

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

September 20, 2016

Rebecca A. Clemmer Regulatory Manager United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19407

Subject: Notification per PRN 98-10 – Removing State Restriction

Product Name: Devrinol 2-XT Selective Herbicide

EPA Registration Number: 70506-301 Application Date: August 17, 2016

Decision Number: 520618

Dear Ms. Clemmer:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced 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 submitted with the application has been stamped "Notification" and will be placed in our records. Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you have any questions, you may contact Shanta Adeeb at 703-347-0502 or via email at adeeb.shanta@epa.gov.

Sincerely,

Reuben Baris, Product Manager 25

Herbicide Branch

Registration Division (7505P) Office of Pesticide Programs

#### NOTIFICATION

70506-301

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

09/20/2016

GROUP	15	HERBICIDE

## DEVRINOL® 2-XT Selective Herbicide

For use on certain Nuts, Small Fruits, Vegetables and Tobacco Also for use on Container-Grown Ornamentals, Field-Grown Nursery Stock, Liner Stock, Ground Covers, and Turfgrass

#### **ACTIVE INGREDIENT:**

 Napropamide\*
 22.0%

 OTHER INGREDIENTS:
 78.0%

 TOTAL
 100%

\*contains 240 grams/liter or 2 pounds active ingredient per gallon.

# 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 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. 70506-301

EPA Est. No



United Phosphorus, Inc. 630 Freedom Business Center, Suite 402 King of Prussia, PA 19406 • 1-800-438-6071

NET WEIGHT: gallons

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### 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.

#### PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow to come into contact with oxidizing agents as hazardous chemical reactions may occur.

#### **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.

#### **USE PRECAUTIONS**

Read all instructions before using.

• Use only for labeled purposes and at labeled rates.

- Use as a directed spray and avoid contact with fruit or foliage.
- Except where specifically noted, DEVRINOL 2-XT 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.

#### **USE RESTRICTIONS**

- Do not allow people or pets to enter the treated area until sprays have dried.
- Do not apply to frozen ground.
- Do not apply when fruit or nuts are on the ground during the harvest period.
- Do not overdose.
- Do not apply when weather conditions favor drift from areas treated.
- Do not graze treated areas.
- Do not contaminate irrigation water or water used for domestic purposes.

#### **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 2-XT herbicide is used on tobacco at up to 4 pounds active ingredient 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 2-XT herbicide in small grains and must be destroyed by plowing under or otherwise prevented from reaching food or feed production.

When using DEVRINOL 2-XT herbicide 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.

#### RESISTANCE MANAGEMENT RECOMMENDATIONS

DEVRINOL 2-XT herbicide is a Group 15 herbicide. Any weed population may contain or develop plants naturally resistant to Group 15 herbicides. The resistant biotypes may dominant the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance management strategies should be followed.

To delay herbicide resistance.

- Where possible, rotate the use of DEVRINOL 2-XT herbicide or other Group 15 herbicides with different herbicide groups that control the same weed species in the field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM (Integrated Pest Management) program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development, Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist, certified crop advisors and/or manufacturer for

herbicide resistance-management recommendations for specific crops and weed biotypes.

#### 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.
- Waterproof gloves.
- Protective eye wear.

#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Do not enter treated areas without protective clothing until sprays have dried.

#### PRODUCT INFORMATION

DEVRINOL 2-XT herbicide is a soluble concentrate selective surface-applied or incorporated herbicide for use in certain types of newly planted or established crops as well as specified non-crop uses. DEVRINOL 2-XT herbicide 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 2-XT herbicide in 10 to 100 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.

#### **REGIONAL USE AREAS**

**Northern**: Colorado, Connecticut, Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New

Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Vermont, Virginia, West Virginia, Wisconsin.

Pacific Northwest: Alaska, Idaho, Montana, Oregon, Utah, Washington, Wyoming.

**Southeastern**: Alabama, Georgia, Florida, North Carolina, South Carolina, Tennessee.

Southwestern: Arkansas, Louisiana, Mississippi, New Mexico, Oklahoma, Texas.

**Western**: Arizona, California, Hawaii, Nevada.

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

**Western and Pacific Northwest**: Three weeks (fall through early spring) or 24-72 hours (remainder of year).

Other Regions and Period Unless Otherwise Specified: 24-72 hours.

#### **APPLICATIONS THROUGH IRRIGATION SYSTEMS**

- For use in the Western Region on tree crops and grapevines only for preemergence control of listed weeds.
- Do not allow treatment to contact foliage or crop.
- Remove existing weed growth before application.
- Meter the DEVRINOL 2-XT herbicide into the irrigation water during the entire period.
- Apply with sufficient water to wet the soil to a depth of 4-8 inches.
- Good agitation should be maintained during the entire application period.
- Avoid run-off.

#### **USE PRECAUTIONS:**

- 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.
- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- 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.
- 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:

 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.

- 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 pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

### FOR FLOOD (BASIN), FURROW AND BORDER IRRIGATION:

- 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.
- Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
- 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.
- 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 pesticides and capable of being fitted with a system interlock.

DEVRINOL 2-XT 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 2-XT 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.

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 100 gallons of water per acre.

## WEEDS CONTROLLED BY DEVRINOL 2-XT HERBICIDE BROADCAST APPLICATION FOR AGRICULTURAL APPLICATIONS

For control of all weeds listed, apply 2 gallons (8 quarts) DEVRINOL 2-XT herbicide per broadcast acre to the soil surface. Apply in the fall through early spring prior to weed emergence. Do not apply DEVRINOL 2-XT herbicide 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.

Reduce rates proportionately for band or strip treatments.

NOTE: DEVRINOL 2-XT herbicide does not control established weeds.

ANNUAL GRASSES:	
Barnyardgrass, Junglerice	Echinochloa spp.
Foxtail Barley	Hordeum jubatum
Wild Barley	Hordeum leporinum
Annual Bluegrass	Poa annua
Bromes	Bromus
Cheatgrass	B. secalinus
Downy Brome	B. tectorum
Ripgut Brome	B. rigidus
Soft Chess	B. mollis
Canarygrass	Phalaris canariensis
Large (Hairy) Crabgrass	Digitaria sanguinalis
Smooth Crabgrass	Digitaria ischaemum
Southwestern Cupgrass	Eriochloa gracilis
Foxtail	Setaria
Bristly Foxtail	S verticilla
Giant Foxtail	S. faberi
Green Foxtail	S. viridis
Yellow Foxtail	S. lutescens
Goosegrass	Eleusine indica
Seedling Johnsongrass	Sorghum halpense
Wild Oats	Avena fatua
Panicums	Panicum
Guineagrass	P. Maximum

Fall Panicum	P. dichotomiflorum
Texas Panicum	P. texanum
Witchgrass	P. capillare
Italian Ryegrass	Lolium multiflorum
Sandbur	Cenchrus spp.
Mexican Sprangletop	Leptochloa uninervia
Red Sprangletop	Leptochloa filiformis
Stinkgrass	Eragrostis cilianensis
ANNUAL BROADLEAF WEEDS:	
Carpetweed	Mollugo verticillata
Common Chickweed	Stellaria media
Coast Fiddleneck	Amsinckia intermedia
Cudweed, Purple	Gnaphalium purpureum
Redstem Filaree	Erodium circutarium
Common Groundsel	Senecio vulgaris
Prostrate Knotweed	Polygonum aviculare
Lambsquarters	Chenopodium album
Prickly Lettuce	Lactuca serriola
Little Mallow*	Malva parviflora
Redroot Pigweed	Amaranthus retroflexus
Pineappleweed	Matricaria matricarioides
Common Purslane	Portulaca oleracea
Horse Purslane	Trianthema portullacastrum
Common Ragweed**	Ambrosia artemisiifolia
Annual Sowthistle	Sonchus oleraceus

<sup>\*</sup>From seed

# WEEDS CONTROLLED BY DEVRINOL 2-XT PREPLANT INCORPORATED APPLICATION

For control of all weeds listed, apply 2 to 4 quarts DEVRINOL 2-XT herbicide as a preplant incorporated application.

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 using equipment which will result in uniform incorporation of the herbicide to the desired depth. Whenever a rate range is indicated for DEVRINOL 2-XT herbicide, use the lower rate on light soil (coarse textured-sandy) and the higher rate on heavy soil (fine textured-clay).

**NOTE:** DEVRINOL 2-XT herbicide does not control established weeds.

ANNUAL GRASSES:	
Barnyardgrass, Junglerice	Echinochloa spp.
Crabgrass	Digitaria spp.
Foxtails	Setaria
Giant Foxtail	S. faberi
Green Foxtail	S. viridis

<sup>\*\*</sup>Suppression

Yellow Foxtail	S. lutescens
Goosegrass	Eleusine indica
Seedling Johnsongrass	Sorghum halepense
Panicums	Panicum
Fall Panicum	P. dichotomiflorum
Witchgrass	P. capillare
Stinkgrass	Eragrostis cilianensis
ANNUAL BROADLEAF WEEDS:	
Carpetweed	Mollugo verticillata
Purple Cudweed	Gnaphalium purpureum
Galinsoga*	Galinsoga spp.
Lambsquarters	Chenopodium album
Redroot Pigweed	Amaranthus retroflexus
Smooth Pigweed	Amaranthus hybridus
Common Purslane	Portulaca oleracea
Florida Pusley	Richardia scabra
Common Ragweed**	Ambrosia artemisiifolia

<sup>\*</sup>Controlled at 4 quarts DEVRINOL 2-XT

### **USE DIRECTIONS**

DEVRINOL 2-XT herbicide is labeled for use on the following crops. Unless otherwise noted, DEVRINOL 2-XT herbicide can be used in ALL REGIONS. Please refer to Regional Use Area under PRODUCT INFORMATION.

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

BERRY CROPS
Apply a maximum of once per year.

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
Blackberry (including bingleberry, boysenberry; dewberry, lowberry, marionberry, olallieberry,	2 gallons/A (4 lb ai)	Apply to a weed free soil surface. May be applied to newly planted and established crop.
youngberry)		Restrictions: Do not apply more than 2
Blueberry		gallons per acre per crop cycle.
Currant		
Elderberry		
Gooseberry		
Huckleberry		
Loganberry		
Raspberry (black and red)		
Strawberries	2 gallons/A	Spring Application - Apply after removal
	(4 lb ai)	of straw mulch. Surface should be weed
established plantings	,	free. Water into soil to a depth of 2 to 4
		inches using natural rainfall or irrigation

<sup>\*\*</sup>Suppression

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
		within 24-72 hours of application for best results.
		Restrictions: Do not exceed a maximum application rate of 2 gallons per acre per crop cycle.  Do not apply from bloom through harvest.
		Fall Application - 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 24-72 hours of application.
		<b>Restrictions</b> : Do not apply to frozen ground. Do not exceed a maximum application rate of 2 gallons per acre per crop cycle.
Strawberries not grown with plastic mulch	2 gallons/A (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 has become established.
		Restrictions: Do not exceed a maximum application rate of 2 gallons per acre per crop cycle.  Do not apply from bloom through harvest.
Strawberries  grown with plastic mulch on plant beds  (All Regions except Southeastern)	2 gallons/A (4 lbs ai) Preplant incorporated	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 within 24-72 hours before laying of plastic mulch using equipment which will result in uniform
Strawberries	1-2 gallons (2-4 lbs ai)	incorporation of the herbicide to desired depth.
grown with plastic mulch on plant beds (Southeastern Region)	Preplant incorporated	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 within 24-72 hours.
		<b>Restrictions</b> : Do not exceed a maximum application rate of 2 gallons per acre per crop cycle.

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
Strawberries grown with plastic mulch on plant beds	2 gallons/A (4 lbs ai)  Application between rows of plastic mulch, middles, or aisles	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 DEVRINOL 2-XT herbicide into the soil to a depth of 1 to 2 inches within 24-72 hours of application. In the event of emerged weed growth being present, tank mix 2 gallons of DEVRINOL 2-XT herbicide with the correct amount of a labeled burndown herbicide to get burndown and residual control.  Restrictions: Do not exceed a maximum application rate of 2 gallons per acre per crop cycle. Do not apply from bloom through harvest.

0000	WEEDS	USE	USE DIRECTIONS AND
CROP	CONTROLLED	RATE/ACRE	RESTRICTIONS
Cranberries Established beds	Nutsedge (Cyperus dentatus)		Apply to a weed free soil surface before spring growth begins or in the fall after harvest. Do not apply when
(over one year old)  (Northeast: Connecticut,	Rice Cutgrass (Leersia oryziodes)		beds are under winter flood. CAUTION: Do not apply in the spring to cranberry beds that do not have sprinkler systems for frost control.
Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New	Purplestem Beggarticks (Bidens connate)	In Peat Beds:  12-18 quarts/A	In Peat Beds: Apply through ground application equipment or through the overhead sprinkler system. See use directions for application through
York, Pennsylvania, Rhode Island, Vermont, West Virginia)		(6 – 9 lbs ai)	sprinkler irrigation systems.  Restrictions: Do not apply more than 18 quarts per acre per year.
		In Beds with Sandy Soils: 8 – 12 quarts/A	In Beds with Sandy Soils: Apply through ground application equipment or through the sprinkler irrigation system.
		(4 – 6 lbs ai)	<b>Restrictions</b> : Do not apply more than 12 quarts DEVRINOL 2-XT per acre per year.
Cranberries New plantings (Northeast:		6 quarts/A (3 lbs ai)	Apply to a weed free soil surface after planting using ground spray equipment or through the sprinkler irrigation system.
Connecticut,			ingaton system.

	T	T	T =
Delaware, Massachusetts, Maryland, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, West Virginia)			Restrictions: Do not apply more than 6 quarts DEVRINOL 2-XT herbicide per acre per year.
Cranberries  Established beds (over one year old)  (North Central: Michigan, Minnesota, North Dakota, South Dakota, Wisconsin)	Purplestem beggarticks (Bidens connata)  Rice Cutgrass (Leersia oryzoides)		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.
		In Peat Beds:  12-18 quarts/A (6 – 9 lbs ai)	In Peat Beds: 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 quarts DEVRINOL 2-XT per acre per year.
		In Beds with Sandy Soils:  8-12 quarts/A	In Beds with Sandy Soils: Apply through ground application or through the sprinkler irrigation system.
		(4 – 6 lbs ai)	Restrictions: Do not apply more than 12 quarts per acre per year.
Cranberries New plantings		6 quarts (3 lb ai)	Apply to a weed free soil surface after planting using ground spray equipment or through the sprinkler
(North Central: Michigan, Minnesota, North Dakota, South Dakota, Wisconsin)			irrigation system.  Restrictions: Do not apply more than 6 quarts DEVRINOL 2-XT per acre per year.
Cranberries Established beds (over one year old)	Clover (Trifolium fimbriatum)		Apply DEVRINOL 2-XT at the rates indicated below to a weed free soil surface before spring growth begins in mid-February or before the end of March.
( <b>West</b> : Idaho, Montana, Oregon, Washington)	Aster (Aster douglasii) Silverweed Cinquefoil* (silverleaf)	In Beds with Heavy Muck Soil: 18 quarts/A (9 lbs ai)	In Beds with Heavy Muck Soil: Apply through ground application equipment or through the overhead sprinkler system. See use directions for application through sprinkler

	(Potentilla anserina), Red Sorrel (sheep sorrel) (Rumex	In Peat Beds: 12-18 quarts/A (6 – 9 lbs ai)	irrigation systems.  In Peat Beds: Apply through ground application equipment or through the overhead sprinkler system.
	acetosella)  Birdsfoot Trefoil (Lotus corniculatus)	In Beds with Sandy Soils:  8-18 quarts/A (4 – 9 lbs ai)	In Beds with Sandy Soils: Apply through ground application equipment or through the sprinkler irrigation system.
	*Suppression only	(+ 3 lb3 al)	Restrictions: 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 quarts DEVRINOL 2-XT acre per acre per year.
Cranberries New Plantings  (West: Idaho, Montana, Oregon, Washington)		8 quarts/A (4 lbs ai)	Apply to a weed free soil surface after planting using ground spray equipment or through the sprinkler irrigation system.  Restrictions: Do not apply more than
**asimigtorij			8 quarts DEVRINOL 2-XT per acre per year.

# FRUIT CROPS Apply a maximum of once per year.

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
Kiwi Fruit	2 gallons/A (4 lb ai)	Apply to a weed free soil surface. May be applied to newly planted and established
(Western Region Only		crop.
		<b>Restrictions</b> : Do not apply within 90 days of harvest.
		Do not apply more than 2 gallons per acre per crop cycle.
Persimmons	2 gallons/A (4 lb ai)	Apply to a weed free soil surface. May be applied to established crop only.
(Western Region Only)	( 2.27)	Restrictions: Do not apply within 100 days of harvest.

### **HERB CROPS**

CROP	RATE DEVRINOL 2-XT/A	USE DIRECTIONS AND RESTRICTIONS
Basil,	2-4 quarts/A	Apply as a preplant/preemergence
Marjoram,	(1 – 2 lb ai)	application. Apply with ground spray

CROP	RATE DEVRINOL 2-XT/A	USE DIRECTIONS AND
Rosemary, Savory (summer and winter)		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 24-72 hours using sufficient water to wet the soil to a depth of 2 to 4 inches. Use the lower rate on light soil (coarse textured- sandy) and the higher rate on heavy soil (fine textured-clay).  Restrictions: Apply a maximum of
		one application per year. There is no restriction between last application and harvest.
Peppermint, Spearmint	2 gallons/A (4 lb ai)	Apply to a weed free soil surface. Mint: may be applied to newly planted and established crops.  When used on established crops, apply DEVRINOL 2-XT 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.
		Restrictions: Do not exceed a maximum application rate of 2 gallons per acre per crop cycle.

## **TOBACCO**

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
Tobacco	2-4 quarts/A	Apply to a weed free soil surface.
	(1-2 lb ai)	Use the lower rate on light soil
	5 ( T ) (	(coarse textured sandy) and the
	Before Transplanting	higher rate on heavy soil (fine
		textured - clay). In Southeast only:
		Apply up to 3 weeks before
		transplanting. No waiting period is
		necessary.
		Restrictions: Do not exceed a
		maximum application rate of 4 quarts
		per acre per crop cycle.
Tobacco	2-4 quarts/A	Apply to a weed free soil surface.
	(1-2 lb ai)	
(Kentucky, Maryland,		Apply to the soil surface immediately

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
Virginia and Southeast Region Only)	At Transplanting	after transplanting. May be applied over the top of transplants.  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.  Restrictions: Do not apply more
		than 4 quarts per acre per crop cycle.
Tobacco (Kentucky, Maryland, Virginia and Southeast Region Only)	2-4 quarts/A (1-2 lb ai) Layby Application Between Rows	Reduce rates proportionately for band layby application. Layby treatments may follow a preplant incorporated application of DEVRINOL 2-XT herbicide.  Apply the labeled amount in a band within 24-72 hours after the layby cultivation. Apply as a directed spray to the row middles.  Apply to a weed-free soil surface. 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.  Restrictions: Do not apply more
		Restrictions: Do not apply more than 4 quarts per acre per crop cycle.

# TREE NUT AND VINE CROPS Apply a maximum of once per year.

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
Almonds Filberts Pecans	2 gallons/A (4 lb ai)	Apply to a weed free soil surface. May be applied to newly planted and established crop.  Restrictions: Do not apply within 50 days of harvest for filberts or pecans,

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
		Do not apply more than 2 gallons per acre per crop cycle.
Grapes	2 gallons/A (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.
		Do not apply more than 2 gallons per acre per crop cycle

### **VEGETABLE CROPS**

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
Asparagus	2 gallons/A (4 lbs ai)	Apply to a weed free soil surface. Asparagus: may be applied to established crop only.
		When used on established crops, apply only to stands that have been established for at least one growing season.
		<b>Restrictions</b> : Do not exceed a maximum application rate of 2 gallons per acre per crop cycle.
Broccoli (Maine Only)	2-4 quarts/A (1-2 lbs ai)	Apply to 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 24-72 hours using sufficient water to wet the soil to a depth of 4-8 inches. Use the lower rate on light soil (coarse textured-sandy) and the higher rate on heavy soil (fine textured-clay).  Restrictions: Do not apply more than 8 quarts per acre per crop season. Do not exceed a maximum application rate of 4 quarts per acre
(Avisono and California	4.0 00000000000000000000000000000000000	per crop cycle.
(Arizona and California Only)	1-2 quarts/A (1/2 – 1 lb ai)	For suppression only of Annual Bluegrass, Barnyardgrass, Common Groundsel, Common Purslane, and
Broccoli,		Redroot Pigweed. Apply to a weed

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
Brussels Sprouts, Cauliflower		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 24-72 hours using sufficient water to wet the soil to a depth of 4-8 inches. Use the lower rate on light soil (coarse textured - sandy) and the higher rate on heavy soil (fine textured - clay).  Restrictions: Do not exceed a maximum application rate of 2 quarts
(Northern Region Only) Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kale, Mustard Greens	2 quarts/A (1 lb ai)	per acre per crop cycle.  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 24-72 hours using sufficient water to wet the soil to a depth of 4-8 inches.
(Pacific Northwest Only) Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kale, Mustard Greens	2-4 quarts/A (1-2 lbs ai)	Restrictions: Do not exceed a maximum application rate of 2 quarts per acre per crop cycle.  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 24-72 hours using sufficient water to wet the soil to a depth of 4-8 inches. Use the
(Southeast Region Only) Broccoli, Brussels Sprouts, Cabbage Cauliflower, Collards,	4 quarts/A (2 lbs ai)	lower rate on light soil (coarse textured - sandy) and the higher rate on heavy soil (fine textured - clay).  Restrictions: Do not exceed a maximum application rate of 4 quarts per acre per crop cycle.  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 24-72 hours using sufficient water to wet the soil

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
Mustard Greens		Restrictions: Do not exceed a maximum application rate of 4 quarts per acre per crop cycle.
(Southwest Region Only) Broccoli, Brussels Sprouts, Cabbage Cauliflower, Collards, Kale, Mustard Greens	2-4 quarts/A (1-2 lbs 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).  Restrictions: Do not exceed a maximum application rate of 4 quarts per acre per crop cycle.
Eggplants	2-4 quarts/A (1-2 lbs 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).  Restrictions: Do not exceed a maximum application rate of 4 quarts per acre per crop cycle.
Peppers (including pimento, bell, hot and sweet) Tomatoes	2-4 quarts/A (1-2 lb ai)	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).  Restrictions: Do not exceed a maximum application rate of 4 quarts per acre per crop cycle.
Eggplants, Peppers (including pimento, bell, hot and	2-4 quarts/A (1-2 lb ai)	Apply to a weed free soil before the laying of plastic mulch.
sweet), Tomatoes grown on plastic mulch on plant beds	Preplant Incorporated	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

CROP	USE RATE/ACRE	USE DIRECTIONS AND RESTRICTIONS
		mulch over the treated soil the same day.
		<b>Restrictions</b> : Do not exceed a maximum application rate of 4 quarts per acre per crop cycle.
Eggplants, Peppers (including pimento, bell, hot and sweet), Tomatoes grown with plastic mulch on plant beds	4 quarts/A (2 lb ai)  Application between rows of plastic mulch, middles or aisles	Apply to a weed free soil surface between the rows of plastic.  Mechanically incorporate or irrigate into the soil to a depth of 1 to 2 inches within 24-72 hours of application.  Restrictions: Do not exceed a maximum application rate of 4 quarts per acre per crop cycle.
Sweet Potatoes	2-4 quarts/A (1-2 lb ai).	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).  For best results, the treatment must reach the zone of weed seed germination. Shallow incorporate to a depth of 1-2 inches or sprinkler irrigate within 24-72 hours using sufficient overhead irrigation to wet the soil to a depth of 2-4 inches.
		At Transplanting: (All Regions) Apply the labeled amount of DEVRINOL 2-XT herbicide to the soil surface immediately after transplanting.
		Plant Beds: (Southeast Region Only) Apply the labeled amount of DEVRINOL 2-XT herbicide to the soil surface after sweet potato roots are covered with soil, but prior to soil cracking and emergence of sweet potato plants.
		Restrictions: Do not exceed a maximum application rate of 4 quarts per acre per crop cycle

For use on container-grown ornamentals, field-grown nursery stock, liner stock, ground covers, and turfgrass.

#### PRODUCT INFORMATION

Devrinol 2-XT herbicide does not control established weeds. It must be applied to freshly weeded soil before weeds germinate, or during Fall and Winter months.

Devrinol 2-XT herbicide can be applied to **newly planted** container stock after soil has settled from first watering, field grown nursery stock, dichondra, and to established plants.

Devrinol 2-XT herbicide needs mechanical incorporation (such as a power tiller), adequate irrigation, or natural moisture (1-2 inches of rainfall or snow within 2-3 days) for optimum results.

Devrinol 2-XT herbicide may be used on several different container potting soil mixtures. These mixtures include those containing 30 percent soil and/or sand, and mixtures containing no soil. (For example: perlite, peat, bark, sawdust, and sand.)

Do not apply this product through any type of irrigation system.

ANNUAL GRASSES:	
Barnyardgrass, Junglerice	Echinochloa spp.
Foxtail Barley	Hordeum jubatum
Wild Barley	Hordeum leporinum
Annual Bluegrass	Poa annua
Bromes	Bromus
Cheatgrass	B. secalinus
Downy Brome	B. tectorum
Ripgut Brome	B. rigidus
Soft Chess	B. mollis
Canarygrass	Phalaris canariensis
Large (Hairy) Crabgrass	Digitaria sanguinalis
Smooth Crabgrass	Digitaria ischaemum
Southwestern Cupgrass	Eriochloa gracilis
Foxtails	Setaria
Bristly Foxtail	S verticilla
Giant Foxtail	S. faberi
Green Foxtail	S. viridis
Yellow Foxtail	S. lutescens
Goosegrass	Eleusine indica
Seedling Johnsongrass	Sorghum halepense
Wild Oats	Avena fatua
Panicums	Panicum
Guineagrass	P. Maximum
Fall Panicum	P. dichotomiflorum
Texas Panicum	P. texanum
Witchgrass	P. capillare
Italian Ryegrass	Lolium multiflorum
Sandbur	Cenchrus spp.
Mexican Sprangletop	Leptochloa uninervia
Red Sprangletop	Leptochloa filiformis
Stinkgrass	Eragrostis cilianensis

WEEDS CONTROLLED BY 2 TO 3 GAL. OF DEVRINOL 2-XT HERBICIDE		
ANNUAL BROADLEAF WEEDS:		
Carpetweed	Mollugo verticillata	
Common Chickweed	Stellaria media	
Coast Fiddleneck	Amsinckia intermedia	
Cudweed, Purple	Gnaphalium purpureum	
Redstem Filaree	Erodium circutarium	
Common Groundsel	Senecio vulgaris	
Prostrate Knotweed	Polygonum aviculare	
Lambsquarters	Chenopodium album	
Prickly Lettuce	Lactuca serriola	
Little Mallow*	Malva parviflora	
Redroot Pigweed	Amaranthus retroflexus	
Pineappleweed	Matricaria matricarioides	
Common Purslane	Portulaca oleracea	
Horse Purslane	Trianthema portullacastrum	
Common Ragweed**	Ambrosia artemisiifolia	
Annual Sowthistle	Sonchus oleraceus	

<sup>\*</sup>From seed

#### **USESITES**

**Nursery Stock (Field Grown):** Consult list of plant species on which Devrinol 2-XT herbicide can be used.

Apply Devrinol 2-XT herbicide as a broadcast treatment over young nursery stock or as a directed application to larger stock either as a band or broadcast application.

Application can be made any time of the year to weed free soil; however, since Devrinol 2-XT herbicide requires 1 to 2 inches of rainfall or irrigation soon after application for adequate weed control, applications should be timed to take advantage of rainfall if irrigation is not available. Fall and Winter applications will provide excellent weed control the following Spring and Summer. A thorough incorporation of Devrinol 2-XT herbicide into the soil to a depth of 1 to 2 inches will provide excellent weed control with less rainfall required.

**Container Grown Ornamentals:** Consult list of plant species on which Devrinol 2-XT herbicide can be used.

Apply Devrinol 2-XT herbicide as a broadcast treatment over the containers.

<sup>\*\*</sup>Suppression

Normal irrigation or rainfall (if a Fall or Winter application is made in cold areas) should provide sufficient water for satisfactory weed control.

Home Grounds, Highway And Industrial Ornamental Plantings: Use an overall (broadcast) treatment over young ornamentals or as a directed application where larger plants are growing. Irrigate soon after application or apply just before expected rain. Fall through Spring applications are preferred if irrigation is not available or if application is to be made in lower Summer rainfall areas.

**Ground Covers:** Apply Devrinol 2-XT herbicide as a broadcast treatment over the ground covers.

Irrigate immediately with a minimum of 1 inch water or apply when rainfall is expected.

**Dichondra:** Apply Devrinol 2-XT herbicide at the time of seeding, or to established dichondra including dichondra sod.

Irrigate with a minimum of 1 inch of water.

# SPECIFIC ORNAMENTALS, NURSERY STOCK, AND CONTAINER STOCK FOR DEVRINOL USE

#### **Deciduous and Evergreen Trees**

Cypress

Acer Elm, Siberian Maple, Red Alder, Black Eucalyptus Olive (Olea)

Ash Ficus Palm (Washingtonia robusta)

Balsam fir Fir Picea Birch Gleditsia Pin Oak Golden Rain Tree Pine. White Birch, European White Black Walnut Gum, Sweet Pinus Cedar Hemlock Pittosporum Citrus Japanese Larch Podocarpus Crataegus Laburnum **Populus** 

Dogwood Malus Spruce, Colorado Blue

Little Leaf Linden

Douglas Fir Maple, Japanese Tulip Tree

Wisteria, Chinese

Prunus

**Deciduous and Evergreen Shrubs** 

Abelia Dogwood Oleander Arizonia Fuchsia Euonymus Osmanthus Arrowwood Forsythia Photinia Asparagus (Sprengeri) Gardenia **Podocarpus** Heather (Calluna) Aucuba Pyracantha Azalea Hibiscus Raphiolepis Honeysuckle (Lonicera) Rhododendron Beach Plum

Bottlebrush Hypericum Rosa

Bougainvillea Ilex Serviceberry
Buxus Juniperus Star Jasmine
Camellias Leucothe Taxus
Cotoneaster Ligustrum Viburnum
Crepe Myrtle Nandina Xylosema

Natal Plum

**Fruit and Nuts** 

Almond Grape Strawberry

Filbert Pecan

Strawberry: Delay applications until the desired number of daughter plants have become

established. Do not apply from bloom through harvest.

**Container Stock** 

Abelia Eucalyptus Pachysandra

Agapanthus Euonymus Palm (Washingtonia robusta)

Ageratum Photinia Fir Forsythia Asparagus Pinus spp. Azalea Gardenia Pittosporum Bottlebrush Geranium **Podocarpus** Bougainvillea Heather Pyracantha Buxus Hedera Rhododendron Camellia Hibiscus Raphiolepis Rosa

CedarIlexRosaCotoneasterJuniperusSedumCrepe MyrtleLeucotheStar JasmineCypressLigustrumThuja

Dogwood Liriope Vinca
Douglas Fir Nandina Xylosema

**Ground Covers** 

Ajuga Fern, Log Liriope

CarpobrotusFern, RoyalOsteospermaDelospermaFern, Shaggy ShieldPachysandraDichondraGanzaniaRibbon GrassErysimumHederaRussian Sage

Fern, Christmas Hypericum Sedum
Fern, Hay-scented Iceplant Silver sage
Fern, Japanese painted Ivy Vinca

Fern, Lady Lantana

**Flowers** 

African Daisy Dahlia Petunia

Aster Daisy Pincushion Flower
Beard-Tongue Daylily Plantain Lily (Hosta)
Bellflower, Tussack Gazania Redrocks Penstemon

Bird of Paradise Geranium Speedwell Blanket Flower Gladiolus Stonecrop Bleeding Heart Leopards Bane Sun Daisy Sunset Hyssop Boltonia Lilly of the Incas Cheddar Pink Moss Pink Yarrow, Common Mums Yellow Loosestrife Clevera

Chrysanthemums Narcissus Zinnia

Coneflower Purple Pasque Flower

#### APPLICATION RATES FOR SITES LISTED ABOVE

**Annual Weeds:** For annual grasses and broadleaf weeds, apply 2-3 gals. of Devrinol 2-XT herbicide per broadcast acre (6-8.8 fl. oz. per  $2^{1}/_{2}$  gallons water per 1,000 sq. ft.). Use the higher rate when weed populations are heavy or when broadleaves are the primary weeds, but only when the use directions above allow it.

In ornamentals, do not apply more than 6 lbs ai. (3 gals. product) per broadcast acre per application, with a total of 12 lbs. a.i. (6 gals. product) allowed per acre per year. A maximum of two applications are allowed on ornamentals.

In almonds, pecans, and grapes, do not apply more than 4 lbs. a.i. (2 gals. product) per broadcast acre (6 fl. oz. per 2 ½ gallons water per 1,000 sq. ft.). A maximum of one application per year is allowed on almond, pecan, and grapes.

Do not apply more than 2 gals. of Devrinol 2-XT herbicide per acre in California.

#### **BULBS - FIELD GROWN**

Iris Narcissus Daffodil Tulip

Lilies

**Annual Weeds:** For annual grasses and broadleaf weeds, apply 2 gals. of Devrinol 2-XT herbicide per broadcast acre (6 fl. oz. per 2½ gallons water per 1,000 sq. ft.) as a surface spray over newly planted bulbs after October 15, but before germination of any annual weed seeds. Apply in 20 to 100 gallons of water per acre using ground spray equipment. Do not apply more than once per season.

OR

Apply 2 gals. of Devrinol 2-XT herbicide per broadcast acre as a surface spray in the spring before germination of summer annual weeds. Do not apply to tulips showing more than 2 inches of top growth.

**TURF GRASS (WARM SEASON GRASSES ONLY)** Devrinol 2-XT herbicide may be used for annual bluegrass, crabgrass and goosegrass control in the following established turf grasses: Bahia, Bermudagrass, Centipede, St. Augustine and Fescue.

**Timing of Application:** For control of crabgrass and goosegrass, apply Devrinol 2-XT herbicide at the listed rate. Apply 2-3 weeks prior to weed emergence. Goosegrass usually starts to germinate 6-7 weeks after the start of crabgrass germination. Devrinol 2-XT herbicide mixed with enough water to give adequate coverage of the area to be treated (but no less than 80 gallons per acre). Use a lawn type spray gun.

Devrinol 2-XT herbicide requires a minimum of one-half (1/2) inch of rainfall or irrigation 2-3 days after application for adequate control. If irrigation methods are not available, move the timing of application of Devrinol 2-XT herbicide back several weeks to allow for some rainfall between application and weed germination.

**For Crabgrass Control:** Apply 1 gal. of Devrinol 2-XT herbicide per acre in 80-120 gallons of water (3 fl. oz. per  $2^{1}/_{2}$  gallons of water per 1,000 sq. ft.).

**For Annual Bluegrass (Poa Annua) Control:** Annual bluegrass is a Winter annual in most of the warm season turf regions; therefore, apply Devrinol 2-XT herbicide in the Fall before the annual bluegrass germinates. Apply 1gal. of Devrinol 2-XT herbicide per acre in 80-120 gals. of water (3 fl. oz. per  $2^{1}/_{2}$  gals. of water per 1,000 sq. ft.).

#### TANK MIXTURE (WARM SEASON TURF GRASSES ONLY)

Observe all cautions and limitations on labeling of all products used in combination.

Make only one application per season.

Apply these combinations only as specified on this label.

For tank mixture application, apply the listed dosage (See Directions for Use) in 80 gals. of water per acre.

#### **Tank Mix Directions**

Proper care must be used in preparing combination tank mixtures to avoid incompatibility problems. Fill the spray tank at least  $^2/_3$  full of water. Start agitation and continue moderate agitation throughout mixing and application. Add, mix and disperse wettable powders first and flowable products next. Make sure each product is thoroughly wetted and dispersed prior to addition of the next product. Complete filling the tank with water, mix thoroughly, and maintain moderate agitation to provide a uniform mix during application. The tank mix combination should not be left in the spray tank for prolonged periods; batches should be mixed and applied the same day. All return lines to the tank must discharge below liquid level.

#### 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 must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

Triple rinse as follows. Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by other

procedures allowed by state and local authorities

## 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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