09/01/2005			
UNITED 574 AM	U.S. EDVIRONMENTAL FROTECTION AGENC Office of Pesticide Programs Requiration Division (7505C) 1200 Lennsylvania Ave., N.W. Washington, D.C. 20460	EPA Reg. Number: 241-360	Date of Issuance: 9/01/05
HR IN PROTECTOR	NOTICE OF PESTICIDE:	Term of Issuance	Ce:
L	Registration <u>X</u> Reregistration	Name of Festici PRE-M 3.3	
(under FIFRA, as	amenderi) of Registrant (include ZIP Code):		
BASF Corpo PO Box 153 Research T			
be submitted to a	labeling differing in substance from that acce nd accepted by the Registration Division prior this product always refer to the above EPA re	to use of the label in cor	
	nformation furnished by the registrant, the ab stered under the Federal Insecticide, Fungicic		∍by
In order to prote cancel the regist with the registra	n no way to be construed as an endorsement or of health and the environment, the Administrat ration of a pesticide in accordance with the A tion of a product under this Act is not to be the name or to its use if it has been covered	or, on his motion, may at a ct. The acceptance of any construed as giving the reg	any time suspend or name in connection
your label:			
IF IN EYES: -Hold eyes oper -Remove contact -Call a poison control IF SWALLOWI -Immediately can -Do not induce -DO NOT GIVI -DO not give any IF ON SKIN OF -Take off contart -Rinse skin imm	Il a poison control center or doctor. vomiting unless told to do so by a poison E ANY LIQUID TO THE PERSON. whing by mouth to an unconscious person & CLOTHING: ninated clothing. ediately with plenty of water for 15-20 mi pontrol center or doctor for treatment advice	es, then continue rinsing ce. control center or doctor.	-
IF IN EYES: -Hold eyes oper -Remove contact -Call a poison co IF SWALLOWI -Immediately ca -Do not induce -DO NOT GIVI -DO not give any IF ON SKIN OF Take off contar -Rinse skin imm -Call a poison co 	a and rinse slowly and gently with water for et lenses, if present, after the first 5 minute ontrol center or doctor for treatment advi- ED: Il a poison control center or doctor. vomiting unless told to do so by a poison E ANY LIQUID TO THE PERSON. withing by mouth to an unconscious person & CLOTHING: ninated clothing. ediately with plenty of water for 15-20 mi ontrol center or doctor for treatment advice	es, then continue rinsing ce. control center or doctor. n. nutes. ce.	-

Page 2 EPA Reg. No. 241-360

2) It is recommended that you add the following subsection in the FIRST AID section: IF INHALED:

-Move person to fresh air.

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-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.

# 3) Revise the PRECAUTIONARY STATEMENTS to the following:

"Causes moderate eye irritation. Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin, or clothing."

4) Move the statement "Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category F on an EPA chemical resistance category selection chart" from under the heading WPS Uses, to BEFORE the heading NON-WPS Uses.

5) In the PPE section, NON-WPS uses, change the subheading "Mixers, loaders, applicators and all other handlers must wear:" to "Mixers and loaders must wear:"

6) Add the following Engineering Controls statement after the PPE section: "When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements liked 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."

7) Add the statement "Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them." after the WPS USES section of the PPE.

8) On page 4, under the subheading SWATH ADJUSTMENT, change the word "Downward" to "downwind."

9) On page 4 and page 7 the statements "THE USER ASSUMES RESPONSIBILITY FOR ANY CROP DAMAGE OR OTHER LIABILITY." are unacceptable. Revise these statements to "BASF intends that the user assumes responsibility for any crop damage or other liability."

You will submit one (1) copy of your final printed labeling before you release the product for shipment. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). A stamped copy of labeling is enclosed for your records. If you have any questions, please contact Hope Johnson at 703-305-5410.

James A. Ton pkins

Product Manager 25 Herbicide Branch Registration Division (7505C)



# **PRE-M**<sup>®</sup> 3.3 EC Turf Herbicide

An Emulsifiable Concentrate for Use as a Preemergent Weed Control in Noncropland Areas, Lawns and Other Turf Areas, Production and Established Landscape Ornamentals, Non-Bearing Fruit and Nut Trees, and Christmas Tree Plantations

# **ACTIVE INGREDIENT:**

pendimethalin, N-(1-ethylpropyi)-3,4-dimethyl-2, 6-dinitrobenzenamine
INERT INGREDIENTS*:
TOTAL
(1 gallon contains 3.3 lbs. of pendimethalin)

\*Contains Petroleum Distillates

EPA Reg. No. 241-360

# KEEP OUT OF REACH OF CHILDREN CAUTION/IPRECAUCIÓN!

PRECAUCION AL USUARIO: Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. If you do not understand the label, find someone to explain it to you in detail.

See insdie booklet for complete First Aid, Precautionary Statements, Directions For Use and Conditions of Sale and Warranty.

**NET CONTENTS:** 

ACCEPTED with COMMENTS in EPA Letter Dated

# SEP 1 2005

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

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BASF Corporation Agricultural Products 26 Davis Drive Research Triangle Park, NC 27709

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	FIRST AID	
lf in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
If swallowed	<ul> <li>Call a poison control center or doctor for treatment advice.</li> <li>Have the person sip a glass of water if able to swallow.</li> <li>DO NOT induce vomiting unless told to do so by a poison control center or doctor</li> <li>DO NOT give anything by mouth to an unconsious person.</li> </ul>	
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice</li> </ul>	

**NOTE TO PHYSICIAN**: Contains petroleum distillate - vomiting may cause aspiration pneumonia. Because of increased chemical pneumonia or pulmonary edema caused by aspiration of the hydrocarbon solvent, vomiting should be induced only under professional supervision.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-832-HELP (4357) for emergency medical treatment information.

# 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. Wear long-sleeved shirt and long pants, socks, shoes, and chemical resistant gloves (such as barrier laminate, nitrile rubber, neoprene rubber, and/or viton). Wash hands before eating, drinking, chewing gum, using tobaco, or using the toliet.

# **Personal Protective Equipment (PPE):**

# NON-WPS USES:

Applicators and other handlers (except mixers/loaders) who handle this pesticide for any use NOT covered by the Worker Protection Standard (40 CFR Part 170) – in general, only agricultural-plant uses are covered by the WPS – must wear:

- · Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as nitrile rubber (≥ 14 mils)
- Shoes plus socks
- Mixers, loaders, applicators and all other handlers must wear:
- · Long-sleeved shirt and long pants, or coveralls
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, or viton ≥ 14 mils
- Shoes plus socks
- · Goggles or face shield

#### WPS USES:

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

Mixers, loaders, applicators and all other handlers must wear:

- Long-sleeved shirt and long pants
- · Shoes plus socks
- · Goggles or face shield
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, or viton ≥ 14 mils

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

# User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing 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, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. **DO NOT** contaminate water when disposing of equipment washwaters.

# DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application.

**DO NOT** apply this product through any type of irrigation system.

BASF does not recommend or authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application to turf or ornamentals.

**DO NOT** apply this product in a way that will contact any person or pet, either directly or through drift. Keep people and pets out of the area during application. 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.

# 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**.

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:

- Coveralis
- Chemical-resistant gloves, such as barrier laminate butyl rubber ≥ 14 mils, nitrile rubber ≥14 mils, neoprene rubber ≥ 14 mils, or viton ≥ 14 mils.
- Shoes plus socks

# 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 or allow others to enter the treated area until sprays have dried.

# FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR CROP INJURY.

# STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal. **PESTICIDE STORAGE: DO NOT** STORE BELOW 40°F. Extended storage at temperatures below 40°F can result in the formation of crystals on the bottom of container. If crystallization does occur, store the container on its side at room temperature (70°F) and rock occasionally until crystals redissolve.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Observe all cautions and limitations in this label and the labels of products used in combination with **PRE-M® 3.3 EC Turf Herblcide**. The use of **PRE-M 3.3 EC** not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

#### **GENERAL INFORMATION**

**PRE-M 3.3 EC** is recommended for use on plants intended for aesthetic purposes in landscaped grounds or being grown in fields, containers, or beds in production. **PRE-M 3.3 EC** can be used for preemergence weed control in interior plantscapes, or on ornamental gardens or parks, or on golf courses or lawns and landscape plantings.

**PRE-M 3.3 EC** is recommended for pre-emergence control of grasses and certain broadleaf weed species as they germinate on noncropland areas, in ornamentals, Christmas tree plantings, non-bearing fruit and nut trees, unimproved turf, and other vegetation control.

**PRE-M 3.3 EC** will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or **PRE-M 3.3 EC** may be used in conjunction with herbicides registered for post-emergence use in noncropland areas. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in noncropland areas.

# MIXING INSTRUCTIONS

- 1. Fill tank one-half to three-quarters full with clean water.
- 2. Add **PRE-M 3.3 EC** to the partially filled tank while agitating and then fill the remainder of the tank with water.
- MAINTAIN CONTINUOUS AGITATION WHILE ADDING PRE-M 3.3 EC AND UNTIL SPRAYING IS COMPLETED. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.
- PRE-M 3.3 EC is to be used in tank mixtures with other registered herbicides, then follow directions on the labels of those products which recommend tank mixing.

**Backpack Sprayer:** Begin with a clean spray tank. Fill the spray tank one-haif full with clean water and add the required amount of **PRE-M 3.3 EC** to the sprayer. Cap sprayer and agitate to ensure mixing. Uncap sprayer and finish filling tank to desired level. Cap sprayer and agitate once again. During application it is desirable to agitate the mixture on occasion to ensure mixing. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential before spraying is resumed.

Liquid Fertilizers: Prior to mixing, small quantities should always be tested using a simple jar test. Add the required amount of **PRE-M 3.3 EC** half-filled spray tank while agitating then add the fertilizer product. Complete filling spray tank to desired level.

Dry Bulk Fertilizers: PRE-M 3.3 EC may be impregnated on dry bulk fertilizers. When applied as directed, PRE-M 3.3 EC/Dry Bulk Fertilizer mixtures provide weed control equal to that provided by the same rates of PRE-M 3.3 EC applied in water.

# SPRAYING INSTRUCTIONS

# **GROUND APPLICATIONS**

Uniformly apply with properly calibrated ground equipment in sufficient water per acre to uniformly treat the area with a spray pressure of 25 to 50 psi. Suggested spray volumes are 20 - 200 gpa for professional turgrass, landscape and ornamental applications and 10-200 gpa for all other noncrop applications such as roadsides, utility rights-of-way or soft-residual bareground applications. Maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above those recommended. Avoid application when winds may cause drift.

Avoid unintentional contact of spray solution with driveways, stone, wood, or other porous surfaces. Rinse immediately with water to avoid staining. Avoid mechanically scrubbing until surface area is thoroughly rinsed. Treated turfgrass should be dry before entering to avoid staining onto non-treated surfaces.

# AERIAL APPLICATIONS

Uniformly apply in 5 or more gallons of water per acre. Exercise caution to minimize drift. **DO NOT** apply during periods of gusty winds or when wind conditions favor drifting. Spray drift can cause injury to sensitive crops. It is recommended that a flagman or an automatic mechanical flagging unit on the aircraft be used to avoid overlapping and possible crop injury.

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops:

- 1. The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they should be observed. The applicator should be familiar with and take into account the in-formation covered in the Aerial Drift Reduction Advisory Information presented below.

#### INFORMATION ON DROPLET SIZE

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see WIND, TEMPERATURE AND HUMIDITY, and TEMPERATURE INVERSIONS).

#### CONTROLLING DROPLET SIZE

- Volume Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure DO NOT exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.

# CONTROLLING DROPLET SIZE (continued):

- Nozzle Orientation Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

#### **BOOM LENGTH**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

#### **APPLICATION HEIGHT**

Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

#### SWATH ADJUSTMENT

When applications are made with a crosswind, the swath will be displaced downward. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### WIND

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

#### **TEMPERATURE AND HUMIDITY**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

# **TEMPERATURE INVERSIONS**

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

#### SENSITIVE AREAS

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

# NONCROPLAND WEED CONTROL

PRE-M<sup>®</sup> 3.3 EC Turf Herbicide is recommended for preemergence control of most annual grasses and certain broadleaf weeds as they germinate on noncropland areas such as railroad, utility, highway, and pipeline rights-of-way; highway guardrails, delineators, and sign posts; utility substations; petroleum tank farms; pumping installations; fence rows; storage areas; windbreaks and shelterbelts, and other similar areas.

For post-emergence control of weeds, tank-mix combinations of **PRE-M 3.3 EC** plus **ARSENAL® herbicide** are recommended, **DO NOT** tank mix with **ARSENAL** in California. Recommended rates for the tank-mix compounds should be determined from the product labels of both **PRE-M 3.3 EC** and **ARSENAL** prior to use. See Table on WEED SPECIES CONTROLLED for rates.

# PRODUCTION AND ESTABLISHED LANDSCAPE ORNAMENTALS

**PRE-M 3.3 EC** can be used in and around field, liner or container nurseries, established ornamentals or gardens, or in general grounds maintenance, or parks, around military or other institutions, or commercial establishments, or cemeteries, and other similar areas.

**PRE-M** 3.3 EC is recommended for use on the following established ornamentals and ground covers planted in noncropland areas such as highway rights-of-way, utility substations, mulch beds, parking areas, statuary or monuments, or similar areas.

# **ORNAMENTAL RESTRICTIONS**

Apply **PRE-M 3.3 EC** to established plantings. **PRE-M 3.3 EC** can be safely applied over-the top of those plants listed below WITH THE FOLLOWING RESTRICTIONS.

- DO NOT make applications to grafted (or budded) liners at any time.
- DO NOT make over-the-top applications to liners or transplants using PRE-M 3.3 EC.
- DO NOT apply PRE-M 3.3 EC to liners or transplants during bud break or at time of first flush or new growth.
- Direct sprays to soil when making applications to established liners or transplants. DO NOT allow spray to cover or penetrate foliage and/or buds or injury is likely to occur.
- DELAY applying PRE-M 3.3 EC to seedbeds, transplant beds, or liners until plants have become well rooted. Care must be taken that soil or planting mixes has settled firmly following transplanting and that there are not cracks that would allow direct contact of PRE-M 3.3 EC with roots. When established rootstock an application of PRE-M 3.3 EC can be made prior to budding/grafting the plants.
- Plant only those desirable plant species listed on this label into soil treated the previous sason with PRE-M 3.3 EC or injury may occur.<sup>1</sup>
- For container grown ornamentals, delay first application of this product to bareroot liners 2 - 4 weeks after transplanting.
- DO NOT APPLY PRE-M 3.3 EC in greenhouses, shadehouses, or other enclosed structures.

It is recommended that treated plants be evuluated for 1 - 2 months prior to making application to a large number of plants. THE USER ASSUMES RESPONSIBILITY FOR ANY CROP DAMAGE OR OTHER LIABILITY.

#### ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing Roundup PRO<sup>®</sup>, Finale<sup>®</sup>, Ornamec<sup>®</sup>, Gallery<sup>®</sup>, Princep<sup>®</sup>, and other similar products. **DO NOT** apply sprays containing Roundup PRO or Finale over the top of ornamental plants.

Before tank mixing a simple jar test is recommended to insure compatibility of herbicides.

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with **PRE-M® 3.3 EC** and follow those that are most restrictive.

# RECOMMENDED SPECIES

**PRE-M** 3.3 EC sprays are safe around and over the top of the established plants listed on the following pages. However, not all varieties or strains of the plants listed have been tested. Unintentional consequences such as crop injury may result because of certain environmental or growing conditions, manner of use or application. Therefore, before treating a large number of plants, spray a few plants and observe for plant damage prior to full-scale application.

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Refer to Table on WEED SPECIES CONTROLLED for rates.

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TREES	A.1 110 51
Common Name	Scientific Name
Alder, European black	Alnus glutinosa
Apple	Malus spp.
Arborvitae, American	Thuja occidentalis
Arbutus	Arbutus spp.
Ash, Red	Fraxinus pennsylvanica
Ash, White	Fraxinus americana
Aspen, Bigtooth	Populus grandidentataAspen
Aspen, Quaking	Populus tremuloides
Basswood	Tilia spp.
Birch, European Weeping	Betula pendula
Birch, River	Betula nigra
Buckeye, Red	Aesculus pavia
Cedar, White	Thuja occidentalis
Chamaecyparis, Boulevard	Chamaecyparis pisifera
Cherry, Black	Prunus serotina
Cherry, Choke	Prunus virginiana
Cherry, Kwanzan	Prunus serrulata
Cherry, Nanking	Prunus tomentosa
Cottonwood	Populus deltoides
	Malus spp.
Crabapple Crepe myrtle	Lagerstroemia indica
	Cryptomeria japonica
Cryptomeria, Japanese Cedar	Taxodium distichum
Sypress, Baid	Cupressocyparis Leylandii
	Comus florida
Dogwood, Flowering	
Dogwood, Korean	Comus Kousa
Dogwood, Silky	<u>Comus amomum</u>
Dogwood, Shrub	Comus spp.
	Ulmus japonica
ir, Balsam	Abies balsamae
īr, Douglas	Pseudotsuga menziesii
fir, Fraser	Abies fraseri
ir, White	Abies concolor
ranklinia	Franklinia spp.
Binkgo	Ginkgo biloba
Gum, Black	Nyssa sylvatica
Gum, Sour	Nyssa sylvatica
law, Black	Viburnum prunifolium
lawthom	Crataegus spp.
lemlock, Canada	Tsuga canadensis
lemlock, Eastern	Tsuga canadensis
Iolly, American	llex opaca
loneylocust	Gleditsia triacanthos
ilac, Common	Syringa vulgaris
Lilac, Japanese Tree	Syringa reticulata
inden	Tilia spp.
Magnolia, Saucer	Magnolia soulangiana
Magnolia, Southern	Magnolia grandiflora
Agnolia, Star	Magnolia stellata
Aaidenhair Tree	Ginkgo biloba
laple, Norway	Acer platanoides
Maple, Japanese	Acer palmatum
Vlaple, Bed	Acer rubrum
	Acer saccharum
Maple, Sugar	
Nannyberry, Rusty	Viburnum rufidulum
Dak, Chinquapin	Quercus muehlenbergii
Dak, Live	Quercus virginiana
Dak, Pin	Quercus palustris
Dak, Red	Quercus rubra

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Oak, Swamp chestnut	Quercus michauxil
Oak, Water	Quercus nigra
Oak, White	Quercus alba
Oak, Willow	Ouercus phellos
Olive Polm Date	Olea europaea Phoenix spp.
Palm, Date Palm, Fan	Washingtonia spp.
Palm, Pindo	Butia spp.
Palm, Washington	Washingtonia spp.
Peach	Prunus persica
Pear, Bradford	Pyrus calleryana 'Bradford'
Pecan	Carya illinoensis
Pine. Austrian	Pinus nigra
Pine, Italian Stone	Pinus pinea
Pine, Lobiolly	Pinus taeda
Pine, Monterey	Pinus radiata
Pine, Red	Pinus resinosa
Pine, Scotch	Pinus sylvestris
Pine, Slash	Pinus elliottii
Pine, Virginia	Pinus virginiana
Pine, White	Pinus strobus
Plum, Purple Leaf	Prunus cerasifera
Poplar, Black	Populus nigra
Redcedar, Eastern	Juniperus virginiana
Redcedar, Western	Thuja plicata
Red Ironbark	Eucalyptus sideroxylon 'Rosea'
Redwood, Dawn	Metasequoia glyptostroboides
Sequoia, Giant	Sequoiadendron giganteum
Serviceberry	Amelanchier laevis
Sourwood	Oxydendrum arboreum
Spruce, Colorado Blue	Picea pungens
Spruce, Dwarf Alberta	Picea glauca 'albertiana'
Spruce, Norway	Picea abies
Spruce, White	Picea glauca
Sweetgum	Liquidambar styracifiua
Sycamore	Platanus occidentalis
Sycamore	
Trachycarpus	Trachycarpus spp.
Trachycarpus Tulip tree	Trachycarpus spp. Liriodendron tulipifera
Trachycarpus Tulip tree Walnut, Black	Trachycarpus spp. Liriodendron tulipifera Juglans nigra
Trachycarpus Tulip tree Walnut, Black Willow, Weeping	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica
Trachycarpus Tulip tree Walnut, Black	Trachycarpus spp. Liriodendron tulipifera Juglans nigra
Trachycarpus Tulip tree Walnut, Black Willow, Weeping	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp.
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry, Japanese	Trachycarpus spp. Liriodendron tulipifera Jugians nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Japanese Blue Indigo Bush	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Japanese Blue Indigo Bush Bottlebrush, Lemon	Trachycarpus spp. Liriodendron tulipifera Jugians nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Callistemon citrinus
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Barberry Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common	Trachycarpus spp. Liriodendron tulipifera Jugians nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Callistemon citrinus Buxus sempervirens
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Barberry Barberry Barberry, Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common Boxwood, Japanese	Trachycarpus spp. Liriodendron tulipifera Jugians nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Caliistemon citrinus Buxus sempervirens Buxus microphylla Camellia japonica Gardenia jasminoides
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Common Boxwood, Common Boxwood, Japanese Camelia	Trachycarpus spp. Liriodendron tulipifera Jugians nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Callistemon citrinus Buxus sempervirens Buxus microphylla Camellia japonica
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Barberry Barberry Barbery, Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common Boxwood, Japanese Camelia Cape jasmine	Trachycarpus spp. Liriodendron tulipifera Jugians nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Caliistemon citrinus Buxus sempervirens Buxus microphylla Camellia japonica Gardenia jasminoides
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Barberry Barberry Barberry Barbery, Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common Boxwood, Japanese Camelia Cape jasmine Cordyline Correa Cotoneaster	Trachycarpus spp. Liriodendron tulipifera Jugians nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Callistemon citrinus Buxus sempervirens Buxus microphylla Camellia japonica Gardenia jasminoides Cordyline spp.
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Barberry Barberry Barbery, Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common Boxwood, Japanese Camelia Cape jasmine Cordyline Correa	Trachycarpus spp. Liriodendron tulipifera Jugians nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Callistemon citrinus Buxus sempervirens Buxus microphylla Carnellia japonica Gardenia jasminoides Cordyline spp. Correa spp.
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Barberry Barberry Barberry Barbery, Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common Boxwood, Japanese Camelia Cape jasmine Cordyline Correa Cotoneaster	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergli Dalea gregii Callistemon citrinus Buxus sempervirens Buxus microphylla Camellia japonica Gardenia jasminoides Cordyline spp. Correa spp. Cotoneaster apiculatus
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Barberry Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Japanese Camelia Cape jasmine Cordyline Correa Cotoneaster Cotoneaster Cotoneaster, Bearberry	Trachycarpus spp. Liriodendron tulipifera Jugians nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergli Dalea gregii Callistemon citrinus Buxus sempervirens Buxus microphylla Carnellia japonica Gardenia jasminoides Cortyline spp. Correa spp. Cotoneaster apiculatus Cotoneaster dammeri
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Barberry Barberry Barbery, Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common Boxwood, Japanese Camelia Cape jasmine Cordyline Correa Cotoneaster Cotoneaster, Bearberry Cotoneaster, Rock	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Callistemon citrinus Buxus sempervirens Buxus microphylla Carnellia japonica Gardenia jasminoides Cordyline spp. Correa spp. Cotoneaster apiculatus Cotoneaster horizontalis
Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood SHRUBS Common Name Abelia, Glossy Aucuba, Gold Azalea Bamboo, Heavenly Barberry Barberry Barberry Barberry Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common Boxwood, Japanese Cameliia Cape jasmine Cordyline Correa Cotoneaster Cotoneaster Cotoneaster, Bearberry Cotoneaster, Rock Cypress, Italian	Trachycarpus spp. Liriodendron tulipifera Juglans nigra Salix babylonica Cladrastis lutea Scientific Name Abelia grandiflora Aucuba japonica Rhododendron spp. Nandina domestica Berberis gladwynensis Berberis thunbergii Dalea gregii Callistemon citrinus Buxus sempervirens Buxus microphylla Carnellia japonica Gardenia jasminoides Cordyline spp. Correa spp. Cotoneaster apiculatus Cotoneaster dammeri Cotoneaster horizontalis Cupressus sempervirens

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#### SHRUBS (continued) Common Name Scientific Name Dogwood, Red Twig Cornus sericea Elaeagnus Elaeagnus Ebbingei Escallonia Escallonia fradesil Euonymus Euonymus fortunei Euonymus, Golden Euonymus japonica Euonymus, Winged Euonymus alata Firethorn Pyracantha coccinea Forsythia, Border Forsythia intermedia Fragrant Olive Osmanthus fragrans Fuschia, California Zauschineria californica Gardenia Gardenia jasminoides Hawthorne, Indian Raphiolepis indica Hibiscus Hibiscus syriacus Holly, Chinese llex comuta Holly, Japanese llex crenata Holly, Fosters llex attenuata 'Fosteri' Holly, Savannah llex attenuata Holly, Yaupon llex vomitoria Honeysuckle, Bush Diervilla Ionícera Juniper Juniperus spp. Juniperus chinensis v. 'Pfitzerana' Juniper, Chinese Juniper, Shore Juniperus conferta Juniper, Trailing Juniperus horizontalis Laurei, Cherry Prunus laurocerasus Laurel, Mountain Kalmia latifolia Laurel, Otto Luyken Prunus laurocerasus Laurel, Schipka Prunus schipkanensis Laurustinus Viburnum tinus Lavandula angustifolia Lavender, English Leucothoe Leucothoe fontanesiana Leucothoe, Coast Leucothoe axillaris Lilac, Cut-leaf Syringa laciniata Lily-of-the-Nile Agapanthus africanus Mahonia Mahonia aquifolium Mock Orange Pittosporum tobira Myrtle, Compact Myrtus communis Myrtle, Wax Myrica cerifera Nandina Nandina domestica Oleander Nerium oleander Oregon Grape Mahonia aquifolium Osmanthus Osmanthus fragrans Pairn, European Fan Chamaerops humilis Palm, Mediterranean Fan Chamaerops spp Phlox, Prickly Leptodactylon californicum Photinia, Fraser Photinia x Fraseri Pieris, Japanese Pieris japonica Pine, Mugo Pinus mugo Plum, Natai Carissa grandiflora Privet, California Ligustrum ovalifolium Privet, Glossy Ligustrum lucidum Privet, Variegated Ligustrum sinensis Privet, Waxleaf Ligustrum japonicum Pyracantha Pyracantha coccinea Quince, Flowering Chaenomeles japonica Ranger, Texas Leucophyllum frutescens Redroot Ceanothus spp Rhododendron Rhododendron spp. Pittosporum tobiri Robira Spice Plant Illicium parviflorum Spiraea Spiraea x vanhouttei Spiraea, Anthony Waterer Spiraea x Bumalda

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Spiraea, Japanese	Spirea japonica
Sweet Bay	Laurus nobilis
Trumpet Bush	Tecoma stans
Verbena, Lemon	Aloysia triphylla
Viburnum	Viburnum suspensum
Vitex	Vitex spp.
Weigela	Weigela florida
Wild Lilac	Ceanothus spp.
Xylosma	Xylosma congestum
Yellowbells	Tecoma stans
Yew*	Taxus media
Yew, Japanese*	Taxus cuspidata
Yew, Southern	Podocarpus macrophyllus
Yucca, Adam's	Yucca filamentosa
Yucca, Weeping	Yucca pendula
the terminals may occu	be made during spring growth or injury to r.
GROUND COVERS	
Common Name	Scientific Name
Ajuga	Ajuga reptans
Capeweed	Arctotheca calendula
Cinquefoll, Spring	Potentilla verna
Daisy, Trailing African	Osteospermum fruticosum
Gazania	Gazania splendens
Iceplant, Large Leaf	Carpobrotus edulis
lvy, English	Hedera helix
lvy, Geranium	Pelargonium peltatum
Jasmine, Asiatic	Trachelospermum asiaticum
Jasmine, Primrose	Jasminum mesnyi
Mondograss	Ophiopogon japonica
Myoporum	Myoporum parvifiolium
Myoporum Pachysandra	Pachysandra terminalis
Myoporum Pachysandra Potentilla	Pachysandra terminalis Potentilla fruticosa
Myoporum Pachysandra Potentilla Rose-Of-Sharon	Pachysandra terminalis Potentilla fruticosa Hypericum calycinum
Myoporum Pachysandra Potentilla Rose-Of-Sharon Wintercreeper	Pachysandra terminalis Potentilla fruticosa
Myoporum Pachysandra Potentilla Rose-Of-Sharon Wintercreeper PERENNIALS	Pachysandra terminalis Potentilla fruticosa Hypericum calycinum
Myoporum Pachysandra Potentilla Rose-Of-Sharon Wintercreeper PERENNIALS Common Name	Pachysandra terminalis Potentilla fruticosa Hypericum calycinum
Myoporum Pachysandra Potentilla Rose-Of-Sharon Wintercreeper PERENNIALS	Pachysandra terminalis Potentilla fruticosa Hypericum calycinum Euonymous fortunei
Myoporum Pachysandra Potentilla Rose-Of-Sharon Wintercreeper PERENNIALS Common Name	Pachysandra terminalis Potentilla fruticosa Hypericum calycinum Euonymous fortunei Scientific Name
Myoporim Pachysandra Potentilla Rose-Of-Sharon Wintercreeper PERENNIALS Common Name Bleeding Heart	Pachysandra terminalis Potentilla fruticosa Hypericum calycinum Euonymous fortunei Scientific Name Dicentra spectabilis
Myoporum Pachysandra Potentilla Rose-Of-Sharon Wintercreeper PERENNIALS Common Name Bleeding Heart Calla lily	Pachysandra terminalis Potentilla fruticosa Hypericum calycinum Euonymous fortunei Scientific Name Dicentra spectabilis Zantedeschia aethiopica
Myoporum Pachysandra Potentilla Rose-Of-Sharon Wintercreeper PERENNIALS Common Name Bleeding Heart Calla lily Canna, common garden	Pachysandra terminalis Potentilla fruticosa Hypericum calycinum Euonymous fortunei Scientific Name Dicentra spectabilis Zantedeschia aethiopica Canna generalis 'Lucifer'
Myoporum Pachysandra Potentilla Rose-Of-Sharon Wintercreeper PERENNIALS Common Name Bleeding Heart Calla Illy Canna, common garden Chincherinchee	Pachysandra terminalis Potentilla fruticosa Hypericum calycinum Euonymous fortunel Scientific Name Dicentra spectabilis Zantedeschia aethiopica Canna generalis 'Lucifer' Ornithogalum thyrsoides

Freesia x hybrida

Calluna vulgaris

Liriope spicata

Liriope muscari

Acidanthera bicolor

Paeonia lactiflora

Zephyranthes spp.

Wisteria spp.

Crocosmia crocosmiiflora

Hosta spp.

Lillium spp.

Freesia

Hosta

Lily

Heather Dwarf

Liriope, Creeping

Orchid, Peacock

Peony, Chinese

Montbretia

Wisteria

Zephyr Lily

Liriope, Variegated

ORNAMENTAL GRASSES		
Common Name	Scientific Name	
Beach Grass	Ammophila breviligulata	
Fescue, Blue	Festuca ovina	
Fescue, Sheep	Festuca ovina	
Fountain Grass	Pennisetum setaceum	
Pampas Grass	Cortaderia selloana	
Reed Canary Grass	Phalaris arundinacea	
Reed, Giant	Arundo spp.	
Ribbon Grass	Phalaris arundinacea	
Tufted Hair Grass	Deschampsia caespitosa	

**PRE-M® 3.3 EC Turf Herbicide** may be used on plant species not listed on this label. The suitability for such uses should be determined by treating a small number of such plants at the recommended rate. Treated plants should be evaluated 1-2 months following treatment for possible injury. THE USER ASSUMES RESPONSIBILITY FOR ANY CROP DAMAGE OR OTHER LIABILITY. **DO NOT** treat plants grown for food or feed. **DO NOT** use treated plants for food or feed.

# WEED CONTROL IN CHRISTMAS TREE PLANTATIONS

**PRE-M® 3.3 EC** is recommended for preemergence control of the weed species listed on this label as they germinate in areas planted with the following Christmas trees:

Common Name	Scientific Name
*Austrian Pine	Pinus nigra
*Balsam Fir	Abies balsamae
Colorado Blue Spruce	Picea pungens
Douglas Fir	Pseudotsuga Menziesii
*Scotch Pine	Pinus sylvestris
*Virginia Pine	Pinus virginiana
White Fir	Abies concolor
White Spruce	Picea glauca

\* Do not use in California.

**PRE-M 3.3 EC** can be applied directly over the top of established Christmas trees. DELAY applying **PRE-M 3.3 EC** to seedbeds, transplant beds, or bareroot liners until plants have become well rcoted.

**PRE-M 3.3 EC** will not control established weeds. Therefore, areas to be treated should be free of established weeds at the time of treatment, or **PRE-M 3.3 EC** may be used in conjunction with herbicides registered for postemergence use in Christmas trees. Consult the labels of those herbicides for suggested treatments, rates to be used and precautions or restrictions for use in Christmas trees.

# WEED CONTROL IN NON-BEARING FRUIT AND NUT CROPS AND VINEYARDS

**PRE-M 3.3 EC** may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non-bearing crops:

Almond Apple	Citrus Fig	Olive Peach	Pistachio Plum	
Apricot	Grape	Pear	Prune	
Cherry	Nectarine	Pecan	Walnut, English	

#### Refer to Table on WEED SPECIES CONTROLLED for rates.

Apply the spray directly to the ground below the trees or vines. Care must be taken that soil or planting mixes have settled firmly following transplanting and that there are no cracks that would allow direct contact of **PRE-M 3.3 EC** and roots. Directed sprays where soil and media surfaces are uniformly covered will result in best weed control and plant tolerance. For newly transplanted and one year old grapevines, apply only when they are dormant. **DO NOT** apply if buds have started to swell. **PRE-M 3.3 EC** may be used where the roots of a fruit, vine, nut, or ornamental plant encroach into a treatable area.

# WEED SPECIES CONTROLLED

For pre-emergence control of the weed species listed, apply **PRE-M 3.3 EC** at the following rates:

Length of Control	PRE-M 3.3 EC Turf Herbicide	Ounces Required to Treat 1000 sq ft
Short Term Control (2-4 months)	2.4 Quarts/Acre	1.8 oz
Long Term Control (6-8 months)	4.8 Quarts/Acre	3.6 oz

# PRE-M 3.3 EC will not control established weeds.

The efficacy of **PRE-M 3.3 EC** will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If **PRE-M 3.3 EC** is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

The following grass and broadleaf weeds are controlled by preemergence treatments of **PRE-M 3.3 EC** at the rates recommended:

#### GRASSES CONTROLLED

Common Name	Scientific Name	
Barnyardgrass	Echinochloa crus-galli	
Bluegrass, Annual	Poa annua	
Crabgrass	Digitaria spp.	
Crowfootgrass	Dactyloctenium aegyptium	
Foxtail, Giant	Setaria faberi	
Foxtail, Green	Setaria viridis	
oxtail, Yellow	Setaria lutescens	
Boosegrass	Eleusine indica	
tchgrass	Rottboellia exaltata	
ohnsongrass (from seed)	Sorghum halepense	
unglerice	Echinochloa colonum	
ovegrass	Eragrostis spp.	
anicum Browntop	Panicum fasciculatum	
anicum, Fall	Panicum dichotomiflorum	
Panicum Texas	Panicum texanum	
andbur, Field	Cenchrus incertus	
lignalgrass	Brachiaria platyphylla	
prangletop, Mexican	Leptochloa uninervia	
prangletop, Red	Leptochloa filiformis	
litchgrass	Panicum capillare	
/oolly Cupgrass	Eriochloa villosa	

# BROADLEAF WEEDS CONTROLLED

Common Name	Scientific Name
Burweed, Lawn	Soliva ptersoperma
Carpetweed	Mollugo verticillata
Chickweed, Common	Stellaria media
Chickweed, Mouseear	Cerastium vulgatum
Clover, Hop	Trifolium procumbens
Cudweed	Gnaphalium spp.
Eveningprimrose	Oenothera blennis
Fiddleneck	Amsinckla intermedia
Filaree	Erodium spp.
Henbit	Lamium amplexicaule
Knotweed (prostrate)	Polygonum aviculare
Kochia	Kochia scoparia
Lambsquarters	Chenopodium album
Pigweed	Amaranthus spp.
ouncturevine	Tribulus terrestris
Purslane	Portulaca oleracea
Pusley, Florida	Richardia scabra
Rocket, London	Sisymbrium irio
Sheperdspurse	Capsella bursa-pastoris
Smartweed, Pennsylvania	Polygonum pensylvanicum
Speedwell, Com	Veronica arvensis
Spurge, Annual	Euphorbia spp.
Spurge, Prostrate	Euphorbia humistrata
Noodsorrel, Yellow	Oxalis stricta
Velvetleaf (Buttonweed)	Abutilon theophrasti

# WEED CONTROL IN LAWNS AND TURF

**PRE-M 3.3 EC** provides preemergence control of most annual grasses and certain broadleaf weeds as they germinate in any turfgrass site (lawns, sod, turf areas). Examples of such sites include, but are not limited to: grounds or lawns around residential and commercial establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields or jogging paths, areas around houses of worship, cemeteries; golf courses; prairiegrass areas; and sod farms.

<u>Turfgrass Types:</u> **PRE-M 3.3 EC Turf Herbicide** should only be applied to well established lawns and turf.

**PRE-M 3.3 EC** can be used on the following turfgrasses: Bahiagrass, Bermudagrass, Centipedegrass, Fine Fescue, Kentucky Bluegrass, Perennial Ryegrass, St. Augustinegrass, Tall Fescue, Zoysiagrass.

# **GENERAL TURF INFORMATION**

Use only on well-established turfgrass with a dense and uniform stand.

DO NOT use on greens or injury may occur.

PRE-M 3.3 EC treatments will not control established weeds.

Applications must be made prior to germination of weeds.

Allow at least 2 months between applications except where indicated under **RATE AND APPLICATION CHART**.

#### MIXING AND APPLICATION INSTRUCTIONS

Add **PRE-M 3.3 EC** slowly to partially filled tank (one-haif to threequarters full) of water while agitating and then fill the remainder of the tank with water. MAINTAIN CONTINUOUS AGITATION WHILE ADDING **PRE-M 3.3 EC** AND UNTIL SPRAYING IS COMPLETED. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying as needed.

Apply with properly calibrated equipment in sufficient water per acre to provide uniform spray distribution. Low pressure (25-50 psi) sprayers are recommended. Avoid application when winds may cause drift.

#### COMPATIBILITY

**PRE-M 3.3 EC** is compatible with most commonly used herbicides. When **PRE-M 3.3 EC** is used in tank mixture with another herbicide, refer to each label for rates, methods of application, proper timing, weeds controlled, limitations, and precautions. <u>Always use</u> in accordance with the more restrictive label limitations and precautions. When tank mixing be sure to add **PRE-M 3.3 EC** to the partially filled tank first, mix thoroughly, and then add combination products to the mixture; **DO NOT** apply tank mix combinations unless previous experience indicates the mixture is effective and will not result in application problems or plant injury. **DO NOT** attempt to mix **PRE-M 3.3 EC** with two parts water and add this diluted mixture slowly into the tank while agitating.

# PRECAUTIONS ON TURF

Not for use on bentgrass or *Poa annua* (putting greens and tees) or on dichondra, where these are desired species.

This product may cause yellowing and thinning of cool season grasses in winter overseeded turf.

Delay seeding by 3 months and sprigging by 5 months after application. Prior to seeding or sprigging, the soil surface should be disturbed or worked to dilute any remaining chemical residue.

On newly planted areas, wait until the grass has been mowed at least 4 times and has filled in before applying product.

On turf that has been severely thinned due to winter damage, excessive soil moisture, low temperature (below 40°F), scalping, insects, disease, etc., wait until turf has filled in and rooting of stolons is complete before applying.

This product may stain, thus avoid contact with areas such as sidewalks, driveways, etc. If contact with the spray mixture occurs, promptly rinse with water.

**PRE-M 3.3 EC** treatments are most effective in controlling weeds when adequate rainfall or overhead irrigation is received within 7 days after irrigation.

Weeds Species Controlled: When applied as directed, PRE-M 3.3 EC will control the following weed species:

#### GRASSES CONTROLLED

Common Name	Scientific Name	
Annual bluegrass	Poa annua	
Barnyardgrass	Echinochioa crus-galli	
Crabgrass	Digitaria spp.	
Fall panicum	Panicum dichotomiflorum	
Foxtail	Setaria spp.	
Goosegrass	Eleusine indica	
BROADLEA	F WEEDS CONTROLLED	
Common Name	Scientific Name	
Common chickweed	Stellaria media	
Cudweed	Gnaphalium spp.	
Hop clover	Trifolium procumbens	
Henbit	Lamium amplexicaule	
Knotweed	Polygonum avicularc	
Mouseear chickweed	Cerastium vulgatum	
Prostrate spurge	Euphorbia supina	
Purstane	Portulaca oleracea	
Oxalis	Oxalis spp.	
Evening primrose	Oenothera biennis	

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		TURFGRASSES			
APPLICATION RATES FOR WEED CONTROL					
Turfgrass Species	Weeds Controlled	Rates of PRE-M <sup>®</sup> 3.3 EC	Comments		
COOL SEASON GRASSE	S				
	crabgrass foxtail <i>Poa annua</i> barriyardgrass fall panicum oxalis prostrate spurge purslane knotweed evening primrose hop clover	3.6 to 4.8 pts/Acre or 1.3 to 1.8 oz./1,000 sq ft Initial application prior to weed germination in spring.	Apply a repeat application of 2.5 to 3.6 pts/Acre (1 to 1.3 oz/1000 sq ft) after 5-8 weeks for extended control or where heavy weed infestations ar expected.		
	goosegrass	Residential2 Turf Uses Only: 3.6 to 4.8 pts/Acre or 1.3 to 1.8 oz/1,000 sq ft Initial application prior to weed germination in spring.	Apply a repeat application of 3.6 pts/Acre (1.3 oz/1000 sq ft) if the lower rate was used initially or for extended goosegrass control.		
	goosegrass	Commercial or Other Non-Residential Turf Uses: 3.6 to 7.2 pts/Acre or 1.3 to 2.6 oz/1,000 sq ft Initial application prior to weed germination in spring.	Apply a repeat application of 3.6 pts/Acre (1.3 oz/1000 sq ft) if the lower rate was used initial- ty or for extended goosegrass control.		
	cudweed Poa annua chickweed lawn burweed henbit com speedwell	3.6 to 4.8 pts/Acre or 1.3 to 1.8 oz/1,000 sq ft	Apply in late summer or early fall prior to weed germination.		
WARM SEASON GRASS	ES		1		
Bahiagrass Bermudagrass Gentipedegrass Fescue, tall St. Augustinegrass Zoysiagrass	crabgrass foxtail <i>Poa annua</i> bamyardgrass fall panicum oxalis prostrate spurge purslane knotweed evening primrose hop clover	Residential <sup>2</sup> Turf Uses Orily: 3.6 to 4.8 pts/Acre or 1.3 to 1.8 oz/1,000 sq ft Initial application prior to weed germination in spring.	Apply a repeat application of 2.5 to 3.6 pts/Acre (1 to 1.3 oz/1000 sq ft) after 5-8 weeks if necessary.		
	goosegrass	3.6 pts/Acre or 1.3 oz/1000 sq ft Apply prior to weed germination in spring. Make a second application 6-8 weeks lat- er.	An additional application of 3.6 pts/Acre (1.3 oz/1000 sq ft) may be made for extended goosegrass control 8 weeks after the second application.		
	cudweed <i>Poa annua</i> chickweed lawn burweed henbit com speedwell	2.6 to 4.8 pts/Acre or 1.3 to 1.8 oz/1,000 sq ft	Apply in late summer or early fall prior to weed germination.		

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- DO NOT exceed a maximum of 4.8 pts/Acre per application for use on residential turfgrass.
- <sup>2</sup> Residential is defined as turf in any residential situation as well as schools, parks and playgrounds.

**DO NOT** exceed a maximum of 7.2 pts./Acre per application for use on commercial or other non-residential turfgrass.

The efficacy of **PRE-M<sup>®</sup> 3.3 EC Turt Herbicide** will be improved if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If **PRE-M 3.3 EC** is not activated by rainfall or irrigation with in 30 days, erratic weed control may result.

To prevent establishment of weeds along the edges of lawns it may be necessary to overlap the spray three to six inches onto sidewalks or driveways, etc. to ensure effective application rates in these especially vulnerable sites. Where temporary discoloration of pavement is to be avoided, rinse immediately to avoid staining.

#### INDUSTRIAL (UNIMPROVED) TURF

Industrial, or unimproved turf areas often have a different spectrum of weeds to be controlled than those found in fine turf as described in this leaflet. **PRE-M 3.3 EC** Turf Herbicide will control annual grasses and broadleaf weeds mentioned in that section of this label as well as the following weeds that might germinate in established grasses in rights-ofway, roadsides, construction sites, parks, substations, lots, or similar areas:

Crowfootgrass, Itchgrass, Johnsongrass (from seed), Junglerice, Lovegrass, Browntop Panicum, Texas Panicum, Field Sandbur, Signalgrass, Mexican Sprangletop, Red Sprangletop, Witchgrass, Woolly Cupgrass, Carpetweed, Fiddleneck, Filaree, Kochia, Lambsquarters, Pigweed, Puncturevine, Florida Pusley, London Rocket, Shepherdspurse, Pennsylvania Smartweed, Annual Spurge, and Velvetleaf.

Apply before weeds germinate. A postemergence herbicide such as 2,4-D, MSMA, or similar products may be tank mixed to control established weeds. Apply according to label instructions for the respective products and follow the most restrictive wording.

# TOTAL VEGETATION CONTROL

**PRE-M<sup>®</sup> 3.3 EC** may be tank mixed with **ARSENAL<sup>®</sup>**, **PLATEAU<sup>®</sup>**, Roundup **PRO<sup>®</sup>**, Karmex<sup>¬</sup>, Finale<sup>¬</sup>, Oust<sup>¬</sup>, diuron, or other products to provide bare ground, or total vegetation control. **PRE-M 3.3 EC** can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, omamentals, or desirable trees encroaching into the treated zone. Refer to tank mix partner labels regarding effects on desirable plants. **DO NOT** tank mix with **ARSENAL** in California.

Applications may be made to existing weeds controlled by the partner herbicide. Recommended rates should be determined from the product labels prior to use. Follow the most restrictive label instructions.

For Kochia: Combinations of **PRE-M 3.3 EC** with **ARSENAL** or diuron are recommended if control has been a problem for other herbicides.For rates refer to RATE AND APPLICATION CHART.

#### Conditions of Sale and Warranty

The **Directions For Use** of this product reflects the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF is CORPORATION ("BASF") or the Seller. All such risks shall be assumed by the Buyer.

 BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. TO THE EXTENT PERMITTED BY LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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Gallery is a trademark of Dow AgroSciences Karmex and Oust are trademarks of E.I. DuPont de Namours and Company

Ornamec is a trademark of PBI Gordon Corporation Princep is a trademark of Syngenta

Roundup PRO is a registered trademark of Monsanto

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