ Paper ☐ Other (Specify) _____ |
| ***Certification must be submitted** | If "Yes" Unit Packaging wgt. / No. per container | If "Yes" Package wgt / No. per container | |

| 3. Location of Net Contents Information | 4. Size(s) Retail Container | 5. Location of Label Directions |
|---|---|---|
| ☐ Label ☐ Container | | ☐ |

**6. Manner in Which Label is Affixed to Product** ☐ Lithograph ☐ Paper glued ☐ Stenciled ☐ Other _____

## Section - IV

**1. Contact Point** *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

| Name | Title | Telephone No. (Include Area Code) |
|---|---|---|
| Jacob J. Vukich | Senior Product Registration Manager | 302-366-5186 |

**Certification**

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

| 2. Signature | 3. Title | 6. Date Application Received (Stamped) |
|---|---|---|
| Jacob J. Vukich | Senior Product Registration Manager | |
| **4. Typed Name** Jacob J. Vukich | **5. Date** August 10, 2007 | |

DuPont Crop Protection
Stine-Haskell Research Center
P.O. Box 30
Newark, DE 19714-0030

**REGISTRATION ACTION: NOTIFICATION OF ALTERNATE BRAND NAME**
**FEE CATEGORY: Not Applicable REGISTRATION FEE: Not Applicable**

August 10, 2007

NOTIFICATION
AUG 29 2007

Document Processing Desk
Office of Pesticide Programs [NOTIF]
U.S. Environmental Protection Agency
One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202

Dear Sir or Madam,

**SUBJECT: Notification of an Alternate Brand Name for DuPont DPX-E9636 FNV Herbicide, EPA Reg. No. 352-671**

E.I. duPont de Nemours and Company is herein notifying the Agency of an alternate brand name for DuPont DPX-E9636 FNV Herbicide, EPA Reg. No. 352-671. This alternate brand name is "DuPont Matrix FNV Herbicide".

This notification is consistent with PR Notice 98-10. To facilitate this notification, enclosed are the following:

- A completed "Application for Pesticide - Other", EPA Form 8570-1, OPP Identifier Number 274019

- Two (2) copies of product labeling reflecting the alternate brand name "DuPont Matrix FNV Herbicide".

If you have any questions regarding this notification, please contact me at 302-366-5186, or by e-mail at Jacob.J.Vukich@usa.dupont.com. Best regards.

Sincerely,

Jacob J. Vukich
Sr. Product Registration Manager
DuPont Crop Protection

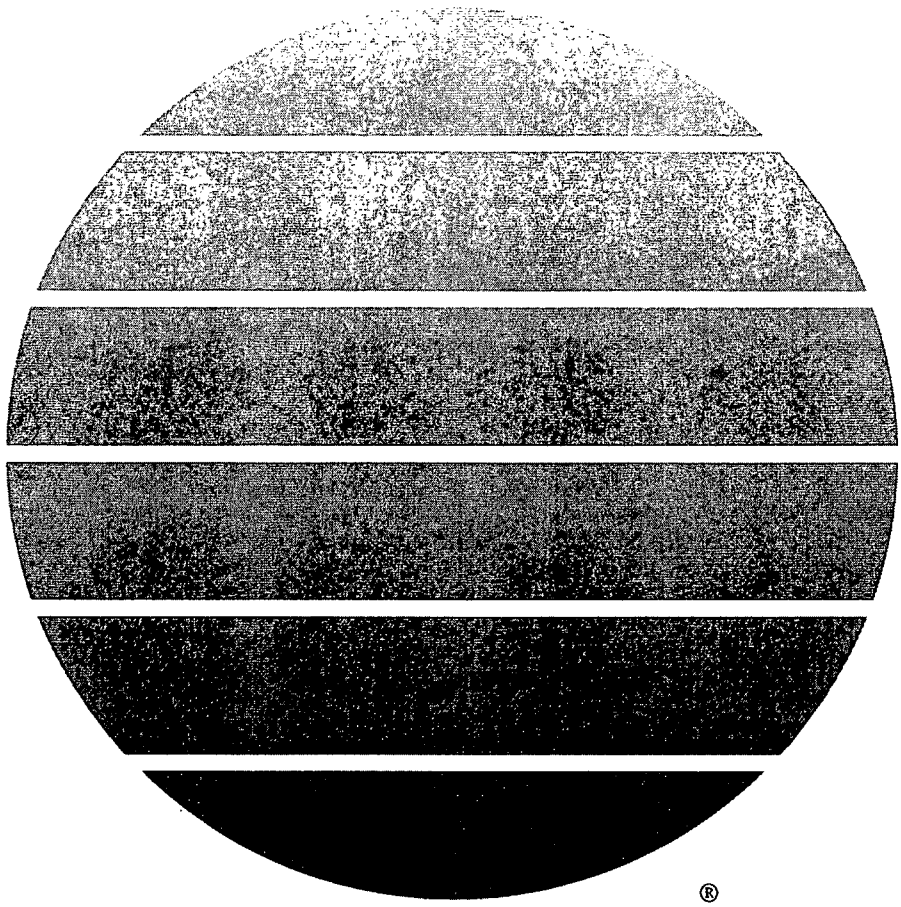
DUPONT®

# DuPont™ Matrix® FNV

## herbicide

NOTIFICATION

AUG 2 9 2007



*"..... A Growing Partnership With Nature"*

DUPONT®

# DuPont™ Matrix® FNV

## herbicide

**DRY FLOWABLE**

***For Weed Control in Citrus Fruit, Stone Fruit, Tree Nuts, Pome Fruit, and Grapes***

| *Active Ingredients* | *By Weight* |
|---|---|
| Rimsulfuron N-((4,6-dimethoxypyrimidin-2-yl) aminocarbonyl)-3-(ethylsulfonyl)-2-pyridinesulfonamide | 25.0% |
| *Inert Ingredients* | 75.0% |
| TOTAL | 100.0% |

EPA REG. NO. 352-671

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.

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

### HAZARD TO HUMANS AND DOMESTIC ANIMALS

**CAUTION!** Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Avoid breathing dust or spray mist.

### PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical resistant to this product are listed below. If you want more options, follow the instructions for Category A on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:**

- Long-sleeve shirt and long pants.
- Chemical resistant gloves made of any water proof material such as polyethylene or polyvinylchloride.
- Shoes plus socks.

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

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

**ENGINEERING CONTROL STATEMENTS**

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170 Section 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### USER SAFETY RECOMMENDATIONS

**USERS SHOULD:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

### 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 by cleaning of equipment or disposal of equipment wash waters.

# GENERAL INFORMATION

This product must be used only in accordance with recommendations on this label or in separate published DuPont recommendations. DuPont will not be responsible for losses or damage resulting from use of this product in any manner not specifically recommended by DuPont.

DuPont™ MATRIX® FNV herbicide selectively controls certain broadleaf weeds and grasses in pome fruit, citrus fruit, tree nut, stone fruit, and grape crops which have been established for at least one full growing season.

MATRIX® FNV Herbicide is recommended for use in most states. Check with your state extension service or Department of Agriculture before use to be certain that this product is registered in your state.

Best control is obtained when MATRIX® FNV is applied to weeds either preemergence or early postemergence, and the weeds are susceptible, young and actively growing. 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.

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® FNV. 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® FNV 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® FNV may be needed to provide extended weed control.

MATRIX® FNV is formulated as a dry flowable product. Continuous agitation is required to maintain the product in suspension in the spray tank.

MATRIX® FNV is non-corrosive to spray equipment, non-flammable and non-volatile.

## ENVIRONMENTAL CONDITIONS AND BIOLOGICAL ACTIVITY

MATRIX® FNV 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® FNV into the soil. In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases and leaves become chlorotic. Death of leaf tissue and growing point will follow in some species, while others will remain green but stunted and non-competitive. 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 non-competitive.

The herbicidal action of MATRIX® FNV 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® FNV.

## RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of 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 recommendations available in your area.

## INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include 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 systems in your area.

## TANK MIXTURES

To broaden the weed control spectrum and /or extend the residual effectiveness of MATRIX® FNV herbicide, MATRIX® FNV 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® FNV labeling.

Refer to the label(s) of the tank mix partner(s) for any additional use instructions or restrictions.

# 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.

### *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, such as plants, soil, or water, is:

Coveralls.
Chemical resistant gloves made of any water proof material such as polyethylene or polyvinylchloride.
Shoes plus socks.

## APPLICATION INFORMATION

DuPont™ MATRIX® FNV should be applied 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® FNV at 4 ounces per acre per year. For improved weed management, MATRIX® FNV should be applied in tank mixture with other registered preemergence herbicides.

When applied as a banded treatment (50% band or less), MATRIX® FNV may be applied twice per year. However, do not apply more than 4 ounces per acre on a broadcast application basis per year. Unless otherwise specified on this label, or in separate published DuPont recommendations, allow a minimum of 30 days between applications.

To help ensure uniform coverage, use a minimum of 10 gallons of spray solution per acre. Nozzle selection should meet manufacture's spray volume and pressure recommendations for preemergence or postemergence herbicide applications.

Do not apply MATRIX® FNV by air. Use ground application equipment only.

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® FNV may also be applied by certain chemigation methods, such as micro-sprinkler. However, do not apply by overhead, flood, or drip irrigation.

Avoid direct or indirect spray contact with crop foliage or fruit, except undesirable suckers.

Do not use MATRIX® FNV 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® FNV may occur.

| CROP GROUP / CROP | PRE-HARVEST INTERVAL (PHI) |
|---|---|
| **Citrus Fruit**: Calamondin; Citron; Citrus hybrids (includes chironja, tangelo, tangor); Grapefruit; Kumquat; Lemon; Lime; Mandarin (tangerine); Orange (sweet and sour); Pummelo; Satsuma mandarin | 3 days |
| **Pome Fruit**: Apple; Crabapple; Loquat; Mayhaw; Pear; Oriental pear; Quince | 7 days |
| **Tree Nuts**: Almond; Beech nut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (hazelnut); Hickory nut; Macadamia nut (bush nut); Pecan; Pistachio; Walnut (black and English) | 14 days |
| **Stone Fruit**: Apricot; Cherry (sweet and tart); Nectarine; Peach; Plum; Plum (Chickasaw); Plum (Damson); Plum (Japanese); Plumcot; Prune (fresh) | 14 days |
| **Grapes** | 14 days |

### *WEEDS CONTROLLED*

Susceptible weeds are controlled for 60 to 90 days after application of MATRIX® FNV. 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, such as glyphosate, paraquat, or glufosinate, with an appropriate adjuvant. MATRIX® FNV 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® FNV is applied where where heavy crop trash and/or weed residue exists.

Weed control may also be reduced when applications of MATRIX® FNV are made to weeds under stress from drought, excessive water, temperature extremes, disease or low humidity.

## PREEMERGENCE WEED CONTROL

### Grasses

| | |
|---|---|
| Barnyardgrass | *Echinochloa crus-galli* |
| Crabgrass, large | *Digitaria sanguinalis* |
| Foxtail, Giant | *Setaria faberi* |
| Foxtail, Green | *Setaria viridis* |
| Foxtail, Yellow | *Setaria glauca* |
| Quackgrass | *Agropyron repens* |
| Wheat, Volunteer | *Triticum aestivum* |

### Broadleaves

| | |
|---|---|
| Chamomile, False | *Matricaria maritima* |
| Dandelion, common (seedling) | *Taraxacum officinale* |
| Filaree, Redstem | *Erodium cicutarium* |
| Fleabane, hairy | *Conyza bonariensis* |
| Groundsel, common | *Senecio vulgaris* |
| Henbit | *Lamium amplexicaule* |
| Kochia | *Kochia scoparia* |
| Mallow, common | *Malva neglecta* |
| Marestail/horseweed | *Conyza canadensis* |
| Mustard, Birdsrape | *Brassica rapa* |
| Mustard, Black | *Brassica nigra* |
| Pigweed, Redroot | *Amaranthus retroflexus* |
| Pigweed, Smooth | *Amaranthus hybridus* |
| Puncturevine | *Tribulus terrestris* |
| Purslane, Common | *Portulaca oleracea* |
| Spurge, prostrate | *Euphorbia prostrata* |
| Spurge, spotted | *Euphorbia maculata* |

## PREEMERGENCE PARTIAL WEED CONTROL

### Grasses

| | |
|---|---|
| Wild Oat | *Avena fatua* |

### Broadleaves/Sedges

| | |
|---|---|
| Cocklebur | *Xanthium spp.* |
| Dandelion, common (established) | *Taraxacum officinale* |
| Lambsquarters, common | *Chenopodium album* |
| Nightshade, Black | *Solanum nigrum* |
| Nightshade, Hairy | *Solanum sarrachoides* |
| Nutsedge, yellow | *Cyperus esculentus* |
| Pigweed, Prostrate | *Amaranthus blitoides* |
| Ragweed, Common | *Ambrosia artemisiifolia* |
| Velvetleaf | *Abutilon theophrasti* |

## POSTEMERGENCE WEED CONTROL

### Grasses (1-2 inches)

| | |
|---|---|
| Barley, Volunteer | *Hordeum vulgare* |
| Barnyardgrass | *Echinochloa crus-galli* |
| Bluegrass, Annual | *Poa annua* |
| Crabgrass, large (1/2 inch) | *Digitaria sanguinalis* |
| Foxtail, Bristly | *Setaria verticillata* |
| Foxtail, Giant | *Setaria faberi* |
| Foxtail, Green | *Setaria viridis* |
| Foxtail, Yellow | *Setaria glauca* |
| Panicum, Fall | *Panicum dichotomislorum* |
| Wheat, Volunteer | *Triticum aestivum* |

### Broadleaves (1-3 inches)

| | |
|---|---|
| Chamomile, False | *Matricaria maritima* |
| Chickweed, common | *Stellaria media* |
| Henbit | *Lamium amplexicaule* |
| Kochia | *Brassica rapa* |
| Mustard, Black | *Brassica nigra* |
| Mustard, Wild | *Sinapis arvensis* |
| Pigweed, Redroot | *Amaranthus retroflexus* |
| Pigweed, Smooth | *Amaranthus hybridus* |
| Purslane, common | *Portulaca oleracea* |
| Shepherd's-purse | *Capsella bursa-pastoris* |
| Wild Radish | *Raphanus raphanistrum* |

## POSTEMERGENCE PARTIAL WEED CONTROL

### Grasses

| | |
|---|---|
| Johnsongrass, seedling | *Sorghum halepense* |
| Millet, wild-proso | *Panicum miliaceum* |
| Oat, wild | *Avena fatua* |
| Quackgrass | *Agropyron repens* |
| Stinkgrass | *Eragrostis cilianensis* |

### Broadleaves/Sedges

| | |
|---|---|
| Cocklebur | *Xanthium spp.* |
| Dandelion, common (>6 inches in diameter) | *Taraxacum officinale* |
| Lambsquarters, common | *Chenopodium album* |
| Mallow, common | *Malva neglecta* |
| Nightshade, hairy | *Solanum sarrachoides* |
| Nutsedge, yellow | *Cyperus esculentus* |
| Pigweed, prostrate | *Amaranthus blitoides* |
| Ragweed, common | *Ambrosia artemisiifolia* |
| Smartweed, Pennsylvania | *Polygonum pensylvanicum* |
| Thistle, Canada | *Cirsium arvense* |
| Velvetleaf | *Abutilon theophrasti* |

## SPECIFIC WEED PROBLEMS

**COMMON DANDELION AND MALLOW**: DuPont™ MATRIX® FNV 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 such as glyphosate or paraquat. Small and medium sized plants (up to 6 inches in diameter) are controlled by postemergence applications of MATRIX® FNV 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 (such as paraquat, glyphosate, and glufosinate) must be tank mixed with MATRIX® FNV 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® FNV 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® FNV 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® FNV 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 glyphosate 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 DuPont™ MATRIX® FNV into the nutsedge root zone prior to nutsedge emergence. Make a second application when emerging nutsedge is 2 to 4 inches tall. **Postemergence plus 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 (such as Barnyardgrass, Green foxtail, and Crabgrass)**: Where sprinkler irrigation is used, a fall or early spring application of MATRIX® FNV will not provide season-long control of summer grasses like foxtail, barnyardgrass and crabgrass. For best results, use MATRIX® FNV with a suitable tank-mix herbicide such as oryzalin or pendimethalin. A second application may be needed to provide extended control of summer grasses.

## GENERAL USE PRECAUTIONS

- Preemergence use on soils containing more than 6% organic matter will result in reduced weed control.
- Avoid spray drift to any adjacent crops or desirable plants as injury may occur.
- Draining or flushing equipment on or near desirable trees or other plants, or in areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots may injure these plants. Trees or other desirable plants whose roots extend into a treated crop use area may be injured.
- Do not contaminate any body of water, including irrigation water that may be used on other crops.
- Carefully observe sprayer cleanup instructions, as spray tank residue may damage other crops.
- For best results, maintain spray tank solution at pH 5 to 7.
- Direct sprays to minimize spray contact with fruit or foliage.
- Do not apply to frozen or snow covered soil. Crop injury may occur from applications made to poorly drained soils.
- If the selected companion herbicide has a ground or surface water advisory, consider the advisory when using the companion herbicide.

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

## CROP ROTATION

Do not plant any crops, except field corn, tomatoes, potatoes, and those listed on this label in the "APPLICATION INFORMATION Section", within one year of the last MATRIX® FNV 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

MATRIX® FNV 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, such as 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. Do not apply MATRIX® FNV through any other chemigation equipment.

## USE PRECAUTIONS FOR CHEMIGATION

- Do not connect an irrigation system used for MATRIX® FNV Herbicide application to a public water system.
- 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 recommended rate, use sufficient water, apply the mixture for the proper length of time and ensure sprinkler produces a uniform water pattern.
- Do not permit run-off during chemigation.
- Continuous agitation in the mix tank is needed to keep the product from settling. If settling does occur, thoroughly re-agitate the tank mixture before using.

## *MIXING INSTRUCTIONS*

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of MATRIX® FNV herbicide.
3. Continue agitation until the MATRIX® FNV herbicide is fully dispersed, at least 5 minutes.

4. Once the DuPont™ MATRIX® FNV herbicide is fully dispersed, maintain agitation and continue filling tank with water. MATRIX® FNV herbicide should be thoroughly mixed with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired).
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply MATRIX® FNV herbicide spray mixture within 48 hours of mixing to avoid product degradation. If the selected companion herbicide has a ground or surface water advisory, consider this advisory when using the companion herbicide.

## SPRAYER CLEANUP

It is important that spray equipment is clean and free of previous pesticide deposits before using MATRIX® FNV and then properly cleaned out following application. Clean all application equipment before applying MATRIX® FNV. Follow the cleanup procedures specified on the label of the product previously sprayed. If no cleanup procedure is provided, use the procedure that follows. Immediately following applications of MATRIX® FNV, thoroughly clean all mixing and spray equipment to avoid subsequent crop injury.

**Note** :

- When cleaning spray equipment before applying MATRIX® FNV, read and follow label directions for proper rinsate disposal of the product previously sprayed.

When spraying or mixing equipment will be used over an extended period to apply multiple loads of MATRIX® FNV, partially fill the tank with fresh water at the end of each day of spraying, and flush the boom and hoses, before allowing to sit overnight.

**At the End of the Day**

When multiple loads of MATRIX® FNV herbicide are applied, it is recommended that during periods at the end of each day of spraying, the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses be flushed. This will prevent the buildup of dried pesticide deposits from accumulating in the application equipment.

**After Spraying MATRIX® FNV and before Spraying Other Crops**

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gallon of household ammonia* (contains at least 3% active ingredient) for every 100 gal of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing ammonia* and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) recommended on this label. If other 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.

* Equivalent amounts of an alternate-strength ammonia solution or a DuPont-approved spray equipment cleaner can be used in the cleanup procedure. Carefully read and follow the individual cleaner instructions. Consult your agricultural dealer, applicator, or DuPont representative for a listing of approved spray equipment cleaners.

**NOTES:**

1. Caution: Do not use chlorine bleach with ammonia, as dangerous gases will form. Do not clean equipment in an enclosed area.
2. Steam-cleaning spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When MATRIX® FNV is tank mixed with other pesticides, all required cleanout procedures should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all preapplication cleanout guidelines on subsequently applied products should be followed as per the individual labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of MATRIX® FNV and applications of other pesticides to MATRIX® FNV-sensitive crops during the same spray season, it is recommended that a sprayer be dedicated to MATRIX® FNV to further reduce the chance of crop injury.

## SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions. AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR. Where states have more stringent regulations, they should be followed.

### *IMPORTANCE OF DROPLET SIZE*

The most effective way to reduce drift potential is to apply large droplets (>150 - 200 microns). The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS! See Wind, Temperature and Humidity, and Temperature Inversions sections of this label.

**CONTROLLING DROPLET SIZE**

**General Techniques**

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

- Pressure - Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.
- Nozzle Type - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low drift nozzles.

### *BOOM HEIGHT*

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

### *WIND*

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given wind speed. AVOID APPLICATIONS DURING GUSTY OR WINDLESS CONDITIONS.

**NOTE**: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

### *TEMPERATURE AND HUMIDITY*

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

### *TEMPERATURE INVERSIONS*

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

### *SHIELDED SPRAYERS*

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

## STORAGE AND DISPOSAL

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

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

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

**Container Disposal: For Plastic Containers**: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. **For Fiber Sacks**: Completely empty fiber sack by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into manufacturing or application equipment. Then dispose of sack in a sanitary landfill or by incineration if allowed by State and local authorities. **For Fiber Drums With Liners**: Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. If drum is contaminated and cannot be reused, dispose of in the same manner. **For Paper and Plastic Bags**: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**When Packaged in Refillable/Returnable Containers: Container Refilling and Disposal (For Containers up to 250 gal)**: This is a refillable container. If the container is to be refilled, do not rinse with any material or introduce any pesticide other than DuPont™ MATRIX® FNV. Reseal and return the container to any authorized DuPont refilling facility. If the container is not to be refilled, triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.
**Container Disposal for Bulk Containers**: When this container is empty, replace the cap and seal all openings that have been opened during use, and return the container to the point of purchase or to a designated location named at time of purchase of this product. The container must only be refilled with this pesticide product. DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact DuPont at 1-800-441-3637. If not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations. For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately.

Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

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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.

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