

70506-36

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

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

SEP 13 2012

Rebecca A. Clemmer  
United Phosphorus, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

Subject: Label Amendment – Addition of Crops and other Label Changes  
Devrinol 50-DF Selective Herbicide  
EPA Reg. No. 70506-36  
Application dated – June 21, 2012

Dear Ms. Clemmer:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

Amended labeling will supercede all previously accepted ones. A stamped copy of labeling is enclosed for your records.

Submit one (1) copy of final printed labeling before you release the product for shipment. If you have any questions regarding this letter, please contact Maggie Rudick at (703) 347-0257 or [rudick.maggie@epa.gov](mailto:rudick.maggie@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis", written over a horizontal line.

Kable Bo Davis  
Product Manager 25  
Herbicide Branch  
Registration Division (7505P)

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DEVRIKOL 50-DF

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**ACCEPTED**  
**SEP 13 2002**  
 Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg No. 70506-36

GROUP	15	HERBICIDE
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**DEVRIKOL® 50-DF**  
**Selective Herbicide - Dry Flowable**

For use on certain Nuts, Small Fruits, Vegetables and Tobacco

**ACTIVE INGREDIENT:**

Napropamide..... 50%

**OTHER INGREDIENTS:**..... 50%

**TOTAL**..... 100%

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**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 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 give anything by mouth to an unconscious person.
- Do not induce vomiting unless told to by a Poison Control Center or doctor.

**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 INHALED:**

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a Poison Control Center or doctor for further treatment advice.

Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment. For emergency medical treatment, contact the Rocky Mountain Poison Control Center at 1-866-673-6671.

For Chemical Emergency: Spill, leak, fire, exposure or accident, call CHEMTREC 1-800-424-9300.

EPA Reg. No. 70506-36

EPA Est. No



United Phosphorus, Inc.

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630 Freedom Business Center Suite 402  
King of Prussia PA 19406 1-800-438-6071

NET WEIGHT \_\_ lbs

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

##### CAUTION

Harmful if swallowed absorbed through skin or inhaled Causes moderate eye irritation Avoid contact with eyes skin or clothing Avoid breathing dust

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Mixers loaders applicators and other handlers must wear

- Long-sleeved shirt and long pants
- Chemical resistant gloves
- 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 CONTROLS STATEMENT

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 170 240(d)(4-6)] the handler PPE requirements may be reduced or modified as specified in the WPS Pilots must use an enclosed cockpit that meets the requirements in the Worker Protection Standard

#### User Safety Recommendations

Users should

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

#### ENVIRONMENTAL HAZARDS

This product is toxic to fish 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 equipment or disposing of equipment washwaters or rinsate

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling 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 Do not allow people or pets to enter the treated area until dusts have settled

#### USE PRECAUTIONS

Read all instructions before using Use only for labeled purposes and at labeled rates Do not overdose Do not apply when weather conditions favor drift from areas treated Except where specifically noted DEVRINOL® 50-DF Herbicide is not recommended for use on soil containing more than 10% organic matter Spraying on ground heavily covered with leaves or trash may adversely affect weed control Do not apply to frozen ground

Do not contaminate irrigation water or water used for domestic purposes

To avoid injury to succeeding crops not specified on the label or specified under Crop Rotation Restrictions section below do not plant until 12 months after the last application of DEVRINOL 50-DF

### CROP ROTATION RESTRICTIONS

- 60-day plantback interval for leafy vegetables
  - 180-day plantback interval for cereal grains
  - 365-day plantback interval for all other crops not listed on this label
- Crops listed on this label may be planted immediately after treatment unless otherwise directed in this label

When DEVRINOL 50-DF is used on tobacco at up to 4 pounds per acre small grains may be seeded in rotation in the fall to prevent soil erosion. These grains may be stunted but not otherwise adversely affected. No tolerance is established for residues of DEVRINOL 50-DF in small grains and must be destroyed by plowing under or otherwise prevented from reaching food or feed production

Crops listed on this label may be planted immediately after the last treatment  
Crops are not to be grazed or harvested for food or feed purposes earlier than maturity

Note When using DEVRINOL 50-DF with other registered pesticides always refer to the restrictive instructions and precautions on the other product label and comply with the most restrictive rotational crop directions

### 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 24 hours.

**Exception:** If the product is soil-injected or soil-incorporated, the Worker Protection Standard under certain circumstances allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks
- Chemical resistant gloves made of any waterproof material
- Eye wear

### PRODUCT INFORMATION

DEVRINOL 50-DF is a selective surface-applied or incorporated herbicide for use in certain types of newly planted or established crops. DEVRINOL 50-DF does not control established

weeds All weed growth crop stubble and/or leaf litter in the fields that can interfere with soil coverage must be thoroughly worked into the soil or removed from the treatment zone prior to planting Spray equipment should be carefully calibrated before use and checked frequently during application to be sure nozzles are operating properly and are delivering a uniform spray pattern Apply the labeled rate of DEVRINOL 50-DF in 10 to 50 gallons of water per acre in a low pressure boom-type sprayer

Be sure the spray tank boom and nozzle have been thoroughly flushed with clean water before use Sufficient jet or mechanical agitation should be provided during the filling operation and during application

When mixing DEVRINOL 50-DF alone or in combination with other wettable powders make a slurry and add to a nearly filled spray tank with adequate agitation This will enhance initial mixing Contact herbicides and spreaders should always be added to a nearly filled spray tank Never add them to the slurry

**ALLOWABLE TIME FOR TREATMENT TO REMAIN ON SOIL SURFACE (BY REGION)**

**WEST** Three weeks (Fall through Early Spring) or 24 hours (remainder of year)

**PACIFIC NORTHWEST** Three weeks (Fall through Early Spring) or 24 hours (remainder of year)

**OTHER REGIONS AND PERIODS UNLESS OTHERWISE SPECIFIED** 24 hours

Use as a directed spray and avoid contact with fruit or foliage  
Do not apply when fruit or nuts are on the ground during the harvest period  
Do not graze treated areas

**APPLICATIONS THROUGH IRRIGATION SYSTEMS**

- Do not allow treatment to contact foliage or crop
- Remove existing weed growth before application
- Meter the DEVRINOL 50-DF into the irrigation water during the entire period
- Apply with sufficient water to wet the soil to a depth of 2-4 inches
- Good agitation should be maintained during the entire application period
- Avoid run-off

**Western Region (Tree crops and Grapevines Only)** DEVRINOL 50-DF may be applied at the labeled rates through irrigation water for preemergence control of listed weeds in grapevines and labeled tree crops

**USE PRECAUTIONS**

- A Apply this product through center pivot lateral move end tow side wheel roll traveler microsprinkler solid set or hand move sprinkler systems or flood (basin) furrow border irrigation systems Do not apply this product through any other type of irrigation system
- B Crop injury lack of effectiveness or illegal pesticide residues in the crop can result from nonuniform distribution of treated water
- C If you have questions about calibration you should contact State Extension Service specialists equipment manufacturers or other experts

- D Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place
- E A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise

**FOR SPRINKLER IRRIGATION**

- 1 The 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
- 2 The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump
- 3 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
- 4 The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops
- 5 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
- 6 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 pesticides and capable of being fitted with a system interlock
- 7 Do not apply when wind speed favors drift beyond the area intended for treatment

**FOR FLOOD (BASIN), FURROW AND BORDER IRRIGATION**

- 1 Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops
- 2 Systems utilizing a pressurized water and pesticide injection system must meet the following requirements
  - a The 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
  - b The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection pump
  - c 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

- d The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops
- e 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
- f 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 pesticides and capable of being fitted with a system interlock

**NOTE** All rates are given on a broadcast basis per acre. Reduce rates proportionately for band or strip treatment.

**WEEDS CONTROLLED BY 8 LBS DEVRINOL 50-DF PER ACRE -**

**NOTE** DEVRINOL 50-DF does not control established weeds

<b>WEEDS CONTROLLED</b>	
<b>ANNUAL GRASSES</b>	
Barnyardgrass Junglerice	<i>Echinochloa</i> spp
Foxtail Barley	<i>Hordeum jubatum</i>
Wild Barley	<i>Hordeum leponnum</i>
Annual Bluegrass	<i>Poa annua</i>
Bromes	<i>Bromus</i>
Cheatgrass	<i>B secalinus</i>
Downy Brome	<i>B tectorum</i>
Ripgut Brome	<i>B rigidus</i>
Soft Chess	<i>B mollis</i>
Canarygrass	<i>Phalaris cananensis</i>
Large (Hairy) Crabgrass	<i>Digitaria sanguinalis</i>
Smooth Crabgrass	<i>Digitaria ischaemum</i>
Southwestern Cupgrass	<i>Enochloa gracilis</i>
Foxtail	<i>Setaria</i>
Bristly Foxtail	<i>S verticilla</i>
Giant Foxtail	<i>S faben</i>
Green Foxtail	<i>S vindis</i>
Yellow Foxtail	<i>S lutescens</i>
Goosegrass	<i>Eleusine indica</i>
Seedling Johnsongrass	<i>Sorghum halpense</i>
Wild Oats	<i>Avena fatua</i>
Panicums	<i>Panicum</i>
Guineagrass	<i>P Maximum</i>
Fall Panicum	<i>P dichotomiflorum</i>
Texas Panicum	<i>P texanum</i>
Witchgrass	<i>P capillare</i>
Italian Ryegrass	<i>Lolium multiflorum</i>
Sandbur	<i>Cenchrus</i> spp
Mexican Sprangletop	<i>Leptochloa uninervia</i>
Red Sprangletop	<i>Leptochloa filiformis</i>



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WEEDS CONTROLLED	
Stinkgrass	<i>Eragrostis ciliaris</i>
ANNUAL BROADLEAF WEEDS	
Carpetweed	<i>Mollugo verticillata</i>
Common Chickweed	<i>Stellaria media</i>
Coast Fiddleneck	<i>Amsinckia intermedia</i>
Cudweed Purple	<i>Gnaphalium purpureum</i>
Redstem Filaree	<i>Erodium cicutarium</i>
Common Groundsel	<i>Senecio vulgaris</i>
Prostrate Knotweed	<i>Polygonum aviculare</i>
Lambsquarters	<i>Chenopodium album</i>
Prickly Lettuce	<i>Lactuca serriola</i>
Little Mallow*	<i>Malva parviflora</i>
Redroot Pigweed	<i>Amaranthus retroflexus</i>
Pineappleweed	<i>Matricaria matricarioides</i>
Common Purslane	<i>Portulaca oleracea</i>
Horse Purslane	<i>Trianthema portulacastrum</i>
Common Ragweed**	<i>Ambrosia artemisiifolia</i>
Annual Sowthistle	<i>Sonchus oleraceus</i>

\*From seed

\*\*Suppression

**NOTE** All rates are given on a broadcast basis. Reduce rates proportionately for band or strip treatment.

For control of all weeds listed apply 8 pounds DEVRINOL 50-DF per broadcast acre to the soil surface. Apply in the fall through early spring prior to weed emergence. Do not apply DEVRINOL 50-DF to frozen ground. For best results the treatment must reach the zone of weed seed germination. If rainfall does not occur the treatment must be shallowly incorporated or irrigated-in following application (sprinkler or flood) with sufficient water to wet the soil to a depth of 2 to 4 inches.

**WEEDS CONTROLLED BY 2 TO 4 LBS DEVRINOL 50-DF  
PREPLANT INCORPORATED APPLICATION**

**NOTE** DEVRINOL 50-DF does not control established weeds

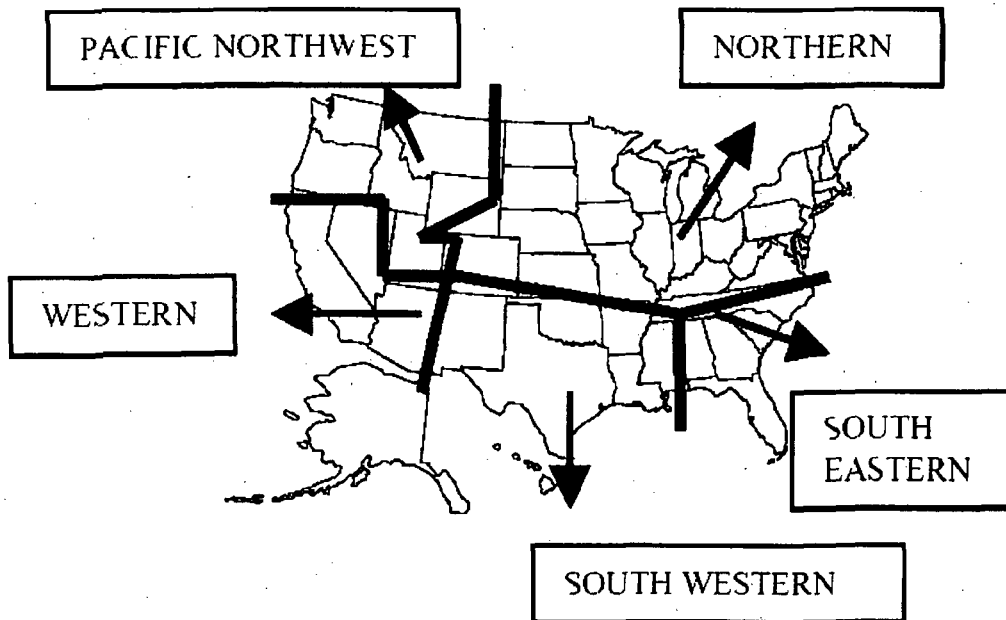
WEEDS CONTROLLED	
ANNUAL GRASSES	
Barnyardgrass Junglerice	<i>Echinochloa</i> spp
Crabgrass	<i>Digitaria</i> spp
Foxtails	<i>Setaria</i>
Giant Foxtail	<i>S. faberi</i>
Green Foxtail	<i>S. viridis</i>
Yellow Foxtail	<i>S. lutescens</i>
Goosegrass	<i>Eleusine indica</i>
Seedling Johnsongrass	<i>Sorghum halepense</i>
Panicums	<i>Panicum</i>
Fall Panicum	<i>P. dichotomiflorum</i>
Witchgrass	<i>P. capillare</i>

WEEDS CONTROLLED	
Stinkgrass	<i>Eragrostis cilianensis</i>
<b>ANNUAL BROADLEAF WEEDS</b>	
Carpetweed	<i>Mollugo verticillata</i>
Purple Cudweed	<i>Gnaphalium purpureum</i>
Galinsoga*	<i>Galinsoga</i> spp
Lambsquarters	<i>Chenopodium album</i>
Redroot Pigweed	<i>Amaranthus retroflexus</i>
Smooth Pigweed	<i>Amaranthus hybridus</i>
Common Purslane	<i>Portulaca oleracea</i>
Florida Pusley	<i>Richardia scabra</i>
Common Ragweed**	<i>Ambrosia artemisiifolia</i>

\*Controlled at 4 lb DEVRINOL 50-DF

\*\*Suppression

On flat-planted or bedded crops apply before planting to well-worked soil that is dry enough to permit thorough incorporation to a depth of 1 to 2 inches. Incorporate the same day as applied using equipment which will result in uniform incorporation of the herbicide to the desired depth. Whenever a rate range is indicated for DEVRINOL 50-DF use the lower rate on light soil (coarse textured-sandy) and the higher rate on heavy soil (fine textured-clay)



**FRUIT AND NUT CROP USE DIRECTIONS**

Apply a maximum of one application per year (except ornamentals)

DEVRINOL 50-DF is labeled for use on the following crops. Refer to regional map under "PRODUCT INFORMATION"

CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
Almonds (All Regions) Filberts (All Regions) Grapes (All Regions) Kiwifruit (Western Region Only) Pecans (All Regions)	8 pounds (4 lb ai)	Apply to a weed free soil surface May be applied to newly planted and established crop  <b>Restrictions</b> Do not apply within 70 days of harvest for grapes Do not apply within 50 days of harvest for filberts or pecans Do not apply within 90 days of harvest for kiwifruit  For almonds grapes and kiwi do not apply more than 8 lbs/A (4 lb ai) per crop cycle Apply a maximum of once per year
Persimmons (Western Region Only)	8 pounds (4 lb ai)	Apply to a weed free soil surface May be applied to established crop only Apply a maximum of once per year <b>Restrictions</b> Do not apply within 100 days of harvest
Blackberry (including bingleberry boysenberry dewberry lowberry marionberry olallieberry youngberry) Blueberry Currant Elderberry Gooseberry Huckleberry Loganberry Raspberry (black and red)	8 pounds (4 lb ai)	Apply to a weed free soil surface May be applied to newly planted and established crop  <b>Restrictions</b> Do not apply more than 8 lbs/A per crop cycle
Rhubarb (Pacific Northwest Only)	8 pounds (4 lb ai)	Apply to a weed free soil surface in winter when rhubarb is dormant <b>Restrictions</b> Do not apply more than 8 lbs/A per crop cycle
Strawberries not grown with plastic mulch (All Regions)	8 pounds (4 lb ai)	Apply to a weed free soil surface May be applied to newly transplanted crop Delay application until the desired number of daughter plants have become established <b>Restrictions</b> Do not exceed a maximum application rate of 8 lbs/A per crop cycle Do not apply from bloom through harvest
Strawberries - Established Plantings - (All Regions)	8 pounds (4 lb ai)	<u>Spring Application</u> - Apply after removal of straw mulch Surface should be weed free Water into soil to a depth of 2 to 4 inches using natural rainfall or irrigation

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CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
		<p>within 24 hours of application for best results</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 8 lbs/A per crop cycle Do not apply from bloom through harvest</p> <p><u>Fall Application</u> - Apply before winter protective mulch is applied over plants Water into soil to a depth of 2 to 4 inches using natural rainfall or irrigation within 24 hours of application</p> <p><b>Restrictions</b> Do not apply DEVIRINOL 50-DF to frozen ground Do not exceed a maximum application rate of 8 lbs/A per crop cycle</p>
<p>Strawberries grown with plastic mulch on plant beds ( All Regions except Southeast ) PRE PLANT</p>	<p>8 pounds (preplant incorporated) (4 lb ai)</p>	<p>Apply to a weed free soil before the laying of plastic mulch Soil should be well worked yet moist enough to permit a thorough incorporation to a depth of 2 inches Incorporate the same day as applied before laying of plastic mulch using equipment which will result in uniform incorporation of the herbicide to desired depth</p> <p>If weed pressure is from small seeded annuals apply to the surface of the bed immediately in front of the laying of the plastic mulch If soil is dry water or sprinkler irrigate with sufficient water to wet to a depth of 2 to 4 inches before covering with plastic mulch Apply the plastic mulch over the treated soil the same day</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 8 lbs/A per crop cycle</p>
<p>Strawberries grown with plastic mulch on plant beds ( Southeast Regions) PRE PLANT</p>	<p>4-8 pounds (2-4 lb ai) (preplant)</p>	<p>Apply to a weed free soil before the laying of plastic mulch Soil should be well worked yet moist enough to permit a thorough incorporation to a depth of 2 inches Incorporate the same day as applied before laying of plastic mulch using equipment which will result in uniform incorporation of the herbicide to desired depth</p> <p>If weed pressure is from small seeded annuals apply to the surface of the bed immediately in front of the laying of the plastic mulch If soil is dry water or</p>

CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
		sprinkler irrigate with sufficient water to wet to a depth of 2 to 4 inches before covering with plastic mulch Apply the plastic mulch over the treated soil the same day <b>Restrictions</b> Do not exceed a maximum application rate of 8 lbs/A per crop cycle
Strawberries grown with plastic mulch on plant beds (All Regions) (application between rows of plastic mulch (middles or aisles))	8 pounds (application between rows of plastic mulch (middles or aisles)) (4 lb ai)	Use a shielded sprayer or properly spaced drop nozzles to apply to a weed free soil surface between the rows of plastic Mechanically incorporate or irrigate DEVIRINOL into the soil to a depth of 1 to 2 inches within 24 hours of application In the event of emerged weed growth being present tank mix 8 pounds of DEVIRINOL with the correct amount of Gramoxone Max to get burndown and residual control  <b>Restrictions</b> Do not exceed a maximum application rate of 8 lbs per acre per crop cycle Do not apply from bloom through harvest

**VEGETABLES AND TOBACCO CROP USE DIRECTIONS**

**NOTE** All rates are given on a broadcast basis Reduce rates proportionately for band or strip treatment  
 Crops listed on this label may be planted immediately after treatment unless otherwise directed in this label

CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
Asparagus (All Regions)	8 pounds (4 lb ai)	Apply to a weed free soil surface Asparagus may be applied to established crop only  When used on established crops apply DEVIRINOL 50-DF only to stands that have been established for at least one growing season When used on recently planted crops application may be made immediately after planting  <b>Restrictions</b> Do not exceed a maximum application rate of 8 lbs per acre per crop cycle
Broccoli (Maine Only)	2-4 pounds	Apply to weed free surface May be

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CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
	(1-2 lb ai)	<p>applied to direct seeded and transplanted crop preplant incorporated or as a surface spray after planting Shallow incorporate no deeper than seeding depth or sprinkler irrigate within 24 hours using sufficient water to wet the soil to a depth of 2-4 inches Use the lower rate on light soil (coarse textured-sandy) and the higher rate on heavy soil (fine textured-clay)</p> <p><b>Restrictions</b> Do not apply more than 4 pounds DEVIRINOL 50-DF per acre per crop season Do not exceed a maximum application rate of 4 lbs per acre per crop cycle</p>
<p>Cole Crops - Broccoli Brussels Sprouts Cauliflower (Arizona and California Only)</p>	<p>1-2 pounds (1/2 - 1 lb ai)</p>	<p>For suppression of Annual Bluegrass, Barnyardgrass Common Groundsel Common Purslane and Redroot Pigweed Apply to a weed free soil surface May be applied to direct seeded and transplanted crop preplant incorporated or as a surface spray after planting Shallow incorporate to a depth of 1-2 inches or sprinkler irrigate within 24 hours using sufficient water to wet the soil to a depth of 2-4 inches Use the lower rate on light soil (coarse textured - sandy) and the higher rate on heavy soil (fine textured - clay)</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 2 lbs per acre per crop cycle</p>
<p>Cole Crops - Broccoli Brussels Sprouts Cabbage Cauliflower (Northern Region Only)</p>	<p>2 pounds (1 lb ai)</p>	<p>Apply to a weed free surface May be applied to direct seeded and transplanted crop preplant incorporated or as a surface spray after planting Shallow incorporate no deeper than seeding depth or sprinkler irrigate within 24 hours using sufficient water to wet the soil to a depth of 2-4 inches</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 2 lbs per acre per crop cycle</p>
<p>Cole Crops - Broccoli</p>	<p>2-4 pounds</p>	<p>Apply to a weed free surface May</p>

CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
Brussels Sprouts Cabbage Cauliflower (Pacific Northwest Only)	(1-2 lb ai)	be applied to direct seeded and transplanted crop preplant incorporated or as a surface spray after planting. Shallow incorporate no deeper than seeding depth or sprinkler irrigate within 24 hours using sufficient water to wet the soil to a depth of 2-4 inches. Use the lower rate on light soil (coarse textured - sandy) and the higher rate on heavy soil (fine textured - clay).  <b>Restrictions</b> Do not exceed a maximum application rate of 4 lbs per acre per crop cycle.
Cole Crops - Broccoli Brussels Sprouts Cabbage Cauliflower (Southeast Region Only)	4 pounds (2 lb ai)	Apply to a weed free surface. May be applied to direct seeded (except in Florida) and transplanted crop as a surface spray after planting. Sprinkler irrigate within 24 hours using sufficient water to wet the soil to a depth of 2-4 inches.  <b>Restrictions</b> Do not exceed a maximum application rate of 4 lbs per acre per crop cycle.
Cole Crops - Broccoli Brussels Sprouts Cabbage Cauliflower (Southwest Region Only)	2-4 pounds (1-2 lb ai)	Apply to a weed free soil surface. May be applied to direct seeded and transplanted crop preplant incorporated or as a surface spray after planting. Incorporate the surface spray to a shallow depth of one inch avoiding the seed placement when mixing the soil. Use the lower rate on light soil (coarse textured - sandy) and the higher rate on heavy soil (fine textured - clay).  <b>Restrictions</b> Do not exceed a maximum application rate of 4 lbs per acre per crop cycle.
Eggplants (All Regions)	2-4 pounds (1-2 lb ai)	Apply before transplanting to weed free soil surface. May be applied to transplanted crop only. Use the lower rate on light soil (coarse textured sandy) and the higher rate on heavy soil (fine textured-clay).  <b>Restrictions</b> Do not exceed a maximum application rate of 4 lbs per

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CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
Peppers (including pimento bell hot and sweet) (All Regions) Tomatoes (All Regions)	2-4 pounds (1-2 lb ai)	<p>acre per crop cycle</p> <p>Apply to a weed free soil surface May be applied to direct seeded and transplanted crop Use the lower rate on light soil (coarse textured - sandy) and the higher rate on heavy soil (fine textured-clay)</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 4 lbs per acre per crop cycle</p>
Peppers (including pimento bell hot and sweet) Tomatoes and Eggplants grown on plastic mulch on plant beds – preplant	2-4 pounds (1 2 lb ai)	<p>Apply to a weed free soil before the laying of plastic mulch Soil should be well worked yet moist enough to permit a thorough incorporation to a depth of 2 inches Incorporate the same day as applied before laying of plastic mulch using equipment which will result in uniform incorporation of the herbicide to desired depth</p> <p>If weed pressure is from small seeded annuals apply to the surface of the bed immediately in front of the laying of the plastic mulch If soil is dry water or sprinkler irrigate with sufficient water to wet to a depth of 2 to 4 inches before covering with plastic mulch Apply the plastic mulch over the treated soil the same day</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 4 lbs per acre per crop cycle</p>
Peppers (including pimento bell hot and sweet) Tomatoes and Eggplants grown with plastic mulch on plant beds – application between rows of plastic mulch (middles or aisles)	4 pounds (2 lb ai)	<p>Apply to a weed free soil surface between the rows of plastic Mechanically incorporate or irrigate DEVIRINOL into the soil to a depth of 1 to 2 inches within 24 hours of application</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 4 lbs per acre per crop cycle</p>
Sweet Potatoes	2 to 4 pounds (1-2 lb ai)	<p>Apply to a weed free soil surface Use the lower rate on light soil (coarse textured sandy) and the higher rate on heavy soils (fine textured clay)</p>



CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
		<p>Use 10 to 50 gallons of spray per acre For best results the treatment must reach the zone of weed seed germination If rainfall does not occur within 24 hours after application the treatment must be shallowly incorporated or irrigated-in with sufficient overhead irrigation to wet the soil to a depth of 2 to 4 inches</p> <p><b>At Transplanting (All Regions)</b> Apply the labeled amount of DEVIRINOL 50-DF to the soil surface immediately after transplanting</p> <p><b>Plant Beds (Southeast Region Only)</b> Apply the labeled amount of DEVIRINOL 50-DF to the soil surface after sweet potato roots are covered with soil but prior to soil cracking and emergence of sweet potato plants</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 4 lbs per acre per crop cycle</p>
Tobacco (All Regions )	Before transplanting apply 2-4 pounds (1-2 lb ai)	<p>Apply to a weed free soil surface Use the lower rate on light soil (coarse textured sandy) and the higher rate on heavy soil (fine textured - clay) In Southeast only Apply up to 3 weeks before transplanting No waiting period is necessary</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 4 lbs per acre per crop cycle</p>
Tobacco (Kentucky Maryland Virginia and Southeast Region Only) At transplanting	2 to 4 pounds (1-2 lb ai)	<p>Apply to a weed free soil surface</p> <p>Apply the labeled amount of DEVIRINOL 50-DF to the soil surface immediately after transplanting May be applied over the top of transplants</p> <p>Apply to a weed-free soil surface Use 10 to 50 gallons of spray per acre For best results the treatment must reach the zone of weed seed</p>

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CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
		<p>germination If rainfall does not occur within 5 days after application the treatment must be shallowly incorporated or irrigated-in with sufficient overhead irrigation to wet the soil to a depth of 2 to 4 inches</p> <p><b>Restrictions</b> Do not apply more than 4 pounds DEVIRINOL 50-DF in any one season</p>
<p>Tobacco (Kentucky Maryland Virginia And Southeast Region Only) Layby application between rows</p>	<p>2 to 4 pounds (1-2 lb ai)</p>	<p>Reduce rates proportionately for band layby application Treatments may follow a preplant incorporated application of DEVIRINOL 50-DF</p> <p>Apply the labeled amount of DEVIRINOL 50-DF in a band immediately after the layby cultivation Apply as a directed spray to the row middles</p> <p>Apply to a weed-free soil surface Use 10 to 50 gallons of spray per acre For best results the treatment must reach the zone of weed seed germination If rainfall does not occur within 5 days after application the treatment must be shallowly incorporated or irrigated-in with sufficient overhead irrigation to wet the soil to a depth of 2 to 4 inches</p> <p><b>Restrictions</b> Do not apply more than 4 pounds DEVIRINOL 50-DF in any one season</p>

CROP	RATE DEVIRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
<p>Herbs Basil Marjoram Rosemary Savory (summer and winter)</p>	<p>2 - 4 pounds (1 - 2 lb ai)</p>	<p>Apply as a preplant/preemergence application Apply with ground spray equipment only in 20-100 gallons of water per acre Apply to a weed free surface Shallow incorporate no deeper than seeding depth or sprinkler irrigate within 24 hours using sufficient water to wet the soil to a depth of 2 to 4 inches Use the</p>

CROP	RATE DEVRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
		<p>lower rate on light soil (coarse textured- sandy) and the higher rate on heavy soil (fine textured-clay) A list of weeds controlled is provided on the second page of this label</p> <p>DEVRINOL 50-DF Herbicide is not recommended for use on soil containing more than 10% organic matter Spraying on ground heavily covered with leaves or trash may adversely affect weed control Do not apply to frozen ground</p> <p><b>Restrictions</b> Do not apply more than once per season Do not apply this product through any type of irrigation system There is no restriction between last application and harvest</p>
Peppermint Spearmint	8 pounds (4 lb ai)	<p>Apply to a weed free soil surface Mint may be applied to newly planted and established crops</p> <p>When used on established crops apply DEVRINOL 50-DF only to stands that have been established for at least one growing season When used on recently planted crops application may be made immediately after planting</p> <p><b>Restrictions</b> Do not exceed a maximum application rate of 8 lbs per acre per crop cycle</p>

CROP CRANBERRIES	RATE DEVRINOL 50-DF/A	USE DIRECTIONS AND RESTRICTIONS
<p>Northeast Connecticut Delaware Massachusetts Maryland Maine New Hampshire New Jersey New York Pennsylvania Rhode Island Vermont West Virginia</p>		
<p><u>Established beds (over one year old)</u> For control of nutsedge (<i>Cyperus dentatus</i>) rice cutgrass (<i>Leersia oryzoides</i>) and purplestem beggarticks (<i>Bidens</i>)</p>	12 - 18	<p>Apply to a weed free soil surface before spring growth begins or in the fall after harvest Do not apply when beds are under winter flood CAUTION Do not apply in the spring to cranberry beds that do not have sprinkler systems for frost control</p>

connata)	pounds (6 – 9 lb ai)  8 – 12 pounds (4 – 6 lb ai)	<u>In Peat Beds</u> Apply through ground application equipment or through the overhead sprinkler system See use directions for application through sprinkler irrigation systems <b>Restrictions</b> Do not apply more than 18 pounds DEVRINOL 50-DF per acre per year  <u>In Beds with Sandy Soils</u> Apply through ground application equipment or through the sprinkler irrigation system <b>Restrictions</b> Do not apply more than 12 pounds DEVRINOL 50-DF per acre per year
<u>New plantings</u>	6 pounds (3 lb ai)	Apply to a weed free soil surface after planting using ground spray equipment or through the sprinkler irrigation system <b>Restrictions</b> Do not apply more than 6 pounds DEVRINOL 50-DF per acre per year
<b>North Central Michigan Minnesota North Dakota South Dakota Wisconsin</b>		
<u>Established beds (over one year old)</u> For control of purplestem beggarticks ( <i>Bidens connata</i> ) and rice cutgrass ( <i>Leersia oryzoides</i> )	12 – 18 pounds (6 – 9 lb ai)  8 – 12 pounds (4 – 6 lb ai)	Apply to a weed free soil surface before spring growth begins or in the fall after harvest Avoid applying when beds may be reflowed for spring frost protection or when soils are water soaked Do not apply when beds are under winter flood CAUTION Do not apply in the spring to cranberry beds that do not have sprinkler systems for frost control  <u>In Peat Beds</u> Apply through ground application equipment or through the overhead sprinkler system See use directions for application through sprinkler irrigation systems <b>Restrictions</b> Do not apply more than 18 pounds DEVRINOL 50-DF per acre per year  <u>In Beds with Sandy Soils</u> Apply through ground application or through the sprinkler irrigation system <b>Restrictions</b> Do not apply more than 12 pounds DEVRINOL 50-DF per acre per year
<u>New plantings</u>	6 pounds (3 lb ai)	Apply to a weed free soil surface after planting using ground spray equipment or through the sprinkler irrigation system <b>Restrictions</b> Do not apply more than 6 pounds DEVRINOL 50-DF per acre per year
<b>West Idaho Montana Oregon Washington</b>		
<u>Established beds (over one year old)</u> For control of clover ( <i>Trifolium fimbriatum</i> ) aster ( <i>Aster douglasii</i> ) silverweed cinquefoil* (silverleaf) ( <i>Potentilla anserina</i> ) red sorrel (sheep sorrel) ( <i>Rumex acetosella</i> ) and birdsfoot trefoil ( <i>Lotus</i>	18 pounds (9 lb ai)	Apply DEVRINOL 50-DF at the rates indicated below to a weed free soil surface before spring growth begins in mid-February or before the end of March  <u>In Beds with Heavy Muck Soil</u> Apply through ground application equipment or through the overhead sprinkler system See use directions for application through sprinkler irrigation systems

<i>corniculatus</i>  *Suppression only	12 – 18 pounds (6 – 9 lb ai)  8 – 18 pounds (4 – 9 lb ai)	<u>In Peat Beds</u> Apply through ground application equipment or through the overhead sprinkler system  <u>In Beds with Sandy Soils</u> Apply through ground application equipment or through the sprinkler irrigation system.  <b>Restrictions</b> Do not apply after buds start to swell CAUTION Do not apply in the spring to cranberry beds that do not have sprinkler systems for frost control Do not apply more than 18 pounds DEVRINOL 50-DF per acre per year
<u>New Plantings</u>	6 pounds (3 lb ai)	Apply to a weed free soil surface after planting using ground spray equipment or through the sprinkler irrigation system <b>Restrictions</b> Do not apply more than 6 pounds DEVRINOL 50-DF per acre per year

#### TANK MIXTURES – LABELED CROPS

DEVRINOL 50-DF may be tank mixed with other pre-emergence herbicides labeled for the same crops to provide additional weed control and for control of weeds not listed on the DEVRINOL 50-DF label and/or with contact herbicides to control emerged weeds at the time of application. Read and follow all applicable directions, restrictions and precautions on product labels, deferring to the most restrictive directions.

For fruit and nut crops, make only one application per season.

For other labeled crops, always follow the more restrictive label instructions for tank mixes.

For a tank mix application, apply the specified dosage (see directions for use) in 10 to 50 gallons of water per acre.

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE** Keep container closed when not in use. Store in a cool, dry place. Do not store near seeds, fertilizer or foodstuffs.

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

**CONTAINER DISPOSAL** Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling if available, or 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.

**IMPORTANT INFORMATION**  
**READ BEFORE USING PRODUCT**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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

The Directions for Use of this product reflect the opinion of experts based on field use and tests and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User.

To the extent consistent with applicable law, United Phosphorus, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or United Phosphorus, Inc., and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, **UNITED PHOSPHORUS, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) 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 UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

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