JUL 14 1995

Dr. Zareen Ahmed American Cyanamid Co. P.O. Box 400 Princeton, NJ 08543

Dear Dr. Ahmed:

Subject: Amended Master Label

STOMP® WDG HERBICIDE

PENDULUM WDG Industrial Herbicide

EPA Reg. No. 241-340

Your submission dated June 30, 1995

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable and a stamped copy is enclosed for your records.

I have enclosed a copy of our review for your information.

Sincerely yours,

Robert J. Taylor Product Manager 25 Fungicide-Herbicide Branch Registration Division (H7505C)

Enclosure

			CONCURRENC	ES		
SYMBOL						
SURNAME						
DATE						
EPA Form 1320-1 (12-70)	BEST	COPY	AVAII	ABLE	 OFFICI	AL FILE COPY

# PENDULUM WDG herbicide water dispersible granule

FOR USE IN TURFGRASSES, ORNAMENTALS, LANDSCAFE OR GROUNDS MAINTENANCE, AND NONCROPLAND AREAS

**ACTIVE INGREDIENT:** 

INERT INGREDIENTS 40.0%

(1.2 oz. contains .72 oz. of pendimethalin)

(10 lbs. contains 6 lbs. of pendimethalin)

(13.2 lbs. contains 7.9 lbs. of pendimethalin)

EPA Reg. No. 241-340

EPA Est. No.

# KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION!

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

#### STATEMENT OF PRACTICAL TREATMENT

If in eyes:

Flush eyes with plenty of water. Call a physician if irritation persists.

If on skin:

Wash with plenty of soap and water. Get medical attention if irritation persists.

In case of emergency endangering life or property involving this product, call collect, day or night, Area Code 201-835-3100.

See Inside Leaflet For Additional Precautionary Statements and Directions For Use.

AMERICAN CYANAMID COMPANY AGRICULTURAL PRODUCTS DIVISION SPECIALTY PRODUCTS DEPARTMENT WAYNE, NJ 07470 ©1995

Net Contents:

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ACCEPTED

THE COMMENTS

TO EPA Fotter Unite

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05/26/95

**BEST COPY AVAILABLE** 

# PENDULUM WDG herbicide

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# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS CAUTION

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

Personal Protective Equipment (PPE): Applicators and other handlers must wear:

- · Long-sleeved shirt and long pants
- · Waterproof gloves
- · Shoes plus socks

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.

#### **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 pesticide application.

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

DO NOT use in manufacturing products for weed control.

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.

# 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 12 hours.

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

- · Coveralls
- · Waterproof gloves
- · 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 treated areas without protective clothing 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

STORAGE: DO NOT store above 120°F. Store in original containers and keep closed. Store in a cool, dry place.

DO NOT contaminate water, food, or feed by storage or disposal.

PESTICIDE

DISPOSAL:

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

#### CONTAINER

DISPOSAL:

## Paper container:

Completely empty bag into application equipment. DO NOT reuse. Dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

# Plastic container:

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

Observe all cautions and limitations on this label and the labels of products used in combination with PENDULUM WDG herbicide. The use of PENDULUM WDG herbicide not consistent with this label can result in injury to crops, animals, or persons. Keep containers closed to avoid spills and contamination.

## DISCLAIMER

The label instructions for use of this product reflect 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 the use or application of the product contrary to label instructions, all of which are beyond the control of American Cyanamid Company. All such risks shall be assumed by the user.

American Cyanamid Company warrants only that the material contained herein conforms to the chemical description on the label and is reasonably fit for the use therein described when used in accordance with the directions for use, subject to the risk referred to above.

Any damages arising from a breach of this warranty shall be limited to direct damages and shall not include consequential commercial damages such as loss of profits or values or any other special or indirect damages.

American Cyanamid Company makes no other express or implied warranty, including other express or implied warranty of FITNESS or of MERCHANTABILITY.

#### **GENERAL INFORMATION**

PENDULUM WDG herbicide 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

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establishments, multifamily dwellings, military and other institutions, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries; golf courses; prairiegrass areas; and sod farms.

PENDULUM WDG herbicide can also be used in and around field, liner, and container grown ornamental nurseries; established landscape ornamentals and ornamental gardens; listed groundcovers and bulbs; nonbearing fruit and nut trees; conifer and hardwood seedling nurseries; and for tree plantation site preparation and maintenance.

In addition, PENDULUM WDG herbicide can be applied for general grounds maintenance around areas such as parking lots, driveways and roadsides, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, markers and fence lines, mulch beds and other similar areas. It may be used under asphalt or concrete treatments as part of a site preparation program.

PENDULUM WDG herbicide is recommended for preemergence control of most annual grasses and certain broadleaf weeds as they germinate in any noncropland area such as railroad, utility, highway, and pipeline rights-of-way; highway guardrails, delineators, and sign posts; bridge abutments and approaches; utility substations; petroleum tank farms; pumping installations; storage areas; fence rows; windbreaks and shelterbelts; paved or gravel surfaces; established wildflower plantings, and other similar areas where weed control is desired.

PENDULUM WDG herbicide controls weeds as they germinate, but will not control established weeds. Therefore, areas to be treated should be free of established weeds. For the control of established weeds, PENDULUM WDG herbicide may be used in conjunction with herbicides registered for postemergence use. Consult the labels of those herbicides for use rates, timings, and precautions or restrictions.

Unusually cold, excessively wet, or hot and dry conditions that delay germination or extend germination over a long period of time can reduce weed control.

The efficacy of PENDULUM WDG herbicide will improve if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If PENDULUM WDG is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

Applied according to label directions and under normal growing conditions, PENDULUM WDG herbicide or PENDULUM WDG herbicide tank-mix combinations will not cause crop injury. Over-application can result in crop stand loss, crop injury, or soil residues. Uneven application can decrease weed control or cause crop injury.

Seedling diseases, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought can weaken seedlings and plants, and increase the possibility of plant damage from PENDULUM WDG herbicide.

PENDULUM WDG may cause temporary discoloration of sprayed surfaces. Rinse immediately to avoid staining. Spray colorants or dyes can be added to alter the color of the spray solution to

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match the treated surfaces.

#### MIXING INSTRUCTIONS FOR PENDULUM WDG HERBICIDE

Respective sections of this leaflet define recommended PENDULUM WDG herbicide or PENDULUM WDG herbicide registered tank-mix treatments. Always allow water soluble packets to dissolve before agitating.

# Ground Driven Sprayer:

- 1. Begin with a clean spray tank. Fill tank one-half to three-quarters full with clean water.
- 2. PENDULUM WDG herbicide Alone

When using PENDULUM WDG herbicide alone, either premix (1 part product + 2 parts water) or slowly add PENDULUM WDG herbicide to the partially filled tank while agitating until completely dispersed. Fill the remainder of the tank with water.

# 3. PENDULUM WDG herbicide tank mixes

- a. Wettable Powder Formulations
  - 1) When using PENDULUM WDG herbicide with a wettable powder formulation, add PENDULUM WDG herbicide to the partially-filled tank while agitating.
  - 2) When PENDULUM WDG herbicide is properly mixed, add a slurry of the wettable powder (1 part WP + 2 parts water) slowly into the tank. Fill the remainder of the tank while agitating.

# b. Flowable Formulations

- 1) When using PENDULUM WDG herbicide with a flowable formulation, add PENDULUM WDG herbicide to the partially-filled tank while agitating.
- 2) When PENDULUM WDG herbicide is properly mixed, premix one part of the flowable with two parts water and add this diluted mixture slowly into the tank. Fill the remainder of the tank while agitating.

#### c. Emulsifiable Concentrate Formulations

- 1) When using PENDULUM WDG herbicide with an emulsifiable concentrate formulation, add PENDULUM WDG herbicide to the partially-filled tank while agitating.
- 2) When PENDULUM WDG herbicide is properly mixed, premix one part of the emulsifiable concentrate with two parts water and add this diluted mixture slowly

into the tank. Fill the remainder of the tank while agitating.

- d. Dry Flowable (Water Dispersible Granule) Formulations
  - 1) When using PENDULUM WDG herbicide with a dry flowable formulation, add PENDULUM WDG herbicide to the partially-filled tank while agitating.
  - 2) When PENDULUM WDG herbicide is properly mixed, premix one part of the dry flowable with two parts water and add this diluted mixture slowly into the tank. Fill the remainder of the tank while agitating.
- 4. MAINTAIN CONTINUOUS AGITATION WHILE ADDING HERBICIDES 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.

Backpack Sprayer: Begin with a clean spray tank. Fill the spray tank ½ full with clean water and add the required amount of PENDULUM WDG herbicide to the sprayer. When using water soluble packets, allow packet to dissolve before agitating. 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 to resuspend the mixture 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 PENDULUM WDG to half filled spray tank while agitating then add the fertilizer product. Complete filling spray tank to desired level.

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

#### SPRAYING INSTRUCTIONS FOR PENDULUM WDG HERBICIDE

Apply with properly calibrated ground equipment in sufficient water per acre to provide uniform spray distribution (at least 40 gallons of water per acre). Low pressure (e.g. 20-40 psi) sprayers are recommended.

Maintain continuous agitation during spraying with good mechanical or bypass agitation. Nozzle screens must be no finer than 50 mesh (100 mesh is finer than 50 mesh). Check sprayer routinely to determine proper calibration. Avoid overlaps that will increase rates above those recommended.

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Avoid application when winds may cause drift.

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Avoid unintentional contact of spray solution with driveways, stone, wood or other porous surfaces. Rinse immediately to avoid staining.

# TURFGRASSES ...

# APPLICATION RATES FOR WEED CONTROL

Turfgrass Species	Weeds	Rates of PENDULUM WDG herbicide	Comments
COOL SEASON			
GRASSES			
Bluegrass, Kentucky	crabgrass	2.5-3.4 lbs./acre	Apply a repeat
Fescue, fine	foxtail	as the initial	application of
Fescue, tall	<u>Poa annua</u>	application prior	1.7-2.5 lbs./acre
Ryegrass, perennial	barnyardgrass	to weed germination	after 6-8 weeks
	fall panicum	in the spring.	for extended
	oxalis		control or where
	prostrate spurge		heavy weed
	purslane		infestations are
	knotweed evening primrose		expected.
	hop clover		
	nop clovel		
	goosegrass	2.5-5.0 lbs./acre	Apply a repeat
	0 0	in the spring prior	application of
		to weed germination.	2.5 lbs./acre
			if the lower rate
			was used initially
			or for extended
			goosegrass control.
	cudweed	2.5-3.4 lbs./acre	Apply in late
	Poa annua	Pio Dia toguació	summer or early
	chickweed		fall prior to
	lawn burweed		weed germination.
	henbit		<i>U</i>
	corn speedwell		
	_		

Bentgrass\* or established <u>Poa annua</u>\* (1/2 inch height or taller) crabgrass
foxtail
Poa annua
barnyardgrass
fall panicum
oxalis
prostrate spurge
purslane
knotweed
evening primrose
hop clover

2.5 lbs./acre in the spring prior to weed germination.

Apply a repeat application of 1.7-2.5 lbs./acre after 6-8 weeks where heavy weed infestations are expected.

goosegrass

2.5 lbs./acre in the spring prior to weed germination. Apply a repeat application of 2.5 lbs./acre after 6-8 weeks.

cudweed
Poa annua
chickweed
lawn burweed
henbit
corn speedwell

2.5-3.4 lbs./acre

Apply in late summer or early fall prior to weed germination.

\*Not for use on greens or tees

# WARM SEASON GRASSES

Bahiagrass
Bermudagrass
Buffalograss
Centipedegrass
Fescue, tall
St. Augustinegrass
Zoysiagrass

crabgrass
foxtail
Poa annua
barnyardgrass
fall panicum
oxalis
prostrate spurge
purslane
knotweed
evening primrose
hop clover

2.5-5.0 lbs./acre prior to weed germination in the spring.

Apply a repeat application of 1.7-2.5 lbs./acre after 6-8 weeks if necessary.

goosegrass

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2.5 lbs./acre prior to weed

An additional application of

		germination in the spring. Apply a repeat application of 2.5-3.4 lbs./acre after 6-8 weeks.	2.5 lbs./acre may be applied for extended goosegrass control 8 weeks after the second application.
	cudweed Poa annua chickweed lawn burweed henbit corn speedwell	2.5-3.4 lbs./acre	Apply in late summer or early fall prior to weed germination.
Bermudagrass greens	crabgrass foxtail Poa annua barnyardgrass fall panicum oxalis prostrate spurge purslane knotweed evening primrose hop clover	2.5 lbs./acre prior to weed germination.	Apply a repeat application of 2.5 lbs./acre after 6-8 weeks if necessary.
	goosegrass	2.5-3.4 lbs./acre prior to weed germination. Apply a repeat application of 2.5 lbs./acre after 6-8 weeks.	
	cudweed Poa annua chickweed lawn burweed henbit corn speedwell	2.5-3.4 lbs./acre	Apply in late summer or early fall prior to weed germination.

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

#### **TURFGRASS TANK MIXES**

PENDULUM WDG herbicide can be mixed with postemergence herbicides to control emerged weeds in turfgrasses. For annual grass control, applications can be made with Acclaim Extra<sup>1</sup> or MSMA to control emerged weeds. Broadleaf weeds can be controlled using Trimec<sup>2</sup>, Three-Way<sup>3</sup>, 2-4,D, and other similar products.

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

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with PENDULUM WDG herbicide and follow those that are most restrictive.

#### **TURFGRASS PRECAUTIONS**

Use on well established turfgrass with a dense and uniform stand. On newly planted areas, application should not be made until the turfgrass has filled in and has been mowed at least four times. On turf that has been thinned or damaged due to winter injury, excessive moisture, etc., allow for turf recovery prior to making an application.

Applications made to overseeded warm-season turfgrasses may cause thinning or injury of the overseeded species.

Do not use on bentgrass or Poa annua greens and tees or injury may occur.

Delay reseeding or winter overseeding of treated turfgrass for at least three months following the last PENDULUM application. Delay sprigging turfgrass for five months after application.

# 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 elsewhere in this leaflet. PENDULUM WDG herbicide will control annual grasses and broadleaf weeds mentioned in that section of this label as well as the following weeds when they germinate in established grasses in rights-of-way, roadsides, constuction sites, parks, substations, lots, or similar areas:

Crowfootgrass, Itchgrass, Johnsongrass (from seed), Junglerice, Lovegrass (from seed), 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.

# ORNAMENTALS

# **RECOMMENDED SPECIES**

PENDULUM WDG herbicide sprays are safe around and over the top of the established plants listed below.

Refer to APPLICATION RATE TABLE for rates.

# TREES

Common Name	Scientific Name
Alder, European Black	Alnus glutinosa
Apple	Malus spp.
Arborvitae, American	Thuia occidentalis
Arbutus	Arbutus spp.
Ash, Red	Fraxinus pennsylvanica
Ash, White	Fraxinus americana
Aspen, Bigtooth	Populus grandidentata
Aspen, Quaking	Populus tremuloides
Basswood	Tilia spp.
Birch, European Weeping	Betula pendula
Birch, River	Betula nigra
Buckeye, Red	Aesculus pavia
Cedar, White	Thuia occidentalis
Chamaecyparis, Boulevard	Chamaecyparis pisifera
Cherry, Black	Prunus serotina
Cherry, Choke	Prunus virginiana
Cherry, Kwanzan	Prunus serrulata
Cherry, Nanking	Prunus tomentosa
Cottonwood	Populus deltoides
Crabapple	Malus spp.
Crepe Myrtle	Lagerstroemia indica
Cryptomeria, Japanese Cedar	Cryptomeria japonica
Cypress, Bald	Taxodium distichum
Cypress, Leyland	Cupressocyparis leylandii
Dogwood, Flowering	Cornus florida
Dogwood, Korean	Cornus kousa
Dogwood, Silky	Cornus amomum
Dogwood, Shrub	Cornus spp.
Elm	<u>Ulmus japonica</u>
Fir, Balsam	Abies balsamae

Fir, Douglas Fir, Fraser

Fir, White Franklinia

Franklinia Ginkgo

Gum, Black

Gum, Sour

Haw, Black

Hawthorn

Hemlock, Canada

Hemlock, Eastern

Holly, American

Honeylocust

Lilac, Common

Lilac, Japanese Tree

Linden

Magnolia, Saucer

Magnolia, Southern

Magnolia, Star

Maidenhair Tree

Maple, Norway

Maple, Japanese

Maple, Red

Maple, Sugar

Nannyberry, Rusty

Oak, Chinquapin

Oak, Live

Oak, Pin

Oak, Red

Oak, Swamp Chestnut

Oak, Water

Oak, White

Oak. Willow

Olive

Palm, Date

Palm, Fan

Palm, Pindo

Palm, Washington

Peach

Pear, Bradford

Pecan

Pine, Austrian

Pine, Italian Stone

Pine, Loblolly

Pine, Monterey

Pine, Red

Pseudotsuga menziesii

Abies fraseri

Abies concolor

Franklinia spp.

Ginkgo biloba

Nyssa sylvatica

Nyssa sylvatica

Viburnum prunifolium

Crataegus spp.

Tsuga canadensis

Tsuga canadensis

Ilex opaca

Gleditsia triacanthos

Syringa vulgaris

Syringa reticulata

Tilia spp.

Magnolia soulangiana

Magnolia grandiflora

Magnolia stellata

<u>Ginkgo biloba</u>

Acer platanoides

Acer palmatum

Acer rubrum

Acer saccharum

Viburnum rufidulum

Quercus muehlenbergii

Quercus virginiana

Quercus palustris

Quercus rubra

Ouercus michauxii

Quercus nigra

Quercus alba

Quercus phellos

Olea europaea

Phoenix spp.

Washingtonia spp.

Butia spp.

Washingtonia spp.

Prunus persica

Pyrus calleryana 'Bradford'

Carya illinoensis

Pinus nigra

Pinus pinea

Pinus taeda

Diameter and died

Pinus radiata

Pinus resinosa

Pine, Scotch Pine, Virginia Pine, White Plum, Purple Leaf Poplar, Black Redcedar, Eastern Redcedar, Western Red Ironbark Redwood, Dawn Sequoia, Giant Serviceberry Sourwood Spruce, Colorado Blue Spruce, Dwarf Alberta Spruce, Norway Spruce, White Sweetgum Sycamore Trachycarpus Tulip tree Walnut, Black Willow, Weeping Yellowwood

Pinus sylvestris
Pinus virginiana
Pinus strobus
Prunus cerasifera
Populus nigra
Juniperus yirginiana
Thuia plicata

Eucalyptus sideroxylon 'Rosea'
Metasequoia glyptostroboides

Sequoiadendron giganteum

Amelanchier laevis
Oxydendrum arboreum

Picea pungens

Picea glauca 'albertiana'

Picea abies Picea glauca

Liquidambar styraciflua Platanus occidentalis Trachycarpus spp. Liriodendron tulipifera

Juglans nigra
Salix babylonica
Cladrastis lutea

# **SHRUBS**

5 2

#### Common Name

Abelia, Glossy Aucuba, Gold Azalea

n i

Bamboo, Heavenly

Barberry

Barberry, Japanese Blue Indigo Bush Bottlebrush, Lemon Boxwood, Common Boxwood, Japanese

Brittlebush
Buttonbush
Camellia
Cape Jasmine
Cassia, Feathery
Cordyline

Correa Cotoneaster

# Scientific Name

Abelia grandiflora
Aucuba japonica
Rhododendron sp.
Nandina domestica
Berberis gladwynensis
Berberis thunbergii

Dalea gregii

Callistemon citrinus
Buxus sempervirens
Buxus microphylla
Encelia farinosa

Cephalanthus occidentalis

Camellia japonica
Gardenia jasminoides
Cassia artemisioides
Cordyline spp.

Correa spp.

Cotoncaster apiculatus

Cotoneaster, Bearberry

Cotoneaster, Rock

Cypress, Italian

Cypress, Leyland

Deutzia, Slender

Dogwood, Red Twig

Elaeagnus

Escallonia

Euonymus

Euonymus, Golden

Euonymus, Winged

Firethorn

Forsythia, Border

Fragrant Olive

Fuschia, California

Gardenia

Hawthorne, Indian

Hibiscus

Holly, Chinese

Holly, Japanese

Holly, Fosters

Holly, Savannah

Holly, Yaupon

Honeysuckle, Bush

Hopseed Bush

Hopbush

Hydrangea

Juniper

Juniper, Chinese

Juniper, Shore

Juniper, Trailing

Laurel, Cherry

Laurel, Mountain

Laurel, Otto Luyken

Laurel, Schipka

Laurustinus

Lavender, English

Leucothoe

Leucothoe, Coast

Lilac, Cut-leaf

Lily-of-the-Nile

Mahonia

Mock Orange

Myrtle, Compact

Myrtle, Wax

Nandina

Cotoneaster dammeri

Cotoneaster horizontalis

Cupressus sempervirens

Cupressocyparis leylandii

Deutzia gracilis

Cornus sericea

Elaeagnus ebbingei

Escallonia fradesii

Euonymus fortunei

Euonymus japonica

Euonymus alata

Pyracantha coccinea

Forsythia intermedia

Osmanthus fragrans

Zauschineria californica

Gardenia jasminoides

Raphiolepis indica

Hibiscus syriacus

Ilex cornuta

**Ilex** crenata

Ilex attenuata 'Fosteri'

<u>Hex attenuata</u>

Ilex vomitoria

Diervilla lonicera

Dodonaea viscosa

Dodonaea viscosa

Hydrangea macrophylla

Juniperus sp.

Juniperus chinensis v. pfitzer

Juniperus conferta

Juniperus horizontalis

Prunus laurocerasus

Kalmia latifolia

Prunus laurocerasus

Prunus schipkanensis

Viburnum tinus

Lavandula angustifolia

Leucothoe fontanesiana

Leucothoe axillaris

Syringa laciniata

Agapanthus africanus

Mahonia aquifolium

Pittosporum tobira

Myrtus communis

Myrica cerifera

Nandina domestica

Oleander Oregon Grape Osmanthus

Palm, European Fan Palm, Mediterranean Fan

Phlox, Prickly Photinia, Fraser Pieris, Japanese Pine, Mugo

Plum, Natal Privet, California Privet, Glossy

Privet, Variegated Privet, Waxleaf Pyracantha

Quince, Flowering Ranger, Texas

Redroot

Rhododendron

Robira Rose

Spice Plant Spiraea

Spiraea, Anthony Waterer

Spiraea, Japanese

Sweet Bay Trumpet Bush Verbena, Lemon

Viburnum Vitex Weigela Wild Lilac Xylosma Yellowbells

Yew

Yew, Japanese Yew, Southern

Yucca, Adam's Needle

Yucca, Weeping

Nerium oleander Mahonia aquifolium Osmanthus fragrans Chamaerops humilis

Chamaerops spp.

Leptodactylon californicum

Photinia X Fraseri Pieris japonica Pinus mugo

Carissa grandiflora
Ligustrum ovalifolium
Ligustrum lucidum
Ligustrum sinensis
Ligustrum japonicum
Pyracantha coccinea
Chaenomeles japonica
Leucophyllum frutescens

Ceanothus spp.
Rhododendron spp.
Pittosporum tobira

<u>Rosa</u> spp.

Illicium parviflorum
Spiraea vanhouttei
Spiraea X bumalda
Spiraea japonica
Laurus nobilis
Tecoma stans
Aloysia triphylla
Viburnum suspensum

Vitex spp.
Weigela florida
Ceanothus spp.
Xylosnia congestum

Tecoma stans
Taxus media
Taxus cuspidata

Podocarpus macrophyllus

Yucca filamentosa Yucca pendula

# **GROUND COVERS**

Common Name

Ajuga

Scientific Name

Ajuga reptans

Baby Sun Rose Beach Strawberry

Capeweed

Cinquefoil, Spring Coyotebrush, Dwarf Daisy, Trailing African

Dymondia Gazania

Iceplant, Large Leaf

Ivy, English
Ivy, Geranium
Jasmine, Asiatic
Jasmine, Primrose
Jessamine, Carolina
Manzanita, Bearberry

Miscanthus
Mondograss
Morninglory
Myoporum
Pachysandra
Potentilla
Red Apple
Rosemary

Rose-Of-Sharon Sand Strawberry

Sedum

St. Johnswort, Creeping

Stonecrop

Verbena, Peruvian

Vervain

Vetch, Crown

Vinca

Wintercreeper

Aptenia cordifolia
Fragaria chiloensis
Arctotheca calendula

Potentilla verna
Baccharis pitularis

Osteospermum fruticosum

Dymondia margaretae Gazania splendens Carpobrotus edulis

Hedera helix

Pelargonium peltatum

Trachelospermum asiaticum

Jasminum mesnyi

Gelsemium sempervirens Arctostaphylos uva-ursi

Miscanthus spp.

Ophiopogon japonica

Convolvulus spp.

Myoporum parviflolium
Pachysandra terminalis
Potentilla fruticosa
Aptenia cordifolia
Rosemarinus officinalis
Hypericum calycinum

Fragaria chiloensis Sedum spurium

Hypericum calycinum

Sedum spurium
Verbena peruviana
Verbena peruviana

Vicia sativa Vinca minor

Euonymous fortunei

# **PERENNIALS**

# Common Name

Acacia
Asparagus
Aster, New York
Aster, Stokes
Babys Breath
Beard-Tongue
Bellflower

#### Scientific Name

Acacia redolens
Asparagus spp.
Aster novi-belgii
Stokesia laevis
Gypsophila elegans
Penstemon spp.
Campanula spp.

Bird of Paradise Black-eyed Susan Blanket Flower Bleeding Heart Butterfly Weed California Poppy

Calla Lily

Canna, Common Garden

Carex

Chincherinchee Clover, Crimson

Columbine Coreopsis Crinum Lily

Crocus
Daffodil
Daylily
Final Du

Fiary Duster
Fern, Asparagus
Fern, Boston
Fern, Leatherleaf
Fortnight Lily
Foxglove
Freesia

Gaillardia Geum Gladiolus

Heather, Dwarf

Hosta

Indian Blanket Lantana, Weeping Leopards Bane

Lily

Liriope, Big Blue Liriope, Creeping Liriope, Variegated

Moonbeam
Montbretia
Nightshade
Orchid, Peacock
Oxeye Daisy
Peony, Chinese
Purple Coneflower

Purple Loosestrife

Rosemary Sedge Caesalpinia pulcherrima

Rudbeckia hirta

Gaillardia x grandiflora
Dicentra spectabilis
Asclepias tuberosa
Eschscholzia california
Zantedeschia aethiopica

Canna generalis 'Lucifer'

Carex spp.

Ornithogalum thyrsoides
Trifolium incarnatum
Aquilegia 'McKana Giant'
Corcopsis lanceolata

Crinum spp.
Crocus spp.
Narcissus spp.
Hemerocallis spp.
Calliandra eriophylla
Asparagus officinalis
Nephrolepis exaltata
Rumohra adiantiformis

Moraea spp.

Digitalis purpurea Freesia x hybrida Gaillardia pulchella

Geum spp.
Gladiolus spp.
Calluna vulgaris

Hosta spp.

Gaillardia pulchella Lantana montevidensis Doronicum cordatum

Lillium spp.
Liriope muscari
Liriope spicata
Liriope muscari
Coreopsis verticillata
Crocosmia crocosmiiflora

Solanum spp.

Acidanthera bicolor

Chrysanthemum leucanthemum

Paconia lactiflora
Echinacea purpurea
Lythrum yirgatum
Rosmarinus officinalis

Carex spp.

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Shasta Daisy

Sweet Flag Tickseed

Texas Bluebonnet

Tulip Wisteria

Wonder Flower

Yarrow Zephyr Lily Chrysanthemum x superbur.

Acorus calamus
Coreopsis lanceolata
Lupinus texenis
Tulipa spp.

Wisteria spp.
Ornithogalum thyrsoides
Achillea millefolium

Zephyranthes spp.

# ORNAMENTAL GRASSES

Common Name

Beach Grass
Fescue, Blue
Fescue, Sheep
Fountain Grass
Pampas Grass

Reed Canary Grass

Reed, Giant Ribbon Grass Tufted Hair Grass Scientific Name

Ammophila breviligulata

Festuca ovina Festuca ovina

Pennisetum setaceum Cortaderia selloana Phalaris arundinacea

Arundo spp.

Phalaris arundinacea Deschampsia caespitosa

#### **BEDDING PLANTS**

Common Name

Ageratum

\*Alyssum

Anemone, Poppy-flowered

Artemesia Balloonflower \*Begonia

Cabbage, Ornamental

Caladium
Cast-Iron Plant
\*China Aster

Crocosmia, Montebretia

\*Dahlia Dianthus Dusty Miller Scientific Name

Ageratum houstonianum

Alyssum saxatile
Anemone coronaria
Artemesia spp.

Platycodon grandiflorum

Begonia spp.
Brassica olereacea
Caladium spp.
Aspidistra elatior

Callistephus chinensis

Crocosmia x crocosmiislora

Dahlia spp.

Dianthus barbatus Senecio cineraria Gayfeather

Gazania, Treasure Flower

Gazania, Trailing

Gloxinia

Kale, Ornamental

Marigold, African

\*Moss Rose

Mum, Garden

Pansy

\*Periwinkle

Periwinkle, Rose

\*Petunia

Plumosa Cockscomb

\*Portulaca

\*Salvia

\*Snapdragon

\*Statice

Sweet William

\*Vinca

Liatris spp.
Gazania rigens

Gazania rigens leucolaena

Gloxinia simningia

Brassica napus

Tagetes erecta

Portulaca grandiflora

Chrysanthemum spp.

Viola tricolor

Vinca major

Catharanthus roseus

Petunia spp.

Celosia cristata

Portulaca grandiflora

Salvia splendens

Antirrhinum maius

Limonium spp.

Dianthus barbatus

Vinc or

\*Application of PENDULUM WDG herbicide should not be made sooner than four weeks after transplanting these annuals. Use the lower labeled rate,

PENDULUM WDG 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.

#### ORNAMENTAL BULBS

Pendulum WDG may be applied for control of susceptible annual weeds in ornamental bulbs listed on the label (crocus, daffodii (narcissus), gladiolus, tulip, etc.). Apply Pendulum WDG prior to, during or after bulb emergence. If weeds have already germinated add a labeled postemergence herbicide to control emerged weeds.

#### WILDFLOWERS

Pendulum WDG may be applied for control of susceptible annual weeds in plantings of wildflowers listed on the label (Black-eyed Susan, California Poppy, Coreopsis, Oxeye Daisy, etc.). Pendulum WDG may be applied to established perennial wildflowers before emergence of weeds or wildflowers. For wildflowers being established from seed, apply

/2

Pendulum WDG after wildflowers have emerged but prior to weed germination. If weeds have already germinated, add a labeled postemergence product to control emerged weeds.

Due to the diversity of species and varieties which exist in areas where wildflowers are grown, the response to PENDULUM WDG herbicide may vary greatly. Careful testing on desirable species is recommended to determine if area-wide applications can be made.

#### ORNAMENTAL TANK MIXES

Emerged weeds in ornamentals can be controlled using tank mixes containing Roundup<sup>4</sup>, Finale<sup>1</sup>, Ornamec<sup>2</sup>, Gallery<sup>5</sup>, Princep<sup>8</sup>, and other similar products. Do not apply sprays containing Roundup or Finale over the top of ornamental plants.

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

Refer to manufacturers' labels for specific use directions, precautions, and limitations before tank mixing with PENDULUM WDG herbicide and follow those that are most restrictive.

#### ORNAMENTAL PRECAUTIONS

Apply PENDULUM WDG herbicide to established plantings. DELAY applying PENDULUM WDG herbicide to seedbeds, transplant beds, or liners until plants have become well rooted. 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 PENDULUM WDG herbicide with roots. Directed sprays where soil and media surfaces are uniformly covered will result in best weed control and ornamental tolerance. Plant only those desirable plant species listed on this label into soil treated the previous season with PENDULUM WDG herbicide or injury may occur.

For container grown ornamentals, delay first application of this product to bareroot liners 2-4 weeks.

# 六年等等等等等的不完全 LANDSGAPE AND GROUNDS MAINTENANCE 等于 1845年 1845

PENDULUM WDG herbicide can be incorporated into landscape and grounds maintenance programs to provide extended preemergence control of most annual grasses and certain broadleaf weeds. Areas to be treated, such as mulch beds, parking areas and roadsides, fencelines and borders, around statuary or monuments, and similar areas, should be free of emerged weeds before application. To remove emerged weeds either cultivate or tankmix PENDULUM WDG with a postemergence product labeled for such use.

Refer to APPLICATION RATE TABLE for rates. Avoid unintentional contact of spray solution

3/

with stone, wood, or other porous surfaces as staining may occur. Rinse immediately to avoid staining.

# NON-BEARING FRUIT AND NUT CROPS AND VINEYARDS

PENDULUM WDG herbicide may be applied for preemergence control of most annual grasses and certain broadleaf weeds on the following non-bearing crops:

Almond Olive
Apple Peach
Apricot Pear
Cherry Pecan
Citrus Pistachio
Fig Plum
Grape Prune

Nectarine Walnut, English

Refer to APPLICATION RATE TABLE 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 PENDULUM WDG herbicide 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 domant. Do not apply if buds have started to swell. PENDULUM WDG herbicide may be used where the roots of a fruit, vine, nut, or ornamental plant encroach into a treatable area.

## NONCROPLAND AREAS INCLUDING TREE PLANTATIONS

PENDULUM WDG herbicide is recommended for grounds maintenance in noncropland areas; preemergence control of the weed species listed in and around established tree plantations (including Christmas trees); in and around established ornamentals planted in noncropland areas such as highway rights-of-way, and utility substations. PENDULUM WDG herbicide may be used for hardwood and conifer regeneration on conservation reserve program land or similar areas.

Refer to APPLICATION RATE TABLE for rates.

PENDULUM WDG herbicide may be applied at planting or to established trees. When making an application at planting, it is important that slit closure be achieved to prevent PENDULUM WDG from directly contacting the tree roots or being washed into the root zone via the open slit

or root stunting may occur.

For postemergence control of weeds, tank-mix combinations of PENDULUM WDG herbicide plus Roundup, Finale, or other labeled herbicides are recommended. Refer to approved labeling for species recommendations. Recommended rates for the tank-mix compounds should be determined from the product labels of both PENDULUM WDG herbicide and partner herbicides prior to use. Precaution must be exercised to prevent combination sprays from direct contact with desirable foliage or injury may result. PENDULUM plus diuron or simazine combinations will broaden weed control spectrum, however, use of combinations may restrict PENDULUM WDG herbicide usage in sensitive areas. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use and follow those that are most restrictive.

# TOTAL VEGETATIVE CONTROL

PENDULUM WDG may be tank mixed with ARSENAL<sup>6</sup>, Roundup, Karmex<sup>7</sup>, Finale, Oust<sup>7</sup>, diuron, or other products to provide bare ground, or total vegetation control. PENDULUM WDG can be used to provide greater plant selectivity in areas where such action may be desired. Such sites might have roots of landscape vegetation, ornamentals, or desirable trees encroaching into the treated zone. Refer to tankmix 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 PENDULUM WDG with ARSENAL or diuron are recommended if control has been a problem for other herbicides.

# APPLICATION RATE TABLE

For preemergence control of the weed species listed using broadcast spray equipment, apply PENDULUM WDG herbicide at the following rates:

			1.2 oz. soluble bag
Length of Control	Pounds required to treat 1 acre	ounces required to treat 1000 sq.ft.	# of bags to treat 1,000 square feet
Short Term (2-4 months)	3.3 lbs.	1.2 oz.	1
Long Term (6-8 months)	6.6 lbs.	2.4 oz.	2

# Hand-held Spray Equipment:

Use the table above to determine the amount of PENDULUM WDG to be applied per 1000 square feet. The amount of water used for the application is not critical but should be sufficient for thorough coverage without runoff. Calibration of backpack or other hand-held equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow mixing instructions discussed elsewhere on this label.

The efficacy of PENDULUM WDG herbicide will improve if the application is followed by one-half inch of rainfall or its equivalent in sprinkler irrigation. If PENDULUM WDG herbicide is not activated by rainfall or irrigation within 30 days, erratic weed control may result.

PENDULUM WDG herbicide will not control established weeds.

If weeds should develop prior to activation of herbicide, shallow cultivate to destroy existing weeds or, where practical, remove by hand. When cultivating for any reason, it should be shallow. PENDULUM WDG herbicide may be used in conjunction with herbicides registered for postemergence use (i.e. Roundup or Finale) for the control of established weeds. Do not apply sprays containing Roundup or Finale over the top of desirable plants. A PENDULUM WDG herbicide treatment may be followed by any registered herbicide to control weeds not listed on the PENDULUM WDG herbicide label.

#### WEED SPECIES CONTROLLED

PENDULUM WDG herbicide is recommended for preemergence control of the weed species listed. Applications can be made around and over the top of the ornamentals and to the sites listed on this label.

#### **GRASSES CONTROLLED**

Common Na	me
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Barnyardgrass

Bluegrass, Annual

Crabgrass

Crowfootgrass

Foxtail, Giant

Foxtail, Green

Foxtail, Yellow

Goosegrass

Itchgrass

Johnsongrass (from seed)

Jun ·lerice

# Scientific Name

Echinochloa crus-galli

Poa annua

<u>Digitaria</u> spp.

Dactyloctenium aegyptium

Setaria faberi

Setaria viridis

Sctaria glauca
Eleusine indica

Rottboellia exaltata

Sorghum halepense

Echinochloa colona

Lovegrass (from seed)
Panicum, Browntop

Panicum, Fall
Panicum, Texas
Sandbur, Field
Signalgrass
Sandbur, Mavis

Sprangletop, Mexican Sprangletop, Red

Witchgrass

Woolly Cupgrass

Eragrostis spp.

Panicum fasciculatum
Panicum dichotomiflorum

Panicum texanum

Cenchrus incertus

Brachiaria platyphylla

Leptochloa uninervia

Leptochloa filiformis

Panicum capillare

Eriochloa villosa

# **BROADLEAF WEEDS CONTROLLED**

# Common Name

Burweed, Lawn Carpetweed

Chickweed, Common Chickweed, Mouseear

Clover, Hop Cudweed

Eveningprimrose

Fiddleneck Filaree Henbit

Knotweed, prostrate

Kochia

Lambsquarters

Pigweed

Puncturevine

Purslane

Pusley, Florida Rocket, London Shepherdspurse

Smartweed, Pennsylvania

Speedwell, Corn
Spurge, Annual
Spurge, Prostrate
Woodsorrel, Yellow
Velvetleaf (Buttonweed)

# Scientific Name

Soliva pterosperma Mollugo verticillata Stellaria media

Cerastium vulgatum

Trifolium procumbens Gnaphalium spp.

Oenothera biennis Amsinckia intermedia

Erodium spp.

Lamium amplexicaule Polygonum aviculare

Kochia scoparia

Chenopodium album

Amaranthus spp.
Tribulus terrestris

Portulaca oleracea Richardia scabra

Cicumbrium irio

Sisymbrium irio

Capsella bursa-pastoris
Polygonum pensylvanicum

Veronica arvensis Euphorbia spp.

Euphorbia numistrata

Oxalis stricta

Abutilon theophrasti

<sup>1</sup> Trademark of AgrEvo

<sup>&</sup>lt;sup>2</sup> Trademark of PBI Gordon Corp.

- 3 Trademark of Lesco Corp.
  4 Trademark of Monsanto Company
  5 Trademark of DowElanco
  6 Trademark of American Cyanamid Company
  7 Trademark of E. I. DuPont de Nemours and Company
  8 Trademark of Ciba-Geigy Corp.